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Greek Law to Ground-Squirrel

Articles in This Slice

GREEK LAW. Ancient Greek law is a branch of comparative jurisprudence the importance of which has been long ignored. Jurists have commonly left its study to scholars, who have generally refrained from comparing the institutions of the Greeks with those of other nations. Greek law has, however, been partially compared with Roman law, and has been incidentally illustrated with the aid of the primitive institutions of the Germanic nations. It may now be studied in its earlier stages in the laws of Gortyn; its influence may be traced in legal documents preserved in Egyptian papyri; and it may be recognized as a consistent whole in its ultimate relations to Roman law in the eastern provinces of the Roman empire.

Greek law and comparative jurisprudence.

The existence of certain panhellenic principles of law is implied by the custom of settling a difference between two Greek states, or between members of a single state, by resorting to external arbitration. The general unity of Greek law is mainly to be seen in the laws of inheritance and adoption, in laws of commerce and contract, and in the publicity uniformly given to legal agreements.

No systematic collection of Greek laws has come down to us. Our knowledge of some of the earliest notions of the subject is derived from the Homeric poems. For the details of Attic law we have to depend on *ex parte* statements in the speeches of the Attic orators, and we are sometimes enabled to check those statements by the trustworthy, but often imperfect, aid of inscriptions. Incidental illustrations of the laws of Athens may be found in the Laws of Plato, who deals with the theory of the subject without exercising any influence on actual practice. The Laws of Plato are criticized in the *Politics* of Aristotle, who, besides discussing laws in their relation to constitutions, reviews the work of certain early Greek lawgivers. The treatise on the *Constitution of Athens* includes an account of the jurisdiction of the various public officials and of the machinery of the law courts, and thus enables us to dispense with the second-hand testimony of grammarians and scholiasts who derived their information from that treatise (see CONSTITUTION OF ATHENS). The works of Theophrastus *On the Laws*, which included a recapitulation of the laws of various barbaric as well as Grecian states, are now represented by only a few fragments (Nos. 97-106, ed. Wimmer).

Original authorities.

Our earliest evidence is to be sought in the Homeric poems. In the primitive society of the heroic age (as noticed by Plato) written laws were necessarily unknown; for, "in that early period, they had no letters; they lived by habit and by the customs of their ancestors" (*Laws*, 680 A). We find a survival from a still more primitive time in the savage Cyclops, who is "unfamiliar with dooms of law, or rules of right" (οὔτε δικας εὖ εἰδότα οὔτε θέμιστας, *Od.* ix. 215 and 112 f.).

Law in Homer.

Dikē (δίκη), assigned by Curtius (*Etym.* 134) to the same root as δείκνυμι, primarily means a "way pointed out," a "course prescribed by usage," hence "way" or "fashion," "manner" or "precedent." In the Homeric poems it sometimes signifies a "doom" of law, a legal "right," a "lawsuit"; while it is rarely synonymous with "justice," as in *Od.* xiv. 84, where "the gods honour justice," τίουσι δίκην.

Dikē.

Various senses of "right" are expressed in the same poems by *themis* (θέμις), a term assigned (*ib.* 254) to the same root as τίθημι. In its primary sense *themis* is that which "has been laid down"; hence a particular decision or "doom." The plural *themistes* implies a body of such precedents, "rules of right," which the king receives from Zeus with his sceptre (*Il.* ix. 99). *Themis* and *dikē* have sometimes been compared with the Roman *fas* and *jus* respectively, the former being regarded as of divine, the latter of human origin; and this is more satisfactory than the latest view (that of Hirzel), which makes "counsel" the primary meaning of *themis*.

Themis.

Thesmos (θεσμός), an ordinance (from the same root as themis), is not found in "Homer," except in the last line of the original form of the *Odyssey* (xxiii. 296), where it probably refers to the "ordinance" of wedlock. The common term for law, νόμος, is first found in Hesiod, but not in a specially legal sense (*e.g. Op.* 276).

Thesmos. Nomos.

A trial for homicide is one of the scenes represented on the shield of Achilles (*Il.* xviii. 497-508). The folk are here to be seen thronging the market-place, where a strife has arisen between two men as to the price of a man that has been slain. The slayer vows that he has paid all (εὔχετο πάντ᾽ ἀποδοῦναι), the kinsman of the slain protests that he has received nothing (ἀναίνετο μηδὲν ἑλέσθαι); both are eager to join issue before an umpire, and both are favoured by their friends among the folk, who are kept back by the heralds. The cause is tried by the elders, who are seated on polished stones in a sacred circle, and in the midst there lie two talents of gold, "to give to him who, among them all, sets forth the cause most rightly" (τῷ δόμεν ὃς μετὰ τοῖσι δίκην ἰθύντατα εἴποι).

The trial scene.

The discussions of the above passage have chiefly turned on two points: (1) the legal questions at issue; and (2) the destination of the "two talents." (1) In the ordinary view (*a*), it is solely a question whether the fine or blood-money, corresponding to the *Wergeld* (see WERGELD, TEUTONIC PEOPLES, BRITAIN: *Anglo-Saxon*) of the old Germanic law (Grimm, *Rechtsalterthümer*, 661 f.), has been paid or not. (This is accepted by Thonissen, Lipsius, Sidgwick and Ridgeway.) In the other view (*b*), it is held that the slayer "claimed to pay" the fine, and the kinsman of the slain "refused to accept any compensation" (so Passow and Leaf, approved by Pollock). (2) The "two talents" (shown by Ridgeway to be a small sum, equal in value to two oxen) are awarded either (*a*) to the litigant who "pleads his cause most justly before them" (so Thonissen, Shilleto and Lipsius, in accordance with the Attic use of phrases like δίκην εἰπεῖν), or (*b*) to the judge "who, among all the elders, gives the most righteous judgment" (so Maine, approved by Sidgwick, Pollock, Leaf and Ridgeway).

On this controversy, cf. Maine's *Ancient Law*, chap. x. pp. 385 f., 405 f., ed. Pollock; Thonissen, *Droit pénal* (1875), 27; P. M. Laurence (on Shilleto's view) in *Journal of Philology*,

viii. (1879), 125 f.; Ridgeway, *ib.* x. (1882), 30 f., and *Journal of Hellenic Studies*, viii. (1887), 133 f.; and Leaf, *ib.* viii. 122 f., and in his Commentary on *Iliad*, ii. (1902), 610-614; also J. H. Lipsius in *Leipziger Studien*, xii. (1890), 225-231, criticized by H. Sidgwick in *Classical Review*, viii. (1894), 1-4.

We are told elsewhere in Homer that sometimes a man accepted blood-money from the slayer of his brother or his son, and that the slayer remained in the land after paying this penalty (*Il.* ix. 633). As a rule the slayer found it safest to flee (*Od.* xxiii. 118 f.), but even so, he might be pursued by the friends of the slain (*Od.* xv. 272-278). If he remained, the land was not (as in later ages) deemed to be polluted by his presence. In Homer, Orestes does not slay Clytaemestra, and he needs no "purification" for slaying Aegisthus.

The laws of Sparta are ascribed to the legislation of Lycurgus, whose traditional date is 884 B.C. Written laws are said to have been expressly forbidden by Lycurgus (Plutarch, *Lycurgus*, 13); hence the "laws of Sparta" are simply a body of traditional observances. We learn that all trials for homicide came before the Council of Elders and lasted for several days, and that all civil causes were tried by the ephors (*q.v.*). We are also told that originally the land was equally divided among the citizens of Sparta, and that this equality was enforced by law (Polybius vi. 45-46). Early in the 4th century the ephor Epitadeus, owing to a disagreement with his son, enacted that every Spartan should be allowed to transfer his estate and his allotment to any other person (Plutarch, *Agis*, 5), while Aristotle, in a much-debated passage of the *Politics* (ii. 9. 14-15), criticizes the Spartan constitution for allowing the accumulation of property in a few hands, an evil aggravated by the large number of "heiresses"; "a man (he adds) may bestow his heiress on any one he pleases; and, if he dies intestate, this privilege descends to his heir."

Greek lawgivers: Lycurgus at Sparta.

Law was first reduced to writing in the 7th century B.C. A written code is a necessary condition of just judgment, and such a code was the first concession which the people in the Greek cities extorted from the ruling aristocracies. The change was generally effected with the aid of a single legislator entrusted with complete authority to draw up a code.

Era of written laws.

The first communities to reach this stage of progress were the Greek colonies in the West. The Epizephyrian Locrians, near the extreme south of Italy, received the earliest written code from Zaleucus (663 B.C.), whose strict and severe legislation put an end to a period of strife and confusion, though we know little of his laws, except that they attached definite penalties to each offence, and that they strictly protected the rights of property. Two centuries later, his code was adopted even by the Athenian colony of Thurii in south Italy (443 B.C.). Charondas, the "disciple" of Zaleucus, became the lawgiver, not only of his native town of Catana on the east coast of Sicily, but also of other Chalcidian colonies in Sicily and Italy. The laws of Charondas were marked by a singular precision, but there was nothing (says Aristotle) that he could claim as his own except the special procedure against false witnesses (*Politics*, ii. 12. 11). In the case of judges who neglected to serve in the law courts, he inflicted a large fine on the rich and a small fine on the poor (*ib.* vi. (iv.) 13. 2). Androdamas of Rhegium gave laws on homicide and on heiresses to the Chalcidians of Thrace, while Philolaus of Corinth provided the Thebans with "laws of adoption" with a view to preventing any change in the number of the allotments of land (*ib.* ii. 12. 8-14).

Zaleucus at Locri Epizephyrii. Charondas at Catana, etc.

Androdamas of Rhegium. Philolaus of Corinth.

Local legislation in Crete is represented by the laws of the important city of Gortyn, which lies to the south of Ida in a plain watered by the Lethaeus. Part of that stream forms a sluice for a water-mill, and at or near this mill some fragmentary inscriptions were found by French archaeologists in 1857 and 1879. The great inscription, to which most of our knowledge of the laws is due, was not discovered until 1884. It had been preserved on a wall 27 ft. long and 5 ft. high, the larger part of which was buried in the ground, while its farthest extremity passed obliquely athwart the bed of the mill-stream. It was necessary to divert the water before the last four columns could be transcribed by the Italian scholar, Federico Halbherr, whose work was completed in the same year by the excavation and transcription of the first eight columns by the German scholar, E. Fabricius. In the following year Halbherr discovered more than eighty small fragments on the neighbouring site of a former temple of the Pythian Apollo.

The laws of Gortyn.

These fragments, which are far earlier than the great inscription above-mentioned, have been assigned to about 650 B.C. They precede the introduction of coined money into Crete, the penalties being reckoned, not in coins, but in caldrons. They deal with the powers of the magistrates and the observances of religion, but are mainly concerned with private matters of

barter and sale, dowry and adoption, inheritance and succession, fines for trespass and questions of blood-money. As in the code of Zaleucus, we have a fixed scale of penalties, including the fine of a single tripod, and ranging from one to a hundred caldrons.

The great inscription is perhaps two centuries later (*c.* 450 B.C.). It consists of a number of amendments or additions to an earlier code, and it deals exclusively with private law, in which the family and family property occupy the largest part. The procedure is entirely oral; oaths and other oral testimony are alone admitted; there are no documentary proofs, and no record of the verdict except in the memory of the judge or of his "remembrancer." All the causes are tried before a single judge, who varies according to the nature of the suit. Where the law specially enjoins it, he is bound to give judgment (δικάδδεν) in accordance with the law and the "witnesses or oaths," but, in other cases, he is permitted to take oath and decide (κρίνειν) in view of "the contentions of the parties," as distinguished from "the declarations of the witnesses." Offences against the person are treated as matters of private compensation according to a carefully graduated tariff. In certain cases the defendant may clear himself by an "oath of purgation" with the support of "cojurors" (ὀμωμόται), the *Eideshelfer* of old Germanic law (Grimm 859 f.), who have no necessary knowledge of the facts. There is no interference with the exposure of infants, except in the interest of the father (if the child is free-born) or of the lord (in the case of serfs). The law of debt is primitive, though less severe than that of the early Romans. In contrast with these primitive elements we have others which are distinctly progressive. The estates of husband, wife and sons are regarded as absolutely distinct. Wills are unknown, even in their most restricted form. Elaborate provisions are made to secure with all speed the marriage of an "heiress"; she is bound to marry the eldest of her paternal uncles or to surrender part of her estate, and it is only if there are no paternal uncles that she is permitted to marry one (and that the eldest) of their sons. Adoption is made by the simple procedure of mounting a block of stone in the market-place and making a public announcement at a time when the citizens are assembled. The adopted son does not inherit any larger share than that of a daughter. Any one who desires to repudiate his adopted son makes a public announcement as before, and the person repudiated receives, by way of nominal compensation, the gift of a small number of staters. In these later "laws of Gortyn" we have reached the time when payments are made, not in "caldrons," but in coins. In the inscription itself the laws are simply described as "these writings."

The text of the great inscription was first published by E. Fabricius in *Ath. Mitth.* ix. (1885), 362-384; there is a cast of the whole in the Cambridge Museum of Classical Archaeology. Cf. Comparetti's *Leggi di Gortyna* (1893); Bücheler and Zittelmann in *Rhein. Mus.* xl. (1885); Dareste, Haussoullier and Th. Reinach, *Inscr. juridiques grecques*, iii. (1894), 352-493 (with the literature there quoted). Eng. trans. by Roby in *Law Quarterly Review* (1886), 135-152; see also E. S. Roberts, *Gk. Epigraphy*, i. 39 f., 52 f., 325-332; J. W. Headlam in *Journal of Hellenic Studies*, xiii. (1892-1893), 48-69; P. Gardner and F. B. Jevons, *Greek Antiquities* (1895), 560-574; W. Wyse in Whibley's *Companion to Greek Studies* (1905), 378-383; and Hermann Lipsius, *Zum Recht von Gortyns* (Leipzig, 1909).

A Roman writer ascribes to the Athenians the very invention of lawsuits (Aelian, *Var. Hist.* iii. 38), and the Athenians themselves regarded their tribunals of homicide as institutions of immemorial antiquity (Isocr. *Paneg.* 40). On the abolition of the single decennial archon[1] in 683 B.C., his duties were distributed over several officials holding office for one year only. The judicial duties thenceforth discharged by the chief archon (*the* archon), in the case of citizens, were discharged by the polemarch in the case of foreign settlers or metics (μέτοικοι); while the king-archon, who succeeded to the religious functions of the ancient kings, decided cases connected with religious observances (see Archon). He also presided over the primitive council of the state, which was identical with the council of the Areopagus. It was possibly with a view to the recognition of the rights of the lower classes that, about the middle of the 7th century B.C., the three archons were raised to the number of nine by the institution of the joint board of the six *thesmothetae*, who superintended the judicial system in general, kept a record of all legal decisions, and drew attention to any defects in the laws. It is probable that in their title we have the earliest example in Attic Greek of the use of *thesmos* in the sense of "law."

Athens. The three senior archons.

The thesmothetae.

The constitution was at this time thoroughly oligarchical. With a view, however, to providing a remedy for the conflict between the several orders of the state, the first code of Athenian law was drawn up and published by Draco (strictly Dracon), who is definitely described as a *thesmothetēs* (621). His laws were known as *thesmoi*. The distinctive part of his legislation was the law of homicide, which was held in such high esteem that it was left unaltered in the legislation of Solon and in the democratic restoration of 411 B.C. It is partly preserved in an inscription of 409, which

Draco.

has been restored with the aid of quotations from the orators (*C.I.A.* i. 61; *Inscr. jurid. grecques*, ii. 1. 1-24; and Hicks, *Gk. Hist. Inscr.* No. 59). It drew a careful distinction between different kinds of homicide. Of the rest of Draco's legislation we only know that Aristotle (*Politics*, ii. 12, 13) was struck by the severity of the penalties, and that the creditor was permitted to seize the person of the debtor as security for his debt.

Solon.

The conflict of the orders was not allayed until both parties agreed in choosing Solon as mediator and as archon (594 B.C.). Solon cancelled all mortgages and debts secured on the person of the debtor, set free all who had become slaves for debt, and forbade such slavery for the future (see SOLON). Thenceforth every citizen had also "the right of appeal to the law-courts," and the privilege of claiming legal satisfaction on behalf of any one who was wronged. Cases of constitutional law (*inter alia*) came before large law-courts numbering hundreds of jurors, and the power of voting in these law-courts made the people masters of the constitution (Aristotle's *Constitution of Athens*, c. 9). Solon's legislation also had an important effect on the law of property. In primitive times, on a man's death, his money or lands remained in the family, and, even in the absence of direct descendants, the owner could not dispose of his property by will. Permission to execute a will was first given to Athenian citizens by the laws of Solon. But "the Athenian Will was only an inchoate Testament" (Maine's *Ancient Law*, c. vi.); for this permission was expressly limited to those citizens who had no direct male descendants (Dem. *Lept.* 102; Plutarch, *Solon*, 21; cf. Wyse on Isaeus, p. 325).

The law of intestate succession is imperfectly preserved in [Dem.] 43, § 51 (cf. Wyse, *ib.* p. 562 f.). In the absence of direct male descendants, a daughter who survived her father was known as an ἐπίκληρος, not an "heiress," but a "person who went with the estate"; and, in the absence of a will, the right or duty of marrying the daughter followed (with certain obvious exceptions) the same rules as the right of succession to the estate (cf. Wyse, *ib.* p. 348 f.).

Cleisthenes, Ephialtes. Pericles, Cleon.

Among the reforms of Cleisthenes (508) was the law of ostracism (*q.v.*). The privileges of the Areopagus were curtailed (while its right to try certain cases of homicide was left untouched) by the reforms of Ephialtes (462), and of Pericles, who also restored the thirty "local justices" (453), limited the franchise to those of citizen-blood by both parents (451), and was the first to assign to jurors a fee for their services in the law-courts, which was raised to three obols by Cleon (425).

Ordinary course of legislation.

In contrast to legislative reforms brought about by lawgivers entrusted with special authority, such as Draco, Solon and Cleisthenes, there was the regular and normal course of public legislation. The legislative power was not exercised directly by the popular assembly (see ECCLESIA), but the preliminary consent of that body was necessary for the appointment of a legislative commission.

Syngrapheis. Nomothetae.

In the 5th century (*e.g.* in 450 and 446 B.C.) certain commissioners called συγγραφεῖς were appointed to draw up laws which, after approval by the council, were submitted to the assembly. The same term was still in use in March 411 (Thuc. viii. 61). But in October, on the overthrow of the Four Hundred, the commissioners are for the first time called *nomothetae* (*ib.* 97).

The procedure in ordinary legislation was as follows. At the first meeting of the assembly in the year, the people was asked whether it would permit motions to be made for altering or supplementing the existing laws. A debate ensued, and, if such permission were granted, any citizen who wished to make a motion to the above effect was required to publish his proposals in the market-place, and to hand them to the secretary of the council (Boulē) to be read aloud at more than one meeting of the assembly. At the third regular meeting the people appointed the legislative commissioners, who were drawn by lot from the whole number of those then qualified to act as jurors. The number, and the duration of the commission, were determined in each case by the people. The proceedings before the commission were conducted exactly in the manner of a lawsuit. Those who desired to see old laws repealed, altered or replaced by new laws came forward as *accusers* of those laws; those of the contrary opinion, as *defenders*; and the defence was formally entrusted to public advocates specially appointed for the purpose (συνήγοροι). The number of the commissioners varied with the number or importance of the laws in question; there is evidence for the number 1001 (Dem. xxiv. 27). If a law approved by the commission was deemed to be unconstitutional, the proposer was liable to be prosecuted (by a γραφὴ παρανόμων), just as in the case of the proposer of an unconstitutional decree in the public assembly. Formal proceedings might also be instituted against laws on the sole ground of their inexpediency (see note on Aristotle's *Constitution of Athens*, p. 219, ed. Sandys). A prosecutor who (like Aeschines in his indictment of Ctesiphon) failed to obtain one-fifth of the votes was fined 1000

drachmae (£40), and lost the right to adopt this procedure in future. When a year had elapsed, the proposer of a law or a decree was free from personal responsibility. This was the case with Leptines, but the law itself could still be attacked, and, in this event, five advocates were appointed to defend it (σύνδικοι), cf. Dem. *Lept.* 144, 146.

Limits of space make it impossible to include in the present article any survey of the purport of the extant remains of the laws of Athens. Such a survey would begin with the laws of the family, including laws of marriage, adoption and inheritance, followed by the law of property and contracts, and the laws for the protection of life, the protection of the person, and the protection of the constitution. The texts have been collected and classified in Télfy's *Corpus juris Attici* (1867), a work which can be supplemented or corrected with the aid of Aristotle's *Constitution of Athens*; while some of the recent expositions of the subject are mentioned in the bibliography at the end of this article. We now proceed to notice the law of homicide, but solely in connexion with jurisdiction.

The laws of Athens.

The general term for a tribunal is δικαστήριον (from δικάζω), Anglicized "dicastery." Of all the tribunals of Athens those for the trial of homicide were at once the most primitive and the least liable to suffer change through lapse of time. In the old Germanic law all trials whatsoever were held in the open air (Grimm 793 f.). At Athens this custom was characteristic of all the five primitive courts of homicide, the object being to prevent the prosecutor and the judges from coming under the same roof as one who was charged with the shedding of blood (Antiphon, *De caede Herodis*, 11). The place where the trial was held depended on the nature of the charge.

Jurisdiction; the five primitive tribunals for the trial of homicide.

1. The rock of the Acropolis, outside the earliest of the city-walls, was the proper place for the trial of persons charged with premeditated homicide, or with wounding with intent to kill. The penalty for the former crime was death; for the latter exile; and, in either case, the property was confiscated. If the votes were equal, the person accused was acquitted. The proceedings lasted for three days, and each side might make two speeches. After the first speech the person accused of premeditated homicide was mercifully permitted to go into exile, in which case his property was confiscated, and in the ordinary course he remained in exile for the rest of his life.

On the Areopagus.

2. Charges of unpremeditated homicide, or of instigating another to inflict bodily harm on a third person, or of killing a slave or a resident alien or a foreigner, were tried at the Palladion, the ancient shrine of Pallas, east of the city-walls. The punishment for unpremeditated homicide was exile (without confiscation) until such time as the criminal had propitiated the relatives of the person slain, or (failing that) for some definite time. The punishment for instigating a crime was the same as for actually committing it.

At the Palladion.

3. Trials at the Delphinion, the shrine of Apollo Delphinios, in the same quarter, were reserved for special cases of either accidental or justifiable homicide.

At the Delphinion.

4. If a man already in exile for unpremeditated homicide were accused of premeditated homicide, or of wounding with intent to kill, provision was made for this rare contingency by permitting him to approach the shore of Attica and conduct his defence on board a boat, while his judges heard the cause on shore, at a "place of pits" called Phreatto, near the harbour of Zea. If the accused were found guilty, he incurred the proper penalty; if acquitted, he remained in exile.

At Phreatto.

5. The court in the precincts of the Prytaneum, to the north of the Acropolis, was only of ceremonial importance. It "solemnly heard and condemned undiscovered murderers, and animals or inanimate objects that had caused the loss of life."[2] The writ ran "against the doer of the deed," and any instrument of death that was found guilty was thrown across the frontier. The trial was held by the four "tribe-kings" (φυλοβασιλεῖς), an archaic survival from before the time of Cleisthenes. (On these five courts see Aristotle's *Constitution of Athens*, c. 57, and Dem. *Aristocr.* 65-79.)

At the Prytaneum.

In all the courts of homicide the president was the archon-basileus, or king-archon, who on these occasions laid aside his crown. Originally all these courts were under the jurisdiction of an ancient body of judges called the ephetae (ἐφέται), whose institution was ascribed to Draco. The transfer of the first of the above courts to the council of the Areopagus is attributed to Solon. In practice the jurisdiction of the ephetae (see also AREOPAGUS) was probably confined to the courts at the Palladion and Delphinion; but even there the rights of this primitive body became obsolete, for trials "at the

Ephetae.

Palladion" sometimes came before an ordinary tribunal of 500 or 700 jurors (Isocr. *c. Callim.* 52, 54; [Dem.] *c. Neaeram*, 10).

Except in the case of the primitive courts of homicide, the right of jurisdiction was entrusted to the several archons until the date of Solon (594). When the direct jurisdiction of the archons was impaired by Solon's institution of the "right of appeal to the law-courts," the dignity of those officials was recognized by their having the privilege of presiding over the new tribunals (ἡγεμονία δικαστηρίου). A similar position was assigned to the other executive officers, such as the strategi (generals), the board of police called the "Eleven," and the financial officers, all of whom presided over cases connected with their respective departments. In their new position as presidents of the several courts, the archons received plaints, obtained from both parties the evidence which they proposed to present, formally presided at the trial, and gave instructions for the execution of the sentence. The choice of the presiding magistrate in each case was determined by the normal duties of his office. Thus the chief archon, the official guardian of orphans and widows, presided in all cases, public or private, connected with the family property of citizens (Aristotle, *u.s.* c. 56). The king-archon had charge of all offences against religion, *e.g.* indictments for impiety, disputes within the family as to the right to hold a particular priesthood, and all actions for homicide (c. 57). The third archon, the polemarch, discharged in relation to resident aliens all such legal duties as were discharged by the chief archon in relation to citizens (c. 58). The trial of military offences was under the presidency of the strategi, who were assisted by the other military officers in preparing the case for the court. The six junior archons, the *thesmothetae*, acted as a board which was responsible for all cases not specially assigned to any other officials (details in c. 59).

The presidents of the tribunals.
The chief archon.
The king-archon.
The polemarch.
The strategi.
The thesmothetae.

The Forty, who were appointed by lot, four for each of the ten tribes, acted as sole judges in petty cases where the damages claimed did not exceed ten *drachmae*. Claims beyond that amount they handed over to the arbitrators. The four representatives of any given tribe received notice of such claims brought against members of that tribe. It seems probable that they dealt with all private suits not otherwise assigned, but, unlike the archons, they did not prepare any case for the court but referred it, in the first instance, to a public arbitrator appointed by lot (c. 53).[3]

The Forty.

The public arbitrators (διαιτηταί) were a body including all Athenian citizens in the sixtieth year of their age. The arbitrator, on receiving the case from the four representatives of the Forty, first endeavoured to bring the parties to an agreement. If this failed, he heard the evidence and gave a decision. If the decision were accepted, the case was at an end, but, if either of the two parties insisted on appealing to a law-court, the arbitrator placed in two caskets (one for each party) copies of all the depositions, oaths and challenges, and of all the laws quoted in the case, sealed them up, and, after attaching a copy of his own decision, handed them over to the four representatives of the Forty, who brought the case into court and presided over the trial. Documents which had not been brought before the arbitrator could not be produced in court. The court consisted of 201 jurors where the sum in question was not more than 1000 *drachmae* (£40); in other cases the number of jurors was 401 (c. 53).

The public arbitrators.

A small board of five appointed by lot, one for each pair of tribes, and known as the "introducers" (εἰσαγωγεῖς), brought up certain of the cases that had to be decided within a month (ἔμμηνοι δίκαι), such as actions for restitution of dowry, repayment of capital for setting up a business, and cases connected with banking.

Eisagōgeis.

The largest and most important of the legal tribunals, the "dicastery" (*par excellence*), was known as the *heliaea*. The name, which is of uncertain origin,[4] denotes not only the place where the court was held but also the members of the court,—the *heliastae* of Aristophanes, the *dicastae*, or ἄνδρες δικασταί, of the Attic orators. During the palmy days of the Athenian democracy, in the interval between the Persian and the Peloponnesian wars, the total number liable to serve as jurors is said to have been 6000 (Aristotle, *u.s.* c. 24. 3), and this number was never exceeded (Aristoph. *Vesp.* 661 f.). Any Athenian citizen in full possession of his rights, and over thirty years of age, was entitled to be placed on the list (Aristotle, *u.s.* c. 63. 3). At the beginning of the year the whole body of jurors assembled on the hill of Ardēttos looking down on the Panathenaic Stadium, and there took a solemn oath to the effect that they would judge according to the laws and decrees of the Athenian people and of the council of the Five Hundred (Boulē), and

Heliaea.

that, in cases where there were no laws, they would decide to the best of their judgment; that they would hear both sides impartially, and vote on the case actually before the court.

It has been suggested that, as the normal number of a court was 500, the maximum number of 6000 jurors was probably divided into ten sections of 500 each, with 1000 reserves. There is evidence in the 4th century for courts of 200, 400, 500, 700 and (in important political trials) various multiples of 500, namely, 1000, 1500, 2000 or 2500. To some of these numbers one juror is added; it was probably added to all, to obviate the risk of the votes being exactly equal.

The evidence as to the organization of the jurors in the early part of the 4th century is imperfect. Passages in Aristophanes (*Ecclesiazusae*, 682-688; *Plutus*, 1166 f.) imply that in 392-388 B.C. the total number was divided into ten sections distinguished by the first ten letters of the Greek alphabet, A to K. Every juror, on his first appointment, received a ticket of boxwood (or of bronze) bearing his name with that of his father and his deme, and with one of the above letters in the upper left-hand corner. Of the bronze tickets many have been found (see notes on Aristotle's *Constitution of Athens*, c. 63, and fig. 1 in frontispiece, ed. Sandys). These tickets formed part of the machinery for allotting the jurors to the several courts. To guard against the possibility of bribery or other undue influence, the allotment did not take place until immediately before the hearing of the case. Each court contained an equal number of jurors from each of the ten tribes, and thus represented the whole body of the state. The juror, on entering the court assigned him, received a counter (see fig. 3 in frontispiece, *u.s.*), on presenting which at the end of the day he received his fee. The machinery for carrying out the above arrangements is minutely described at the end of Aristotle's *Constitution of Athens* (for details, cf. Gilbert, 397-399, Eng. trans., or Wyse in Whibley's *Companion to Greek Studies*, 387 f.).

Jurisdiction of the council and assembly. Eisangelia.

The law-courts gradually superseded most of the ancient judicial functions of the council and the assembly, but the council continued to hold a strict scrutiny (δοκιμασία) of candidates for office or for other privileges, while the council itself, as well as all other officials, had to give account (εὔθυνα) on ceasing to hold office. The council also retained the right to deal with extraordinary crimes against the state. It was open to any citizen to bring such crimes to the knowledge of the council in writing. The technical term for this information, denunciation or impeachment was *eisangelia* (εἰσαγγελία). The council could inflict a fine of 500 *drachmae* (£20), or, in important cases, refer the matter either to a law-court, as in the trial of Antiphon (Thuc. viii. 68), or to the ecclesia, as in that of Alcibiades (415 B.C.), and the strategi in command at Arginusae (406; Xen. *Hell.* i. 7. 19). The term εἰσαγγελία was also applied to denunciations brought against persons who wronged the orphan or the widow, or against a public arbitrator who had neglected his duty (Dem. *Meidias*, 86 f.).

Probolē.

A "presentation" of criminal information (προβολή) might be laid before the assembly with a view to obtaining its preliminary sanction for bringing the case before a judicial tribunal. Such was the mode of procedure adopted against persons who had brought malicious, groundless or vexatious accusations, or who had violated the sanctity of certain public festivals. The leading example of the former is the trial of the accusers who prompted the people to put to death the generals who had won the Battle of Arginusae (Xen. *Hell.* i. 7. 34); and, of the latter, the proceedings of Demosthenes against Meidias.

Classes of legal actions.

Legal actions (δίκαι) were classified as private (ἴδιαι) or public (δημόσιαι). The latter were also described as γραφαί or "prosecutions," but some γραφαί were called "private," when the state was regarded as only indirectly injured by a wrong done to an individual citizen (Dem. xxi. 47). A private suit could only be brought by the man directly interested, or, in the case of a slave, a ward or an alien, by the master, guardian or patron respectively; and, if the suit were successful, the sum claimed generally went to the plaintiff. Public actions may be divided into ordinary criminal cases, and offences against the state. As a rule they could be instituted by any person who possessed the franchise, and the penalty was paid to the state. If the prosecutor failed to obtain one-fifth of the votes, he had to pay a fine of 1000 *drachmae* (£40), and lost the right of ever bringing a similar action.

Lawsuits, whether public or private, were also distinguished as δίκαι κατά τινος or πρός τινα, according as the defeated party could or could not be personally punished. Actions (ἀγῶνες) were also distinguished as ἀγῶνες τιμητοί ("to be assessed"), in which the amount of damages had to be determined by the court, because it had not been fixed by law, and ἀτίμητοι ("not to be assessed"), in which the damages had *not* to be determined by the court,

because they had already been fixed by law or by special agreement.

Among special kinds of action were ἀπαγωγή, ἐφήγησις and ἔνδειξις. These could only be employed when the offence was patent and could not be denied. In the first, the person accused was summarily arrested by the prosecutor and haled into the presence of the proper official. In the second, the accuser took the officer with him to arrest the culprit (Dem. xxii. 26). In the third, he lodged an information with the official, and left the latter to effect the capture. Φάσις, a general term for many kinds of legal "information," was a form of procedure specially directed against those who injured the fiscal interests of the state, and against guardians who neglected the pecuniary interests of their wards. Ἀπογραφή was an action for confiscating property in private hands, which was claimed as belonging to the state, the term being derived from the claimants' written inventory of the property in question.

Ordinary legal procedure.

The ordinary procedure in all lawsuits, public or private, began with a personal summons (πρόσκλησις) of the defendant by the plaintiff accompanied by two witnesses (κλητῆρες). If the defendant failed to appear in court, these witnesses gave proof of the summons, and judgment went by default.

The action was begun by presenting a written statement of the case to the magistrate who presided over trials of the class in question. If the statement were accepted, court-fees were paid by both parties in a private action, and by the prosecutor alone in a public action. The magistrate fixed a day for the preliminary investigation (ἀνάκρισις), and, whenever several causes were instituted at the same time, he drew lots to determine the order in which they should be taken. Hence the plaintiff was said "to have a suit assigned him by lot" (λαγχάνειν δίκην), a phrase practically equivalent to "obtaining leave to bring an action." At the ἀνάκρισις the plaintiff and defendant both swore to the truth of their statements. If the defendant raised no formal protest, the trial proceeded in regular course (εὐθυδικία), but he might contend that the suit was inadmissible, and, to prove his point, might bring witnesses to confront those on the side of the plaintiff (διαμαρτυρία), or he might rely on argument without witnesses by means of a written statement traversing that of the plaintiff (παραγραφή). The person who submitted the special plea in bar of action naturally spoke first, and, if he gained the verdict, the main suit could not come on, or, at any rate, not in the way proposed or before the same court. A cross-action (ἀντιγραφή) might be brought by the defendant, but the verdict did not necessarily affect that of the original suit.

Documents.

In the preliminary examination copies of the laws or other documents bearing on the case were produced. If any such document were in the hands of a third person, he could be compelled to produce it by an action for that purpose (εἰς ἐμφανῶν κατάστασιν). The depositions were ordinarily made before the presiding officer and were taken down in his presence. If a witness were compelled to be absent, a certified copy of his deposition might be sent (ἐκμαρτυρία). The depositions of slaves were not accepted, unless made under torture, and for receiving such evidence the consent of both parties was required. Either party could challenge the other to submit his slaves to the test (πρόκλησις εἰς βάσανον), and, in the event of the challenge being refused, could comment on the fact when the case came before the court. Either party could also challenge the other to take an oath (πρόκλσις εἰς ὅρκον), and, if the oath were declined, could similarly comment on the fact.

Challenges.

The trial.

Mercantile cases had to be decided within the interval of a month; others might be postponed for due cause. If, on the day of trial, one of the parties was absent, his representative had to show cause under oath (ὑπωμοσία); if the other party objected, he did so under oath (ἀνθυπωμοσία). If the plea for delay were refused by the court, and it were the defendant who failed to appear, judgment went by default; in the absence of the plaintiff, the case was given in favour of the defendant.

The official who had conducted the preliminary inquiry also presided at the trial. The proceedings began with a solemn sacrifice. The plea of the plaintiff and the formal reply of the defendant were then read by the clerk. The court was next addressed first by the plaintiff, next by the defendant; in some cases there were two speeches on each side. Every litigant was legally required to conduct his own case. The speeches were often composed by professional experts for delivery by the parties to the suit, who were required to speak in person, though one or more unprofessional supporters (συνήγοροι) might subsequently speak in support of the case. The length of the speeches was in many cases limited by law to a fixed time recorded by means of a water-clock (clepsydra). Documents were not regarded as part of the speech, and, while these were being read, the clock was stopped (Goethe found a

similar custom in force in Venice in October 1786). The witnesses were never cross-examined, but one of the litigants might formally interrogate the other. The case for the defence was sometimes finally supported by pathetic appeals on the part of relatives and friends.

When the speeches were over, the votes were taken. In the 5th century mussel-shells (χοιρῖναι) were used for the purpose. Each of the jurors received a shell, which he placed in one of the two urns, in that to the front if he voted for acquittal; in that to the back if he voted for condemnation. If a second vote had to be taken to determine the amount of the penalty, wax tablets were used, on which the juror drew a long line, if he gave the heavy penalty demanded by the plaintiff; a short one, if he decided in favour of the lighter penalty proposed by the defendant.

In the 4th century the mussel-shells were replaced by disks of bronze. Each disk (inscribed with the words ΨΗΦΟΣ ΔΗΜΟΣΙΑ) was about 1 in. in diameter, with a short tube running through the centre. This tube was either perforated or closed (see figs. 6 and 7 in frontispiece to Aristotle's *Constitution of Athens*, ed. Sandys). One of each kind was given to every juror, who was required to use the perforated or the closed disk, according as he voted for the plaintiff or for the defendant. On the platform there were two urns, one of bronze and one of wood. The juror placed in the hollow of his hand the disk that he proposed to use, and closed his fingers on the extremity of the tube, so that no one could see whether it were a perforated disk or not, and then deposited it in the bronze urn, and (with the same precaution to ensure secrecy) dropped the unused disk into the wooden urn. The votes were sorted by persons appointed by lot, and counted by the president of the court, and the result announced by the herald. For any second vote the same procedure was adopted (Aristotle, *u.s.*, c. 68 of Kenyon's Berlin text).

Penalties.

Pecuniary penalties were inflicted both in public and in private suits; personal penalties, in public suits only. Personal penalties included sentences of death or exile, or different degrees of disfranchisement (ἀτιμία) with or without confiscation. Imprisonment *before* trial was common, and persons mulcted in penalties might be imprisoned until the penalties were paid, but imprisonment was never inflicted as the *sole* penalty after conviction. Foreigners alone could be sold into slavery. Sentences of death were carried out under the supervision of the board of police called the "Eleven." In ancient times a person condemned was hurled into a deep pit (the barathrum) in a north-western suburb of Athens. In later times he was compelled to drink the fatal draught of hemlock. Common malefactors were beaten to death with clubs. Fines were collected and confiscated property sold by special officials, called πράκτορες and πωληταί respectively. In private suits the sentence was executed by the state if the latter had a share in any fine imposed, or if imprisonment were part of the penalty. Otherwise, the execution of the sentence was left to the plaintiff, who had the right of distraint, or, if this failed, could bring an action of ejectment (δίκη ἐξούγης).

From the verdict of the heliaea there was no appeal. But, if judgment had been given by default, the person condemned might bring an action to prove that he was not responsible for such default, τὴν ἔρημον (*sc.* δίκην) ἀντιλαγχάνειν. The corresponding term for challenging the award of an arbitrator was τὴν μὴ οὖσαν ἀντιλαγχάνειν. He might also bring an action for false evidence (δίκη ψευδομαρτυριῶν) against his opponent's witnesses, and, on their conviction, have the sentence annulled. This "denunciation" of false evidence was technically called ἐπίσκηψις and ἐπισκήπτεσθαι.

Character of the Athenian tribunals.

The large number of the jurors made bribery difficult, but, as was first proved by Anytus (in 409), not impossible. It also diminished the feeling of personal responsibility, while it increased the influence of political motives. In addressing such a court, the litigants were not above appealing to the personal interests of the general public. We have a striking example of this in the terms in which Lysias makes one of his clients close a speech in prosecution of certain retail corn-dealers who have incurred the penalty of death by buying more than 75 bushels of wheat at one time: "If you *condemn* these persons, you will be doing what is right, and will pay *less* for the purchase of your corn; if you *acquit* them, you will pay *more*" (xxii. § 22).

Speakers were also tempted to take advantage of the popular ignorance by misinterpreting the enactments of the law, and the jurors could look for no aid from the officials who formally presided over the courts. The latter were not necessarily experts, for they owed their own original appointment to the caprice of the lot. Almost the only officials specially elected as experts were the strategi, and these presided only in their own courts. Again, there was every temptation for the informer to propose the confiscation of the property of a wealthy

citizen, who would naturally prefer paying blackmail to running the risk of having his case tried before a large tribunal which was under every temptation to decide in the interests of the treasury. In conclusion we may quote the opinions on the judicial system of Athens which have been expressed by two eminent classical scholars and English lawyers.

A translator of Aristophanes, Mr B. B. Rogers, records his opinion "that it would be difficult to devise a judicial system less adapted for the due administration of justice" (Preface to *Wasps*, xxxv. f.), while a translator of Demosthenes, Mr C. R. Kennedy, observes that the Athenian jurors "were persons of no legal education or learning; taken at haphazard from the whole body of citizens, and mostly belonging to the lowest and poorest class. On the other hand, the Athenians were naturally the quickest and cleverest people in the world. Their wits were sharpened by the habit ... of taking an active part in important debates, and hearing the most splendid orators. There was so much litigation at Athens that they were constantly either engaged as jurors, or present as spectators in courts of law" (*Private Orations*, p. 361).

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(J. E. S.*)

1 For further information as to the evolution of the Athenian constitution see ARCHON, AREOPAGUS, BOULĒ, ECCLESIA, STRATEGUS, and articles on all the chief legislators.

2 In the case of "animals," we may compare the Mosaic law of Exod. xxxi. 28 and the old Germanic law (Grimm 664); and in that of "inanimate objects," the English law of deodands (Blackstone i. 300), repealed in 1846. See also Frazer on Pausanias, i. 28. 10.

3 Cf. R. J. Bonner, in *Classical Philology* (Chicago, 1907), 407-418, who urges that only cases belonging to the Forty were subject to public arbitration.

4 Connected either with ἀλίζεσθαι, "to assemble," or ἥλιος, or Ἥλις (cf. Curt Wachsmuth, *Stadt Athen*, ii. (1) 359-364). The first is possibly right (cf. Rogers on Aristoph. *Wasps*, xvii. f.); the second implies that this large court was held in the open air (Lipsius, *Att. Recht*, 172).

GREEK LITERATURE.—The literature of the Greek language is broadly divisible into three main sections: (1) Ancient, (2) Byzantine, (3) Modern. These are dealt with below in that order.

The ancient literature falls into three periods: (A) *The Early Literature*, to about 475 B.C.; epic, elegiac, iambic and lyric poetry; the beginnings of literary prose. (B) *The Attic Literature* 475-300 B.C.; tragic and comic drama; historical, oratorical and philosophical prose. (C) *The Literature of the Decadence*, 300 B.C. to A.D. 529; which may again be divided into the Alexandrian period, 300-146 B.C., and the Graeco-Roman period, 146 B.C. to A.D. 529.

For details regarding particular works or the lives of their authors reference should be made to the separate articles devoted to the principal Greek writers. The object of the following pages is to sketch the literary development as a whole, to show how its successive periods were related to each other, and to mark the dominant characteristics of each.

(A) *The Early Literature.*—A process of natural growth may be traced through all the best work of the Greek genius. The Greeks were not literary imitators of foreign models; the forms of poetry and prose in which they attained to such unequalled excellence were first developed by themselves. Their literature had its roots in their political and social life; it is the spontaneous expression of that life in youth, maturity and decay; and the order in which its several fruits are produced is not the result of accident or caprice. Further, the old Greek literature has a striking completeness, due to the fact that each great branch of the Hellenic race bore a characteristic part in its development. Ionians, Aeolians, Dorians, in turn contributed their share. Each dialect corresponded to a certain aspect of Hellenic life and character. Each found its appropriate work.

The dialects.

The Ionians on the coast of Asia Minor—a lively and genial people, delighting in adventure, and keenly sensitive to everything bright and joyous—created artistic epic poetry out of the lays in which Aeolic minstrels sang of the old Achaean wars. And among the Ionians arose elegiac poetry, the first variation on the epic type. These found a fitting instrument in the harmonious Ionic dialect, the flexible utterance of a quick and versatile intelligence. The Aeolians of Lesbos next created the lyric of personal passion, in which the traits of their race—its chivalrous pride, its bold but sensuous fancy—found a fitting voice in the fiery strength and tenderness of Aeolic speech. The Dorians of the Peloponnesus, Sicily and Magna Graecia then perfected the choral lyric for festivals and religious worship; and here again an earnest faith, a strong pride in Dorian usage and renown had an apt interpreter in the massive and sonorous Doric. Finally, the Attic branch of the Ionian stock produced the drama, blending elements of all the other kinds, and developed an artistic literary prose in history, oratory and philosophy. It is in the Attic literature that the Greek mind receives its most complete interpretation.

A natural affinity was felt to exist between each dialect and that species of composition for which it had been specially used. Hence the dialect of the Ionian epic poets would be adopted with more or less thoroughness even by epic or elegiac poets who were not Ionians. Thus the Aeolian Hesiod uses it in epos, the Dorian Theognis in elegy, though not without alloy. Similarly, the Dorian Theocritus wrote love-songs in Aeolic. All the faculties and tones of the language were thus gradually brought out by the co-operation of the dialects. Old Greek literature has an essential unity—the unity of a living organism; and this unity comprehends a number of distinct types, each of which is complete in its own kind.

Pre-Homeric poetry.

Extant Greek literature begins with the Homeric poems. These are works of art which imply a long period of antecedent poetical cultivation. Of the pre-Homeric poetry we have no remains, and very little knowledge. Such glimpses as we get of it connect it with two different stages in the religion of the prehistoric Hellenes. The first of these stages is that in which the agencies or forms of external nature were personified indeed, yet with the consciousness that the personal names were only symbols. Some very ancient Greek songs of which mention is made may have belonged to this stage—as the songs of Linus, Ialemus and Hylas. Linus, the fair youth killed by dogs, seems to be the spring passing away before Sirius. Such songs have been aptly called “songs of the seasons.” The second stage is that in which the Hellenes have now definitively personified the powers which they worship. Apollo, Demeter, Dionysus, Cybele, have now become to them beings with clearly conceived attributes. To this second stage belong the hymns connected with the names of the legendary bards, such as Orpheus, Musaeus, Eumolpus, who are themselves associated with the worship of the Pierian Muses and the Attic ritual of Demeter. The seats of this early sacred poetry are not only “Thracian”—*i.e.* on the borders of northern Greece—but also “Phrygian” and “Cretan.” It belongs, that is, presumably to an age when the ancestors of the Hellenes had left the Indo-European home in central Asia, but had not yet taken full possession of the lands which were afterwards Hellenic. Some of their tribes were still in Asia; others were settling in the islands

Songs of the seasons.

Hymns.

of the Aegean; others were passing through the lands on its northern seaboard. If there was a period when the Greeks possessed no poetry but hymns forming part of a religious ritual, it may be conjectured that it was not of long duration. Already in the *Iliad* a secular character belongs to the marriage hymn and to the dirge for the dead, which in ancient India were chanted by the priest. The bent of the Greeks was to claim poetry and music as public joys; they would not long have suffered them to remain sacerdotal mysteries. And among the earliest themes on which the lay artist in poetry was employed were probably war-ballads, sung by minstrels in the houses of the chiefs whose ancestors they celebrated.

Epos.

Such war-ballads were the materials from which the earliest epic poetry of Greece was constructed. By an "epic" poem the Greeks meant a narrative of heroic action in hexameter verse. The term ἔπη meant at first simply "verses"; it acquired its special meaning only when μέλη, lyric songs set to music, came to be distinguished from ἔπη verses not set to music, but merely recited. Epic poetry is the only kind of extant Greek poetry which is older than about 700 B.C. The early epos of Greece is represented by the *Iliad* and the *Odyssey*, Hesiod and the Homeric hymns; also by some fragments of the "Cyclic" poets.

The "Iliad" and the "Odyssey."

After the Dorian conquest of the Peloponnesus, the Aeolian emigrants who settled in the north-west of Asia Minor brought with them the warlike legends of their chiefs, the Achaean princes of old. These legends lived in the ballads of the Aeolic minstrels, and from them passed southward into Ionia, where the Ionian poets gradually shaped them into higher artistic forms. Among the seven places which claimed to be the birthplace of Homer, that which has the best title is Smyrna. Homer himself is called "son of Meles"—the stream which flowed through old Smyrna, on the border between Aeolia and Ionia. The tradition is significant in regard to the origin and character of the *Iliad*, for in the *Iliad* we have Achaean ballads worked up by Ionian art. A preponderance of evidence is in favour of the view that the *Odyssey* also, at least in its earliest form, was composed on the Ionian coast of Asia Minor. According to the Spartan account, Lycurgus was the first to bring to Greece a complete copy of the Homeric poems, which he had obtained from the Creophylidae, a clan or gild of poets in Samos. A better authenticated tradition connects Athens with early attempts to preserve the chief poetical treasure of the nation. Peisistratus is said to have charged some learned men with the task of collecting all "the poems of Homer"; but it is difficult to decide how much was comprehended under this last phrase, or whether the province of the commission went beyond the mere task of collecting. Nor can it be determined what exactly it was that Solon and Hipparchus respectively did for the Homeric poems. Solon, it has been thought, enacted that the poems should be recited from an authorized text (ἐξ ὑποβολῆς); Hipparchus, that they should be recited in a regular order (ἐξ ὑπολήψεως). At any rate, we know that in the 6th century B.C. a recitation of the poems of Homer was one of the established competitions at the Panathenaea, held once in four years. The reciter was called a *rhapsodist*—properly one who weaves a long, smoothly-flowing chant, then an epic poet who chants his own or another's poem. The rhapsodist did not, like the early minstrel, use the accompaniment of the harp; he gave the verses in a flowing recitative, bearing in his hand a branch of laurel, the symbol of Apollo's inspiration. In the 5th century B.C. we find that various Greek cities had their own editions (αἱ πολιτικαί, κατὰ πόλεις or ἐκ πόλεων ἐκδόσεις) of the poems, for recitation at their festivals. Among these were the editions of Massilia, of Chios and of Argolis. There were also editions bearing the name of the individual editor (αἱ κατ᾽ ἄνδρα)—the best known being that which Aristotle prepared for Alexander. The recension of the poems by Aristarchus (156 B.C.) became the standard one, and is probably that on which the existing text is based. The oldest Homeric MS. extant, Venetus A of the *Iliad*, is of the 10th century; the first printed edition of Homer was that edited by the Byzantine Demetrius Chalcondyles (Florence, 1488).

The Homeric question.

The ancient Greeks were almost unanimous in believing the *Iliad* and the *Odyssey* to be the work of one man, Homer, to whom they also ascribed some extant hymns, and probably much more besides. Aristotle and Aristarchus seem to have put Homer's date about 1044 B.C., Herodotus about 850 B.C. It is not till about 170 B.C. that the grammarians Hellanicus and Xenon put forward the view that Homer was the author of the *Iliad*, but not of the *Odyssey*. Those who followed them in assigning different authors to the two poems were called the Separators (*Chorizontes*). Aristarchus combated "the paradox of Xenon," and it does not seem to have had much acceptance in antiquity. Giovanni Battista Vico, a Neapolitan (1668-1744), seems to have been the first modern to suggest the composite authorship and oral tradition of the Homeric poems; but this was a pure conjecture in support of his theory that the names of ancient lawgivers and poets are often mere symbols. F. A. Wolf, in the *Prolegomena* to his edition

(1795), was the founder of a scientific scepticism. The *Iliad*, he said (for he recognized the comparative unity and consistency of the *Odyssey*), was pieced together from many small unwritten poems by various hands, and was first committed to writing in the time of Peisistratus. This view was in harmony with the tone of German criticism at the time; it was welcomed as a new testimony to the superiority of popular poetry, springing from fresh natural sources, to elaborate works of art; and it at once found enthusiastic adherents. For the course of Homeric controversy since Wolf the reader is referred to the article Homer.

Cyclic poems.

The Ionian school of epos produced a number of poems founded on the legends of the Trojan war, and intended as introductions or continuations to the *Iliad* and the *Odyssey*. The grammarian Proclus (A.D. 140) has preserved the names and subjects of some of these; but the fragments are very scanty. The *Nostoi* or *Homeward Voyages*, by Agias (or Hagias) of Troezen, filled up the gap of ten years between the *Iliad* and the *Odyssey*; the *Lay of Telegonus*, by Eugammon of Cyrene, continued the story of the Odyssey to the death of Odysseus by the hand of Telegonus, the son whom Circe bore to him. Similarly the *Cyprian Lays* by Stasinus of Cyprus, ascribed by others to Hegesias (or Hegesinus) of Salamis or Halicarnassus, was introductory to the *Iliad*; the *Aethiopis* and the *Sack of Troy*, by Arctinus of Miletus, and the *Little Iliad*, by Lesches of Mytilene, were supplementary to it. These and many other names of lost epics—some taken also from the Theban myths (*Thebaïs*, *Epigoni*, *Oedipodea*)—serve to show how prolific was that epic school of which only two great examples remain. The name of *epic cycle* was properly applied to a prose compilation of abstracts from these epics, pieced together in the order of the events. The compilers were called “cyclic” writers; and the term has now been transferred to the epic poets whom they used.[1]

Hesiodic epos.

The epic poetry of Ionia celebrated the great deeds of heroes in the old wars. But in Greece proper there arose another school of epos, which busied itself with religious lore and ethical precepts, especially in relation to the rural life of Boeotia. This school is represented by the name of Hesiod. The legend spoke of him as vanquishing Homer in a poetical contest of Chalcis in Euboea; and it expresses the fact that, to the old Greek mind, these two names stood for two contrasted epic types. Nothing is certainly known of his date, except that it must have been subsequent to the maturity of Ionian epos. He is conjecturally placed about 850-800 B.C.; but some would refer him to the early part of the 7th century B.C. His home was at Ascra, a village in a valley under Helicon, whither his father had migrated from Cyme in Aeolis on the coast of Asia Minor. In Hesiod’s *Works and Days* we have the earliest example of a didactic poem. The seasons and the labours of the Boeotian farmer’s year are followed by a list of the days which are lucky or unlucky for work. The *Theogony*, or “Origin of the Gods,” describes first how the visible order of nature arose out of chaos; next, how the gods were born. Though it never possessed the character of a sacred book, it remained a standard authority on the genealogies of the gods. So far as a corrupt and confused text warrants a judgment, the poet was piecing together—not always intelligently—the fragments of a very old cosmogonic system, using for this purpose both the hymns preserved in the temples and the myths which lived in folklore. The epic lay in 480 lines called the *Shield of Heracles*—partly imitated from the 18th book of the *Iliad*—is the work of an author or authors later than Hesiod. In the Hesiodic poetry, as represented by the *Works and Days* and the *Theogony*, we see the influence of the temple at Delphi. Hesiod recognizes the existence of δαίμονες—spirits of the departed who haunt the earth as the invisible guardians of justice; and he connects the office of the poet with that of the prophet. The poet is one whom the gods have authorized to impress doctrine and practical duties on men. A religious purpose was essentially characteristic of the Hesiodic school. Its poets treated the old legends as relics of a sacred history, and not merely, in the Ionian manner, as subjects of idealizing art. Such titles as the *Maxims of Cheiron* and the *Lay of Melampus*, the seer—lost poems of the Hesiodic school—illustrate its ethical and its mystic tendencies.

The Homeric hymns.

The *Homeric Hymns* are a collection of pieces, some of them very short, in hexameter verse. Their traditional title is—*Hymns* or *Preludes of Homer and the Homeridae*. The second of the alternative designations is the true one. The pieces are not “hymns” used in formal worship, but “preludes” or prefatory addresses (προοίμια) with which the rhapsodists ushered in their recitations of epic poetry. The “prelude” might be addressed to the presiding god of the festival, or to any local deity whom the reciter wished to honour. The pieces (of which there are 33) range in date perhaps from 750 to 500 B.C. (though some authorities assign dates as late as the 3rd and 4th centuries A.D.; see ed. by Sikes and Allen, *e.g.* p. 228), and it is probable that the collection was formed in Attica, for the use of rhapsodists. The style is that of the Ionian or Homeric epos; but there are also several traces of the Hesiodic or Boeotian school. The

principal “hymns” are (1) to Apollo (generally treated as two or more hymns combined in one); (2) to Hermes; (3) to Aphrodite; and (4) to Demeter. The hymn to Apollo, quoted by Thucydides (iii. 104) as Homer’s, is of peculiar interest on account of the lines describing the Ionian festival at Delos. Two celebrated pieces of a sportive kind passed under Homer’s name. The *Margites*—a comic poem on one “who knew many things but knew them all badly”—is regarded by Aristotle as the earliest germ of comedy, and was possibly as old as 700 B.C. Only a few lines remain. The *Batracho*(*myo*)*machia*, or *Battle of the Frogs and Mice* probably belongs to the decline of Greek literature, perhaps to the 2nd century B.C.[2] About 300 verses of it are extant.

Transition from epos to elegy.

In the *Iliad* and the *Odyssey* the personal opinions or sympathies of the poet may sometimes be conjectured, but they are not declared or even hinted. Hesiod, indeed, sometimes gives us a glimpse of his own troubles or views. Yet Hesiod is, on the whole, essentially a prophet. The message which he delivers is not from himself; the truths which he imparts have not been discovered by his own search. He is the mouthpiece of the Delphian Apollo. Personal opinion and feeling may tinge his utterance, but they do not determine its general complexion. The egotism is a single thread; it is not the basis of the texture. Epic poetry was in Greece the foundation of all other poetry; for many centuries no other kind was generally cultivated, no other could speak to the whole people. Politically, the age was monarchical or aristocratic; intellectually, it was too simple for the analysis of thought or emotion. Kings and princes loved to hear of the great deeds of their ancestors; common men loved to hear of them too, for they had no other interest. The mind of Greece found no subject of contemplation so attractive as the warlike past of the race, or so useful as that lore which experience and tradition had bequeathed. But in the course of the 8th century B.C. the rule of hereditary princes began to disappear. Monarchy gave place to oligarchy, and this—often after the intermediate phase of a tyrannis—to democracy. Such a change was necessarily favourable to the growth of reflection. The private citizen is no longer a mere cipher, the Homeric τις, a unit in the dim multitude of the king-ruled folk; he gains more power of independent action, his mental horizon is widened, his life becomes fuller and more interesting. He begins to feel the need of expressing the thoughts and feelings that are stirred in him. But as yet a prose literature does not exist; the new thoughts, like the old heroic stories, must still be told in verse. The forms of verse created by this need were the Elegiac and the Iambic.

Elegy.

The elegiac metre is, in form, a simple variation on the epic metre, obtained by docking the second of two hexameters so as to make it a verse of five feet or measures. But the poetical capabilities of the elegiac couplet are of a wholly different kind from those of heroic verse. ἔλεγος seems to be the Greek form of a name given by the Carians and Lydians to a lament for the dead. This was accompanied by the soft music of the Lydian flute, which continued to be associated with Greek elegy. The non-Hellenic origin of elegy is indicated by this very fact. The flute was to the Greeks an Asiatic instrument—string instruments were those which they made their own—and it would hardly have been wedded by them to a species of poetry which had arisen among themselves. The early elegiac poetry of Greece was by no means confined to mourning for the dead. War, love, politics, proverbial philosophy, were in turn its themes; it dealt, in fact, with the chief interest of the poet and his friends, whatever that might be at the time. It is the direct expression of the poet’s own thoughts, addressed to a sympathizing society. This is its first characteristic. The second is that, even when most pathetic or most spirited, it still preserves, on the whole, the tone of conversation or of narrative. Greek elegy stops short of lyric passion. English elegy, whether funereal as in Dryden and Pope, or reflective as in Gray, is usually true to the same normal type. Roman elegy is not equally true to it, but sometimes tends to trench on the lyric province. For Roman elegy is mainly amatory or sentimental; and its masters imitated, as a rule, not the early Greek elegists, not Tyrtaeus or Theognis, but the later Alexandrian elegists, such as Callimachus or Philetas. Catullus introduced the metre to Latin literature, and used it with more fidelity than his followers to its genuine Greek inspiration.

Iambic verse.

Elegy, as we have seen, was the first slight deviation from epos. But almost at the same time another species arose which had nothing in common with epos, either in form or in spirit. This was the iambic. The word ἴαμβος, *iambus* (ἰάπτειν, to dart or shoot) was used in reference to the licensed raillery at the festivals of Demeter; it was the maiden Iambe, the myth said, who drew the first smile from the mourning goddess. The iambic metre was at first used for satire; and it was in this strain that it was chiefly employed by its earliest master of note, Archilochus of Paros (670 B.C.). But it was adapted to the expression generally of any pointed thought. Thus it was suitable to fables. Elegiac and iambic poetry both belong to the borderland between epic and

lyric. While, however, elegy stands nearer to epos, iambic stands nearer to the lyric. Iambic poetry can express the personal feeling of the poet with greater intensity than elegy does; on the other hand, it has not the lyric flexibility, self-abandonment or glow. As we see in the case of Solon, iambic verse could serve for the expression of that deeper thought, that more inward self-communing, for which the elegiac form would have been inappropriate.

But these two forms of poetry, both Ionian, the elegiac and the iambic, belong essentially to the same stage of the literature. They stand between the Ionian epos and the lyric poetry of the Aeolians and Dorians. The earliest of the Greek elegists, Callinus and Tyrtaeus, use elegy to rouse a warlike spirit in sinking hearts. Archilochus too wrote warlike elegy, but used it also in other strains, as in lament for the dead. The elegy of Mimnermus of Smyrna or Colophon is the plaintive farewell of an ease-loving Ionian to the days of Ionian freedom. In Solon elegy takes a higher range; it becomes political and ethical.[3] Theognis represents the maturer union of politics with a proverbial philosophy. Another gnomic poet was Phocylides of Miletus; an admonitory poem extant under his name is probably the work of an Alexandrine Jewish Christian. Xenophanes gives a philosophic strain to elegy. With Simonides of Ceos it reverts, in an exquisite form, to its earliest destination, and becomes the vehicle of epitaph on those who fell in the Persian Wars. Iambic verse was used by Simonides (or Semonides) of Amorgus, as by Archilochus, for satire—but satire directed against classes rather than persons. Solon's iambics so far preserve the old associations of the metre that they represent the polemical or controversial side of his political poetry. Hipponax of Ephesus was another iambic satirist—using the σκάζων ("limping") or choliambic verse, produced by substituting a spondee for an iambus in the last place. But it was not until the rise of the Attic drama that the full capabilities of iambic verse were seen.

Lyric poetry.

The lyric poetry of early Greece may be regarded as the final form of that effort at self-expression which in the elegiac and iambic is still incomplete. The lyric expression is deeper and more impassioned. Its intimate union with music and with the rhythmical movement of the dance gives to it more of an ideal character. At the same time the continuity of the music permits pauses to the voice—pauses necessary as reliefs after a climax. Before lyric poetry could be effective, it was necessary that some progress should have been made in the art of music. The instrument used by the Greeks to accompany the voice was the four-stringed lyre, and the first great epoch in Greek music was when Terpander of Lesbos (660 B.C.), by adding three strings, gave the lyre the compass of the octave. Further improvements are ascribed to Olympus and Thaletas. By 500 B.C. Greek music had probably acquired all the powers of expression which the lyric poet could demand. The period of Greek lyric poetry may be roughly defined as from 670 to 440 B.C. Two different parts in its development were taken by the Aeolians and the Dorians.

Aeolian school.

The lyric poetry of the Aeolians—especially of Lesbos—was essentially the utterance of personal feeling, and was usually intended for a single voice, not for a chorus. Lesbos, in the 7th century B.C., had attained some naval and commercial importance. But the strife of oligarchy and democracy was active; the Lesbian nobles were often driven by revolution to exchange their luxurious home-life for the hardships of exile. It is such a life of contrasts and excitements, working on a sensuous and fiery temperament, that is reflected in the fragments of Alcaeus. In these glimpses of war and love, of anxiety for the storm-tossed state and of careless festivity, there is much of the cavalier spirit; if Archilochus is in certain aspects a Greek Byron, Alcaeus might be compared to Lovelace. The other great representative of the Aeolian lyric is Sappho, the only woman of Greek race who is known to have possessed poetical genius of the first order. Intensity and melody are the characteristics of the fragments that remain to us.[4] Probably no poet ever surpassed Sappho as an interpreter of passion in exquisitely subtle harmonies of form and sound. Anacreon of Teos, in Ionia, may be classed with the Aeolian lyrists in so far as the matter and form of his work resembled theirs, though the dialect in which he wrote was mainly the Ionian. A few fragments remain from his hymns to the gods, from love-poems and festive songs. The collection of sixty short pieces which passes current under his name date only from the 10th century. The short poems which it comprises are of various age and authorship, probably ranging in date from *c.* 200 B.C. to A.D. 400 or 500. They have not the pure style, the flexible grace, or the sweetness of the classical fragments; but the verses, though somewhat mechanical, are often pretty.

Dorian school.

The Dorian lyric poetry, in contrast with the Aeolian, had more of a public than of a personal character, and was for the most part choral. Hymns or choruses for the public worship of the gods, and odes to be sung at festivals on occasions of public interest, were its characteristic forms. Its central inspiration was the pride of the Dorians in the Dorian past, in their traditions of worship, government

and social usage. The history of the Dorian lyric poetry does not present us with vivid expressions of personal character, like those of Alcaeus and Sappho, but rather with a series of artists whose names are associated with improvements of form. Thus Alcman (the Doric form of Alcmaeon; 660 B.C.) is said to have introduced the balanced movement of strophe and antistrophe. Stesichorus, of Himera in Sicily, added the epode, sung by the chorus while stationary after these movements; Arion of Methymna in Lesbos gave a finished form to the choral hymn ("dithyramb") in honour of Dionysus, and organized the "cyclic" or circular chorus which sang it at the altar. Ibycus of Rhegium (*c.* 540) wrote choral lyrics after Stesichorus and glowing love-songs in the Aeolic style.

Simonides and Pindar.

The culmination of the lyric poetry is marked by two great names, Simonides and Pindar. Simonides (556-468) was an Ionian of the island of Ceos, but his lyrics belonged by form to the choral Dorian school. Many of his subjects were taken from the events of the Persian wars: his epitaphs on those who fell at Thermopylae and Salamis were celebrated. In him the lyric art of the Dorians is interpreted by Ionian genius, and Athens—where part of his life was passed—is the point at which they meet. Simonides is the first Greek lyrist whose significance is not merely Aeolian or Dorian but Panhellenic. The same character belongs even more completely to his younger contemporary. Pindar (518-*c.* 443) was born in Boeotia of a Dorian stock; thus, as Ionian and Dorian elements meet in Simonides, so Dorian and Aeolian elements meet in Pindar. Simonides was perhaps the most tender and most exquisite of the lyric poets. Pindar was the boldest, the most fervid and the most sublime. His extant fragments[5] represent almost every branch of the lyric art. But he is known to us mainly by forty-four *Epinicia*, or odes of victory, for the Olympian, Pythian, Nemean and Isthmian festivals. The general characteristic of the treatment is that the particular victory is made the occasion of introducing heroic legends connected with the family or city of the victor, and of inculcating the moral lessons which they teach. No Greek lyric poetry can be completely appreciated apart from the music, now lost, to which it was set. Pindar's odes were, further, essentially occasional poems; they abound in allusions of which the effect is partly or wholly lost on us; and the glories which they celebrate belong to a life which we can but imperfectly realize. Of all the great Greek poets, Pindar is perhaps the one to whom it is hardest for us to do justice; yet we can at least recognize his splendour of imagination, his strong rapidity and his soaring flight.

Bacchylides of Ceos (*c.* 504-430), the youngest of the three great lyric poets and nephew of Simonides, was known only by scanty fragments until the discovery of nineteen poems on an Egyptian papyrus in 1896. They consist of thirteen (or fourteen) epinicia, two of which celebrate the same victories as two odes of Pindar. The papyrus also contains six odes for the festivals of gods or heroes. The poems contain valuable information on the court life of the time and legendary history. Bacchylides, the little "Cean nightingale," is inferior to his great rival Pindar, "the Swan of Dirce," in originality and splendour of language, but he writes simply and elegantly, while his excellent γνῶμαι attracted readers of a philosophical turn of mind, amongst them the emperor Julian.

Similarly, the scanty fragments of Timotheus of Miletus (d. 357), musical composer and poet, and inventor of the eleven-stringed lyre, were increased by the discovery in 1902 of some 250 lines of his "nome" the *Persae*, written after the manner of Terpander. The beginning is lost; the middle describes the battle of Salamis; the end is of a personal nature. The papyrus is the oldest Greek MS. and belongs to the age of Alexander the Great. The language is frequently very obscure, and the whole is a specimen of lyric poetry in its decline.

(B) *The Attic Literature.*—The Ionians of Asia Minor, the Aeolians and the Dorians had now performed their special parts in the development of Greek literature. Epic poetry had interpreted the heroic legends of warlike deeds done by Zeus-nourished kings and chiefs. Then, as the individual life became more and more elegiac and iambic poetry had become the social expression of that life in all its varied interests and feelings. Lastly, lyric poetry had arisen to satisfy a twofold need—to be the more intense utterance of personal emotion, or to give choral voice, at stirring moments, to the faith or fame, the triumph or the sorrow, of a city or a race. A new form of poetry was now to be created, with elements borrowed from all the rest. And this was to be achieved by the people of Attica, in whose character and language the distinctive traits of an Ionian descent were tempered with some of the best qualities of the Dorian stock.

Origin of

The drama (*q.v.*) arose from the festivals of Dionysus, the god of wine, which were held at intervals from the beginning of winter to the beginning of spring. A troop of rustic worshippers would gather around the altar of the god, and sing a hymn in his honour, telling of his victories or sufferings in his progress over the

drama. Tragedy.

earth. “Tragedy” meant “the goat-song,” a goat (τράγος) being sacrificed to Dionysus before the hymn was sung. “Comedy,” “the village-song,” is the same hymn regarded as an occasion for rustic jest. Then the leader of the chorus would assume the part of a messenger from Dionysus, or even that of the god himself, and recite an adventure to the worshippers, who made choral response. The next step was to arrange a dialogue between the leader (κορυφαῖος, *coryphaeus*) and one chosen member of the chorus, hence called “the answerer” (ὑποκριτής, *hypocritēs*, afterwards the ordinary word for “actor”). This last improvement is ascribed to the Attic Thespis (about 536 B.C.). The elements of drama were now ready. The choral hymn to Dionysus (the “dithyramb”) had received an artistic form from the Dorians; dialogue, though only between the leader of the chorus and a single actor, had been introduced in Attica. Phrynichus, an Athenian, celebrated in this manner some events of the Persian Wars; but in his “drama” there was still only one actor. Choerilus of Athens and Pratinas of Phlius, who belonged to the same period, developed the satyric drama; Pratinas also wrote tragedies, dithyrambs, and *hyporchemata* (lively choral odes chiefly in honour of Apollo).

Aeschylus.

Aeschylus (born 525 B.C.) became the real founder of tragedy by introducing a second actor, and thus rendering the dialogue independent of the chorus. At the same time the choral song—hitherto the principal part of the performance—became subordinate to the dialogue; and drama was mature. Aeschylus is also said to have made various improvements of detail in costume and the like; and it was early in his career that the theatre of Dionysus under the acropolis was commenced—the first permanent home of Greek drama, in place of the temporary wooden platforms which had hitherto been used. The system of the “trilogy” and the “tetralogy” is further ascribed to Aeschylus,—the “trilogy” being properly a series of three tragedies connected in subject, such as the *Agamemnon*, *Choëphori*, *Eumenides*, which together form the *Oresteia*, or Story of Orestes. The “tetralogy” is such a triad with a “satyric drama” added—that is, a drama in which “satyrs,” the grotesque woodland beings who attended on Dionysus, formed the chorus, as in the earlier dithyramb from which drama sprang. The *Cyclops* of Euripides is the only extant specimen of a satyric drama. In the seven tragedies which alone remain of the seventy which Aeschylus is said to have composed, the forms of kings and heroes have a grandeur which is truly Homeric; there is a spirit of Panhellenic patriotism such as the Persian Wars in which he fought might well quicken in a soldier-poet; and, pervading all, there is a strain of speculative thought which seeks to reconcile the apparent conflicts between the gods of heaven and of the underworld by the doctrine that both alike, constrained by necessity, are working out the law of righteousness.

Sophocles.

Sophocles, who was born thirty years after Aeschylus (495 B.C.), is the most perfect artist of the ancient drama. No one before or after him gave to Greek tragedy so high a degree of ideal beauty, or appreciated so finely the possibilities and the limitations of its sphere. He excels especially in drawing character; his *Antigone*, his *Ajax*, his *Oedipus*—indeed, all the chief persons of his dramas—are typical studies in the great primary emotions of human nature. He gave a freer scope to tragic dialogue by adding a third actor; and in one of his later plays, the *Oedipus at Colonus*, a fourth actor is required. From the time when he won the tragic prize against Aeschylus in 468 to his death in 405 B.C. he was the favourite dramatist of Athens; and for us he is not only a great dramatist, but also the most spiritual representative of the age of Pericles. The distinctive interest of Euripides is of another kind. He was only fifteen years younger than Sophocles; but when he entered on his poetical career, the old inspirations of tragedy were already failing. Euripides marks a period of transition in the tragic art, and is, in fact, the mediator between the classical and the romantic drama. The myths and traditions with which the elder dramatists had dealt no longer commanded an unquestioning faith. Euripides himself was imbued with the new intellectual scepticism of the day; and the speculative views which were conflicting in his own mind are reflected in his plays. He had much picturesque and pathetic power; he was a master of expression; and he shows ingenuity in devising fresh resources for tragedy—especially in his management of the choral songs. Aeschylus is Panhellenic, Sophocles is Athenian, Euripides is cosmopolitan. He stands nearer to the modern world than either of his predecessors; and though with him Attic tragedy loses its highest beauty, it acquires new elements of familiar human interest.

Euripides.

In Attica, as in England, a period of rather less than fifty years sufficed for the complete development of the tragic art. The two distinctive characteristics of Athenian drama are its originality and its abundance. The Greeks of Attica were not the only inventors of drama, but they were the first people who made drama a complete work of art. And the great tragic poets of Attica were remarkably prolific. Aeschylus was the reputed author of 70 tragedies, Sophocles of 113, Euripides of 92; and there were others whose productiveness was equally great.

Comedy represented the lighter side, as tragedy the graver side, of the Dionysiac worship; it was the joy of spring following the gloom of winter. The process of growth was nearly the same as in tragedy; but the Dorians, not the Ionians of Attica, were the first who added dialogue to the comic chorus. Susarion, a Dorian of Megara, exhibited, about 580 B.C., pieces of the kind known as "Megarian farces." Epicharmus of Cos (who settled at Syracuse) gave literary form to the Doric farce, and treated in burlesque style the stories of gods and heroes, and subjects taken from everyday life. His Syracusan contemporary Sophron (*c.* 450) was a famous writer of mimes, chiefly scenes from low-class life. The most artistic form of comedy seems, however, to have been developed in Attica. The greatest names before Aristophanes are those of Cratinus and Eupolis; but from about 470 B.C. there seems to have been a continuous succession of comic dramatists, amongst them Plato Comicus, the author of 28 comedies, political satires and parodies after the style of the Middle Comedy. Aristophanes came forward as a comic poet in 427 B.C., and retained his popularity for about forty years. He presents a perhaps unique union of bold fancy, exquisite humour, critical acumen and lyrical power. His eleven extant comedies may be divided into three groups, according as the licence of political satire becomes more and more restricted. In the *Acharnians*, *Knights*, *Clouds*, *Wasps* and *Peace* (425-421) the poet uses unrestrained freedom. In the *Birds*, *Lysistrata*, *Thesmophoriazusae* and *Frogs* (414-405) a greater reserve may be perceived. Lastly, in the *Ecclesiazusae* and the *Plutus* (392-388) personal satire is almost wholly avoided. The same general tendency continued. The so-called "Middle Comedy" (390-320) represents the transition from the Old Comedy, or political satire, to satire of a literary or social nature; its chief writers were Antiphanes of Athens and Alexis of Thurii. The "New Comedy" (320-250) resembled the modern "comedy of manners."

Comedy.

Aristophanes.

Its chief representative was Menander (342-291), the author of 105 comedies. Fragments have been discovered of seven of these, of sufficient length to give an idea of their dramatic action. His plays were produced on the stage as late as the time of Plutarch, and his γνῶμαι, distinguished by worldly wisdom, were issued in the form of anthologies, which enjoyed great popularity. Other prominent writers of this class were Diphilus, Philemon, Posidippus and Apollodorus of Carystus. About 330 B.C. Rhinthon of Tarentum revived the old Doric farce in his *Hilarotragoediae* or travesties of tragic stories. These successive periods cannot be sharply or precisely marked off. The change which gradually passed over the comic drama was simply the reflection of the change which passed over the political and social life of Athens. The Old Comedy, as we see it in the earlier plays of Aristophanes, was probably the most powerful engine of public criticism that has ever existed in any community. Unsparing personality was its essence. The comic poet used this recognized right on an occasion at once festive and sacred, in a society where every man of any note was known by name and sight to the rest. The same thousands who heard a policy or a character denounced or lauded in the theatre might be required to pass sentence on it in the popular assembly or in the courts of law.

The development of Greek poetry had been completed before a prose literature had begun to exist. The earliest name in extant Greek prose literature is that of Herodotus; and, when he wrote, the Attic drama had already passed its prime. There had been, indeed, writers of prose before Herodotus; but there had not been, in the proper sense of the term, a prose literature. The causes of this comparatively late origin of Greek literary prose are independent of the question as to the time at which the art of writing began to be generally used for literary purposes. Epic poetry exercised for a very long period a sovereign spell over the Greek mind. In it was deposited all that the race possessed of history, theology, philosophy, oratory. Even after an age of reflection had begun, elegiac poetry, the first offshoot of epic, was, with iambic verse, the vehicle of much which among other races would have been committed to prose. The basis of Greek culture was essentially poetical. A political cause worked in the same direction. In the Eastern monarchies the king was the centre of all, and the royal records afforded the elements of history from a remote date. The Greek nation was broken up into small states, each busied with its own affairs and its own men. It was the collision between the Greek and the barbarian world which first provided a national subject for a Greek historian. The work of Herodotus, in its relation to Greek prose, is so far analogous to the *Iliad* in its relation to Greek poetry, that it is the earliest work of art, and that it bears a Panhellenic stamp.

Literary prose.

The sense and the degree in which Herodotus was original may be inferred from what is known of earlier prose-writers. For about a century before Herodotus there had been a series of writers in philosophy, mythology, geography and history. The earliest, or among the earliest, of the philosophical writers were Pherecydes of Syros

Early prose

writers. (550 B.C.) and the Ionian Anaximenes and Anaximander. It is doubtful whether Cadmus of Miletus, supposed to have been the first prose writer, was an historical personage. The Ionian writers, especially called λογογράφοι, "narrators in prose" (as distinguished from ἐποποιοί, makers of verse), were those who compiled the myths, especially in genealogies, or who described foreign countries, their physical features, usages and traditions. Hecataeus of Miletus (500 B.C.) is the best-known representative of the *logographi* in both these branches. Hellanicus of Mytilene (450 B.C.), among whose works was a history of Attica, appears to have made a nearer approach to the character of a systematic historian. Other logographi were Charon of Lampsacus; Pherecydes of Leros, who wrote on the myths of early Attica; Hippys of Rhegium, the oldest writer on Italy and Sicily; and Acusilaus of Argos in Boeotia, author of genealogies (see LOGOGRAPHI, and GREECE: *Ancient History*, "Authorities").

Herodotus. Herodotus was born in 484 B.C.; and his history was probably not completed before the beginning of the Peloponnesian War (431 B.C.). His subject is the struggle between Greece and Asia, which he deduces from the legendary rape of the Argive Io by Phoenicians, and traces down to the final victory of the Greeks over the invading host of Xerxes. His literary kinship with the historical or geographical writers who had preceded him is seen mainly in two things. First, though he draws a line between the mythological and the historical age, he still holds that myths, as such, are worthy to be reported, and that in certain cases it is part of his duty to report them. Secondly, he follows the example of such writers as Hecataeus in describing the natural and social features of countries. He seeks to combine the part of the geographer or intelligent traveller with his proper part as historian. But when we turn from these minor traits to the larger aspects of his work, Herodotus stands forth as an artist whose conception and whose method were his own. His history has an epic unity. Various as are the subordinate parts, the action narrated is one, great and complete; and the unity is due to this, that Herodotus refers all events of human history to the principle of divine Nemesis. If Sophocles had told the story of Oedipus in the *Oedipus Tyrannus* alone, and had not added to it the *Oedipus at Colonus*, it would have been comparable to the story of Xerxes as told by Herodotus. Great as an artist, great too in the largeness of his historical conception, Herodotus fails chiefly by lack of insight into political cause and effect, and by a general silence in regard to the history of political institutions. Both his strength and his weakness are seen most clearly when he is contrasted with that other historian who was strictly his contemporary and who yet seems divided from him by centuries.

Thucydides. Thucydides was only thirteen years younger than Herodotus; but the intellectual space between the men is so great that they seem to belong to different ages. Herodotus is the first artist in historical writing; Thucydides is the first thinker. Herodotus interweaves two threads of causation—human agency, represented by the good or bad qualities of men, and divine agency, represented by the vigilance of the gods on behalf of justice. Thucydides concentrates his attention on the human agency (without, however, denying the other), and strives to trace its exact course. The subject of Thucydides is the Peloponnesian War. In resolving to write its history, he was moved, he says, by these considerations. It was probably the greatest movement which had ever affected Hellas collectively. It was possible for him as a contemporary to record it with approximate accuracy. And this record was likely to have a general value, over and above its particular interest as a record, seeing that the political future was likely to resemble the political past. This is what Thucydides means when he calls his work "a possession for ever." The speeches which he ascribes to the persons of the history are, as regards form, his own essays in rhetoric of the school to which Antiphon belongs. As regards matter, they are always so far dramatic that the thoughts and sentiments are such as he conceived possible for the supposed speaker. Thucydides abstains, as a rule, from moral comment; but he tells his story as no one could have told it who did not profoundly feel its tragic force; and his general claim to the merit of impartiality is not invalidated by the possible exceptions—difficult to estimate—in the cases of Cleon and Hyperbolus.

Xenophon. Strong as is the contrast between Herodotus and Thucydides, their works have yet a character which distinguish both alike from the historical work of Xenophon in the *Anabasis* and the *Hellenica*. Herodotus gives us a vivid drama with the unity of an epic. Thucydides takes a great chapter of contemporary history and traces the causes which are at work throughout it, so as to give the whole a scientific unity. Xenophon has not the grasp either of the dramatist or of the philosopher. His work does not possess the higher unity either of art or of science. The true distinction of Xenophon consists in his thorough combination of the practical with the literary character. He was an accomplished soldier, who had done and seen much. He was also a good writer,

who could make a story both clear and lively. But the several parts of the story are not grouped around any central idea, such as a divine Nemesis is for Herodotus, or such as Thucydides finds in the nature of political man. The seven books of the *Hellenica* form a supplement to the history of Thucydides, beginning in 411 and going down to 362 B.C. The chief blot on the *Hellenica* is the author's partiality to Sparta, and in particular to Agesilaus. Some of the greatest achievements of Epaminondas and Pelopidas are passed over in silence. On the whole, Xenophon is perhaps seen at his best in his narrative of the *Retreat of the Ten Thousand*—a subject which exactly suits him. The *Cyropaedeia* is a romance of little historical worth, but with many good passages. *The Recollections of Socrates*, on the other hand, derive their principal value from being uniformly matter-of-fact. In his minor pieces on various subjects Xenophon appears as the earliest essayist. It may be noted that one of the essays erroneously ascribed to him—that *On the Athenian Polity*—is probably the oldest specimen in existence of literary Attic prose.

His contemporaries Ctesias of Cnidus and Philistus of Syracuse wrote histories of Persia and Sicily. In the second half of the 4th century a number of histories were compiled by literary men of little practical knowledge, who had been trained in the rhetorical schools. Such were Ephorus of Cyme and Theopompus of Chios, both pupils of Isocrates; and the writers of *Atthides* (chronicles of Attic history), the chief of whom were Androtion and Philochorus. Timaeus of Tauromenium was the author of a great work on Sicily, and introduced the system of reckoning by Olympiads.

Oratory.

The steps by which an Attic prose style was developed, and the principal forms which it assumed, can be traced most clearly in the Attic orators. Every Athenian citizen who aspired to take part in the affairs of the city, or even to be qualified for self-defence before a law-court, required to have some degree of skill in public speaking; and an Athenian audience looked upon public debate, whether political or forensic, as a competitive trial of proficiency in a fine art. Hence the speaker, no less than the writer, was necessarily a student of finished expression; and oratory had a more direct influence on the general structure of literary prose than has ever perhaps been the case elsewhere. A systematic rhetoric took its rise in Sicily, where Corax of Syracuse (466 B.C.) devised his *Art of Words* to assist those who were pleading before the law-courts; and it was brought to Athens by his disciple Tisias. The teaching of the Sophists, again, directed attention, though in a superficial and imperfect way, to the elements of grammar and logic; and Gorgias of Leontini—whose declamation, however turgid, must have been striking—gave an impulse at Athens to the taste for elaborate rhetorical brilliancy.

The Attic orators.

Antiphon represents the earliest, and what has been called the grand, style of Attic prose; its chief characteristics are a grave, dignified movement, a frequent emphasis on verbal contrasts, and a certain austere elevation. The interest of Andocides is mainly historical; but he has graphic power. Lysias, the representative of the "plain style," breaks through the rigid mannerism of the elder school, and uses the language of daily life with an ease and grace which, though the result of study, do not betray their art. He is, in his own way, the canon of an Attic style; and his speeches, written for others, exhibit also a high degree of dramatic skill. Isocrates, whose manner may be regarded as intermediate between that of Antiphon and that of Lysias, wrote for readers rather than for hearers. The type of literary prose which he founded is distinguished by ample periods, by studied smoothness and by the temperate use of rhetorical ornament. From the middle of the 4th century B.C. the Isocratic style of prose became general in Greek literature. From the school of Rhodes, in which it became more florid, it passed to Cicero, and through him it has helped to shape the literary prose of the modern world. The speeches of Isaeus in will-cases are interesting,—apart from their bearing on Attic life,—because in them we see, as Dionysius says, "the seeds and the beginnings" of that technical mastery in rhetorical argument which Demosthenes carries to perfection.

Demosthenes.

Isaeus has also, in a degree, some of the qualities of Lysias. Demosthenes excels all other masters of Greek prose not only in power but in variety; his political speeches, his orations in public or private causes, show his consummate and versatile command over all the resources of the language. In him the development of Attic prose is completed, and the best elements in each of its earlier phases are united. The modern world can more easily appreciate Demosthenes as a great natural orator than as an elaborate artist. But, in order to apprehend his place in the history of Attic prose, we must remember that the ancients felt him to be both; and that he was even reproached by detractors with excessive study of effect. Aeschines is the most theatrical of the Greek orators; he is vehement, and often brilliant, but seldom persuasive. Hypereides was, after Demosthenes, probably the most effective; he had much of the grace of Lysias, but also a wit, a fire and a pathos which were his own. Portions of six of his speeches, found in

Egypt between 1847 and 1890, are extant. The one oration of Lycurgus which remains to us is earnest and stately, reminding us both of Antiphon and of Isocrates. Dinarchus was merely a bad imitator of Demosthenes. There seems more reason to regret that Demades is not represented by larger fragments. The decline of Attic oratory may be dated from Demetrius of Phalerum (318 B.C.), the pupil of Aristotle, and the first to introduce the custom of making speeches on imaginary subjects as practised in the rhetorical schools. Cicero names him as the first who impaired the vigour of the earlier eloquence, "preferring his own sweetness to the weight and dignity of his predecessors." He forms a connecting link between Athens and Alexandria, where he found refuge after his downfall and promoted the foundation of the famous library.

In later times oratory chiefly flourished in the coast and island settlements of Asia Minor, especially Rhodes. Here a new, florid style of oration arose, called the "Asiatic," which owed its origin to Hegesias of Magnesia (*c.* 250 B.C.).

Philosophical prose—Plato and Aristotle.

The place of Plato in the history of Greek literature is as unique as his place in the history of Greek thought. The literary genius shown in the dialogues is many-sided: it includes dramatic power, remarkable skill in parody, a subtle faculty of satire, and, generally, a command over the finer tones of language. In passages of continuous exposition, where the argument rises into the higher regions of discussion, Plato's prose takes a more decidedly poetical colouring—never florid or sentimental, however, but lofty and austere. In Plato's later works—such, for instance, as the *Laws*, *Timaeus*, *Critias*—we can perceive that his style did not remain unaffected by the smooth literary prose which contemporary writers had developed. Aristotle's influence on the form of Attic prose literature would probably have been considerable if his *Rhetoric* had been published while Attic oratory had still a vigorous life before it. But in this, as in other departments of mental effort, it was Aristotle's lot to set in order what the Greek intellect had done in that creative period which had now come to an end. His own chief contribution to the original achievements of the race was the most fitting one that could have been made by him in whose lifetime they were closed. He bequeathed an instrument by which analysis could be carried further, he founded a science of reasoning, and left those who followed him to apply it in all those provinces of knowledge which he had mapped out.[6] Theophrastus, his pupil and his successor in the Lyceum, opens the new age of research and scientific classification with his extant works on botany, but is better known to modern readers by his lively *Characters*, the prototypes of such sketches in English literature as those of Hall, Overbury and Earle.

Character of the creative age.

(C) *The Literature of the Decadence.*—The period of decadence in Greek literature begins with the extinction of free political life in the Greek cities. So long as the Greek commonwealths were independent and vigorous, Greek life rested on the identity of the man with the citizen. The city state was the highest unit of social organization; the whole training and character of the man were viewed relatively to his membership of the city. The market-place, the assembly, the theatre were places of frequent meeting, where the sense of citizenship was quickened, where common standards of opinion or feeling were formed. Poetry, music, sculpture, literature, art, in all their forms, were matters of public interest. Every citizen had some degree of acquaintance with them, and was in some measure capable of judging them. The poet and the musician, the historian and the sculptor, did not live a life of studious seclusion or engrossing professional work. They were, as a rule, in full sympathy with the practical interests of their time. Their art, whatever its form might be, was the concentrated and ennobled expression of their political existence. Aeschylus breathed into tragedy the inspiration of one who had himself fought the great fight of national liberation. Sophocles was the colleague of Pericles in a high military command. Thucydides describes the operations of the Peloponnesian War with the practical knowledge of one who had been in charge of a fleet. Ictinus and Pheidias gave shape in stone, not to mere visions of the studio, but to the more glorious, because more real and vivid, perceptions which had been quickened in them by a living communion with the Athenian spirit, by a daily contemplation of Athenian greatness, in the theatre where tragic poets idealized the legends of the past, in the ecclesia where every citizen had his vote on the policy of the state, or in that free and gracious society, full of beauty, yet exempt from vexatious constraint, which belonged to the age of Pericles. The tribunal which judged these works of literature or art was such as was best fitted to preserve the favourable conditions under which they arose. Criticism was not in the hands of a literary clique or of a social caste. The influence of jealousy or malevolence, and the more fatal influence of affectation, had little power to affect the verdict. The verdict was pronounced by the whole body of the citizens. The success or failure of a tragedy was decided, not by the minor circumstance that it gained the first or second prize, but by the

collective opinion of the citizens assembled in the theatre of Dionysus. A work of architecture or sculpture was approved or condemned, not by the sentence of a few whom the multitude blindly followed, but by the general judgment of some twenty thousand persons, each of whom was in some degree qualified by education and by habit to form an independent estimate. The artist worked for all his fellow-citizens, and knew that he would be judged by all. The soul of his work was the fresh and living inspiration of nature; it was the ennobled expression of his own life; and the public opinion before which it came was free, intelligent and sincere.

The transition to Hellenism.

Philip of Macedon did not take away the municipal independence of the Greek cities, but he dealt a death-blow to the old political life. The Athenian poet, historian, artist might still do good work, but he could never again have that which used to be the very mainspring of all such activity—the daily experience and consciousness of participation in the affairs of an independent state. He could no longer breathe the invigorating air of constitutional freedom, or of the social intercourse to which that freedom lent dignity as well as grace. Then came Alexander's conquests; Greek civilization was diffused over Asia and the East by means of Greek colonies in which Asiatic and Greek elements were mingled. The life of such settlements, under the monarchies into which Alexander's empire broke up, could not be animated by the spirit of the Greek commonwealths in the old days of political freedom. But the externals of Greek life were there—the temples, the statues, the theatres, the porticos. Ceremonies and festivals were conducted in the Greek manner. In private life Greek usages prevailed. Greek was the language most used; Greek books were in demand. The mixture of races would always in some measure distinguish even the outward life of such a community from that of a pure Greek state; and the facility with which Greek civilization was adopted would vary in different places. Syria, for example, was rapidly and completely Hellenized. Judaea resisted the process to the last. In Egypt a Greek aristocracy of office, birth and intellect existed side by side with a distinct native life. But, viewed in its broadest aspect, this new civilization may be called Hellenism. Hellenism (*q.v.*) means the adoption of Hellenic ways; and it is properly applied to a civilization, generally Hellenic in external things, pervading people not necessarily or exclusively Hellenic by race. What the Hellenic literature was to Hellas, that the Hellenistic literature was to Hellenism. The literature of Hellenism has the Hellenic form without the Hellenic soul. The literature of Hellas was creative; the literature of Hellenism is derivative.

The Alexandrian period. Poetry.

Alexandria was the centre of Greek intellectual activity from Alexander to Augustus. Its "Museum," or college, and its library, both founded by the first Ptolemy (Soter), gave it such attractions for learned men as no other city could rival. The labours of research or arrangement are those which characterize the Alexandrian period. Even in its poetry spontaneous motive was replaced by erudite skill, as in the hymns, epigrams and elegies of Callimachus, in the enigmatic verses of Lycophron, in the highly finished epic of Apollonius Rhodius, and in the versified lore, astronomical or medical, of Aratus and Nicander. The mimes of Herodas (or Herondas) of Cos (*c.* 200 B.C.), written in the Ionic dialect and choliambic verse, represent scenes from everyday life. The papyrus (published in 1891) contains seven complete poems and fragments of an eighth. They are remarkably witty and full of shrewd observations, but at times coarse. The pastoral poetry of the age—Dorian by origin—was the most pleasing; for this, if it is to please at all, must have its spring in the contemplation of nature. Theocritus is not exempt from the artificialism of the Hellenizing literature; but his true sense of natural beauty entitles him to a place in the first rank of pastoral poets. Bion of Ionia and Moschus of Syracuse also charm by the music and often by the pathos of their bucolic verse. Excavations on the site of the temple of Asclepius at Epidaurus have brought to light two hexameter poems and a paean (in Ionic metre) on Apollo and Asclepius by a local poet named Isyllus, who flourished about 280. Tragedy was represented by the poets known as the Alexandrian *Pleiad*. But it is not for its poetry of any kind that this period of Greek literature is memorable. Its true work was in erudition and science. Aristarchus (156 B.C.), the greatest in a long line of Alexandrian critics, set the example of a more thorough method in revising and interpreting the ancient texts, and may in this sense be said to have become the founder of scientific scholarship. The critical studies of Alexandria, carried on by the followers of Aristarchus, gradually formed the basis for a science of grammar. The earliest Greek grammar is that of Dionysius Thrax (born *c.* 166), a pupil of Aristarchus. Translation was another province of work which employed the learned of Alexandria—where the Septuagint version of the Old Testament was begun, probably about 300-250 B.C. Chronology was treated scientifically by Eratosthenes, and was combined with history by Manetho in his chronicles of Egypt, and by Berossus in his chronicles of Chaldaea. Euclid was

Erudition and science.

at Alexandria in the reign of Ptolemy Soter. Herophilus and Erasistratus were distinguished physicians and anatomists, and the authors of several medical works. The general results of the Alexandrian period might perhaps be stated thus. Alexandria produced a few eminent men of science, some learned poets (in a few cases, of great literary merit) and many able scholars. The preservation of the best Greek literature was due chiefly to the unremitting care of the Alexandrian critics, whose appreciation of it partly compensated for the decay of the old Greek perceptions in literature and art, and who did their utmost to hand it down in a form as free as possible from the errors of copyists. On the whole, the patronage of letters by the Ptolemies had probably as large a measure of success as was possible under the existing conditions; and it was afforded at a time when there was special danger that a true literary tradition might die out of the world.

Summary.

The Graeco-Roman period in the literature of Hellenism may be dated from the Roman subjugation of Greece. “Greece made a captive of the rough conqueror,” but it did not follow from this intellectual conquest that Athens became once more the intellectual centre of the world. Under the empire, indeed, the university of Athens long enjoyed a pre-eminent reputation. But Rome gradually became the point to which the greatest workers in every kind were drawn. Greek literature had already made a home there before the close of the 2nd century B.C. Sulla brought a Greek library from Athens to Rome. Such men as Cicero and Atticus were indefatigable collectors and readers of Greek books. The power of speaking and writing the Greek language became an indispensable accomplishment for highly educated Romans. The library planned by Julius Caesar and founded by Augustus had two principal departments, one for Latin, the other for Greek works. Tiberius, Vespasian, Domitian and Trajan contributed to enlarge the collection. Rome became more and more the rival of Alexandria, not only as possessing great libraries, but also as a seat of learning at which Greek men of letters found appreciation and encouragement. Greek poetry, especially in its higher forms, rhetoric and literary criticism, history and philosophy, were all cultivated by Greek writers at Rome.

The Graeco-Roman period.

The first part of the Graeco-Roman period may be defined as extending from 146 B.C. to the close of the Roman republic. At its commencement stands the name of one who had more real affinity than any of his contemporaries with the great writers of old Athens, and who, at the same time, saw most clearly how the empire of the world was passing to Rome. The subject of Polybius (*c.* 205-120) was the history of Roman conquest from 264 to 146 B.C. His style, plain and straightforward, is free from the florid rhetoric of the time. But the distinction of Polybius is that he is the last Greek writer who in some measure retains the spirit of the old citizen-life. He chose his subject, not because it gave scope to learning or literary skill, but with a motive akin to that which prompted the history of Thucydides—namely, because, as a Greek citizen, he felt intensely the political importance of those wars which had given Rome the mastery of the world. The chief historical work which the following century produced—the *Universal History* of Diodorus Siculus (fl. *c.* 50 B.C.)—resembled that of Polybius in recognizing Rome as the political centre of the earth, as the point on which all earlier series of events converged. In all else Diodorus represents the new age in which the Greek historian had no longer the practical knowledge and insight of a traveller, a soldier or a statesman, but only the diligence, and usually the dullness, of a laborious compiler.

First part: 146-30 B.C.

The Greek literature of the Roman empire, from Augustus to Justinian, was enormously prolific. The area over which the Greek language was diffused—either as a medium of intercourse or as an established branch of the higher education—was co-extensive with the empire itself. An immense store of materials had now been accumulated, on which critics, commentators, compilers, imitators, were employed with incessant industry. In very many of its forms, the work of composition or adaptation had been reduced to a mechanical knack. If there is any one characteristic which broadly distinguishes the Greek literature of these five centuries, it is the absence of originality either in form or in matter. Lucian is, in his way, a rare exception; and his great popularity—he is the only Greek writer of this period, except Plutarch, who has been widely popular—illustrates the flatness of the arid level above which he stands out. The sustained abundance of literary production under the empire was partly due to the fact that there was no open political career. Never, probably, was literature so important as a resource for educated men; and the habit of reciting before friendly or obsequious audiences swelled the number of writers whose taste had been cultivated to a point just short of perceiving that they ought not to write.

Second part: 30 B.C.-A.D. 529.

In the manifold prose work of this period, four principal departments may be distinguished.

(1) *History*, with *Biography*, and *Geography*. History is represented by Dionysius of Halicarnassus—also memorable for his criticisms on the orators and his effort to revive a true standard of Attic prose—by Cassius Dio, Josephus, Arrian, Appian, Herodian, Eusebius and Zosimus. In biography, the foremost names are Plutarch, Diogenes Laërtius and Philostratus; in geography, Hipparchus of Nicaea, Strabo, Ptolemy and Pausanias. (2) *Erudition* and *Science.* The learned labours of the Alexandrian schools were continued in all their various fields. Under this head may be mentioned such works as the lexicons of Julius Pollux, Harpocration and Hesychius, Hephaestion's treatise on metre, and Herodian's system of accentuation; the commentaries of Galen on Plato and on Hippocrates; the learned miscellanies of Athenaeus, Aelian and Stobaeus; and the *Stratagems* of Polyaenus. (3) *Rhetoric* and *Belles-Lettres*. The most popular writers on the theory of rhetoric were Hermagoras, Hermogenes, Aphthonius and Cassius Longinus—the last the reputed author of the essay *On Sublimity*. Among the most renowned teachers of rhetoric—now distinctively called "Sophists," or rhetoricians—were Dio Chrysostom, Aelius Aristides, Themistius, Himerius, Libanius and Herodes Atticus. Akin to the rhetorical exercises were various forms of ornamental or imaginative prose—dialogues, letters, essays or novels. Lucian, in his dialogues, exhibits more of the classical style and of the classical spirit than any writer of the later age; he has also a remarkable affinity with the tone of modern satire, as in Swift or Voltaire. His Attic prose, though necessarily artificial, was at least the best that had been written for four centuries. The emperor Julian was the author both of orations and of satirical pieces. The chief of the Greek novelists (the forerunner of whom was Aristides of Miletus, *c.* 100 B.C., in his *Milesian Tales*) are Xenophon of Ephesus and Longus, representing a purely Greek type of romance, and Heliodorus—with his imitators Achilles Tatius and Chariton—representing a school influenced by Oriental fiction. There were also many Christian romances in Greek, usually of a religious tendency. Alciphron's fictitious *Letters*—founded largely on the New Comedy of Athens—represent the same kind of industry which produced the letters of Phalaris, Aristaenetus and similar collections. (4) *Philosophy* is represented chiefly by Epictetus and Marcus Aurelius, in both of whom the Stoic element is the prevailing one; by the Neoplatonists, such as Plotinus, Porphyry, Iamblichus; and by Proclus, of that eclectic school which arose at Athens in the 5th century A.D.

Departments of prose literature.

The Greek poetry of this period presents no work of high merit. Babrius versified the Aesopic *Fables*; Oppian (or two poets of this name) wrote didactic poems on fishing and hunting; Nonnus and Quintus Smyrnaeus made elaborate essays in epic verse; and the Orphic lore inspired some poems and hymns of a mystic character. The so-called *Sibylline Oracles*, in hexameter verse, range in date from about 170 B.C. to A.D. 700, and are partly the expression of the Jewish longings for the restoration of Israel, partly predictions of the triumph of Christianity. By far the most pleasing compositions in verse which have come to us from this age are some of the short poems in the Greek Anthology, which includes some pieces as early as the beginning of the 5th century B.C. and some as late as the 6th century of the Christian era.

Verse.

The Anthology.

The 4th century may be said to mark the beginning of the last stage in the decay of literary Hellenism. From that point the decline was rapid and nearly continuous. The attitude of the church towards it was no longer that which had been held by Clement of Alexandria, by Justin Martyr or by Origen. There was now a Christian Greek literature, and a Christian Greek eloquence of extraordinary power. The laity became more and more estranged from the Greek literature—however intrinsically pure and noble—of the pagan past. At the same time the Greek language—which had maintained its purity in Italian seats—was becoming corrupted in the new Greek Rome of the East. In A.D. 529 Justinian put forth an edict by which the schools of heathen philosophy were formally closed. The act had at least a symbolical meaning. It is necessary to guard against the supposition that such assumed landmarks in political or literary history always mark a definite transition from one order of things to another. But it is practically convenient, or necessary, to use such landmarks.

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(R. C. J.; X.)

II. Byzantine Literature

Definition.

By "Byzantine literature" is generally meant the literature, written in Greek, of the so-called Byzantine period. There is no justification whatever for the inclusion of Latin works of the time of the East Roman empire. The close of the Byzantine period is clearly marked by the year 1453, at which date, with the fall of the Eastern empire, the peculiar culture and literary life of the Byzantines came to an end. It is only as regards the beginning of the Byzantine period that any doubts exist. There are no sufficient grounds for dating it from Justinian, as was formerly often done. In surveying the whole development of the political, ecclesiastical and literary life and of the general culture of the Roman empire, and particularly of its eastern portion, we arrive, on the contrary, at the conclusion that the actual date of the beginning of this new era—*i.e.* the Christian-Byzantine, in contradistinction to the Pagan-Greek and Pagan-Roman—falls within the reign of Constantine the Great. By the foundation of the new capital city of Constantinople (which lay amid Greek surroundings) and by the establishment of the Christian faith as the state religion, Constantine finally broke with the Roman-Pagan tradition, and laid the foundation of the Christian-Byzantine period of development. Moreover, in the department of language, so closely allied with that of literature, the 4th century marks a new epoch. About this time occurred the final disappearance of a characteristic of the ancient Greek language, important alike in poetry and in rhythmic prose, the difference of "quantity." Its place was henceforth taken by the accent, which became a determining principle in poetry, as well as for the rhythmic conclusion of the prose sentence. Thus the transition from the old musical language to a modern conversational idiom was complete.

Transitional period.

The reign of Constantine the Great undoubtedly marks the beginning of a new period in the most important spheres of national life, but it is equally certain that in most of them ancient tradition long continued to exercise an influence. Sudden breaches of continuity are less common in the general culture and literary life of the world than in its political or ecclesiastical development. This is true of the transition from pagan antiquity to the Christian middle ages. Many centuries passed before the final victory of the new religious ideas and the new spirit in public and private intellectual and moral life. The last noteworthy remnants of paganism disappeared as late as the 6th and 7th centuries. The last great educational establishment which rested upon pagan foundations—the university of Athens—was not abolished till A.D. 529. The Hellenizing of the seat of empire and of the state, which was essential to the independent development of Byzantine literature, proceeds yet more slowly. The first purely *Greek* emperor was Tiberius II. (578-582); but the complete Hellenizing of the character of the state had not been accomplished until the 7th century. We shall, therefore, regard the period from the 4th to the

7th century as that of the transition between ancient times and the middle ages. This period coincides with the rise of a new power in the world's history—Islam. But though, in this transitional period, the old and the new elements are both to a large extent present and are often inextricably interwoven, yet it is certain that the new elements are, both as regards their essential force and their influence upon the succeeding period, of infinitely greater moment than the decrepit and mostly artificial survivals of the antique.

In order to estimate rightly the character of Byzantine literature and its distinctive peculiarities, in contradistinction to ancient Greek, it is imperative to examine the great difference between the civilizations that produced them. The Byzantine did not possess the homogeneous, organically constructed system of the ancient civilization, but was the outcome of an amalgamation of which Hellenism formed the basis. For, although the Latin character of the empire was at first completely retained, even after its final division in 395, yet the dominant position of Greek in the Eastern empire gradually led to the Hellenizing of the state. The last great act of the Latin tradition was the codification, in the Latin language, of the law by Justinian (527-565). But it is significant that the *Novels* of Justinian were composed partly in Greek, as were all the laws of the succeeding period. Of the emperors in the centuries following Justinian, many of course were foreigners, Isaurians, Armenians and others; but in language and education they were all Greeks. In the last five centuries of the empire, under the Comneni and the Palaeologi, court and state are purely Greek.

Mixed character of Byzantine culture.

In spite of the dominant position of Greek in the Eastern empire, a linguistic and national uniformity such as formed the foundation of the old Latin *Imperium Romanum* never existed there. In the West, with the expansion of Rome's political supremacy, the Latin language and Latin culture were everywhere introduced—first into the non-Latin provinces of Italy, later into Spain, Gaul and North Africa, and at last even into certain parts of the Eastern empire. This Latinizing was so thorough that it weathered all storms, and, in the countries affected by it, was the parent of new and vigorous nationalities, the French, the Spaniards, the Portuguese and the Rumanians. Only in Africa did "Latinism" fail to take root permanently. From the 6th century that province relapsed into the hands of the native barbarians and of the immigrant Arabs, and both the Latin and the Greek influences (which had grown in strength during the period of the Eastern empire) were, together with Christianity, swept away without leaving a trace behind. It might have been expected that the Hellenizing of the political system of the Eastern empire would have likewise entailed the Hellenizing of the non-Greek portions of the empire. Such, however, was not the case; for all the conditions precedent to such a development were wanting. The non-Greek portions of the Eastern empire were not, from the outset, gradually incorporated into the state from a Greek centre, as were the provinces in the West from a Latin centre. They had been acquired in the old period of the homogeneous Latin *Imperium*. In the centuries immediately following the division of the empire, the idea of Hellenizing the Eastern provinces could not take root, owing to the fact that Latin was retained, at least in principle, as the state language. During the later centuries, in the non-Greek parts, centrifugal tendencies and the destructive inroads of barbarians began on all sides; and the government was too much occupied with the all but impossible task of preserving the political unity of the empire to entertain seriously the wider aim of an assimilation of language and culture. Moreover, the Greeks did not possess that enormous political energy and force which enabled the Romans to assimilate foreign races; and, finally, they were confronted by sturdy Oriental, mostly Semitic, peoples, who were by no means so easy to subjugate as were the racially related inhabitants of Gaul and Spain. Their impotence against the peoples of the East will be still less hardly judged if we remember the fact already mentioned, that even the Romans were within a short period driven back and overwhelmed by the North African Semites who for centuries had been subjected to an apparently thorough process of Latinization.

The influence of Greek culture then, was very slight; how little indeed it penetrated into the oriental mind is shown by the fact that, after the violent Arab invasion in the south-east corner of the Mediterranean, the Copts and Syrians were able to retain their language and their national characteristics, while Greek culture almost completely disappeared. The one great instance of assimilation of foreign nationalities by the Greeks is the Hellenizing of the Slavs, who from the 6th century had migrated into central Greece and the Peloponnese. All other non-Greek tribes of any importance which came, whether for longer or for shorter periods, within the sphere of the Eastern empire and its civilization—such as the Copts, Syrians, Armenians, Georgians, Rumanians, Serbs, Bulgarians, Albanians—one and all retained their nationality and language. The complete Latinizing of the West has, accordingly, no counterpart in a similar Hellenizing of the East. This is clearly shown during the Byzantine period in the progress of Christianity. Everywhere in the West, even among the

non-Romanized Anglo-Saxons, Irish and Germans, Latin maintained its position in the church services and in the other branches of the ecclesiastical system; down to the Reformation the church remained a complete organic unity. In the East, at the earliest period of its conversion to Christianity, several foreign tongues competed with Greek, *i.e.* Syrian, Coptic, Armenian, Georgian, Gothic, Old-Bulgarian and others. The sacred books were translated into these languages and the church services were held in them and not in Greek. One noticeable effect of this linguistic division in the church was the formation of various sects and national churches (cf. the Coptic Nestorians, the Syrian Monophysites, the Armenian and, in more recent times, the Slavonic national churches). The Church of the West was characterized by uniformity in language and in constitution. In the Eastern Church parallel to the multiplicity of languages developed also a corresponding variety of doctrine and constitution.

Though the character of Byzantine culture is mainly Greek, and Byzantine literature is attached by countless threads to ancient Greek literature, yet the Roman element forms a very essential part of it. The whole political character of the Byzantine empire is, despite its Greek form and colouring, genuinely Roman. Legislation and administration, the military and naval traditions, are old Roman work, and as such, apart from immaterial alterations, they continued to exist and operate, even when the state in head and limbs had become Greek. It is strange, indeed, how strong was the political conception of the Roman state (*Staatsgedanke*), and with what tenacity it held its own, even under the most adverse conditions, down to the latter days of the empire. The Greeks even adopted the name “Romans,” which gradually became so closely identified with them as to supersede the name “Hellenes”; and thus a political was gradually converted into an ethnographical and linguistic designation. *Rhomaioi* was the most common popular term for Greeks during the Turkish period, and remains so still. The old glorious name “Hellene” was used under the empire and even during the middle ages in a contemptuous sense—“Heathen”—and has only in quite modern times, on the formation of the kingdom of “Hellas,” been artificially revived. The vast organization of the Roman political system could not but exercise in various ways a profound influence upon Byzantine civilization; and it often seemed as if Roman political principles had educated and nerved the unpolitical Greek people to great political enterprise. The Roman influence has left distinct traces in the Greek language, Greek of the Byzantine and modern period is rich in Latin terms for conceptions connected with the departments of justice, administration and the imperial court. In literature such “barbarisms” were avoided as far as possible, and were replaced by Greek periphrases.

Roman influence.

But by far the most momentous and radical change wrought on the old Hellenism was effected by Christianity; and yet the transition was, in fact, by no means so abrupt as one might be led to believe by comparing the Pagan-Hellenic culture of Plato’s day with the Christian-Byzantine of the time of Justinian. For the path had been most effectually prepared for the new religion by the crumbling away of the ancient belief in the gods, by the humane doctrine of the Stoics, and, finally, by the mystic intellectual tendencies of Neoplatonism. Moreover, in many respects Christianity met paganism halfway by adapting itself to popular usages and ideas and by adopting important parts of the pagan literature. The whole educational system especially, even in Christian times, was in a very remarkable manner based almost entirely on the methods and material inherited from paganism. Next to the influences of Rome and of Christianity, that of the East was of importance in developing the Byzantine civilization, and in lending Byzantine literature its distinctive character. Much that was oriental in the Eastern empire dates back to ancient times, notably to the period of Alexander the Great and his successors. Since the Greeks had at that period Hellenized the East to the widest extent, and had already founded everywhere flourishing cities, they themselves fell under the manifold influences of the soil they occupied. In Egypt, Palestine and Syria, in Asia Minor as far inland as Mesopotamia, Greek and oriental characteristics were often blended. In respect of the wealth and the long duration of its Greek intellectual life, Egypt stands supreme. It covers a period of nearly a thousand years from the foundation of Alexandria down to the conquest of Egypt by the Arabs (A.D. 643). The real significance of Egyptian Hellenism during this long period can be properly estimated only if a practical attempt be made to eliminate from the history of Greek literature and science in pagan and in Christian times all that owed its origin to the land of the Nile. The soil of Egypt proved itself especially productive of Greek literature under the Cross (Origen, Athanasius, Arius, Synesius), in the same way as the soil of North Africa was productive of Latin literature (Tertullian, Cyprian, Lactantius, Augustine). Monastic life, which is one of the chief characteristic elements of Christian-Byzantine civilization, had its birth in Egypt.

Christianity.

The Orient.

Syria and Palestine came under the influence of Greek civilization at a later date than

Egypt. In these, Greek literature and culture attained their highest development between the 3rd and the 8th centuries of the Christian era. Antioch rose to great influence, owing at first to its pagan school of rhetoric and later to its Christian school of exegesis. Gaza was renowned for its school of rhetoric; Berytus for its academy of law. It is no mere accident that sacred poetry, aesthetically the most valuable class of Byzantine literature, was born in Syria and Palestine.

In Asia Minor, the cities of Tarsus, Caesarea, Nicaea, Smyrna, Ephesus, Nicopolis, &c., were all influential centres of Greek culture and literature. For instance, the three great fathers of Cappadocia, Basil, Gregory of Nyssa, and Gregory of Nazianzus all belonged to Asia Minor.

If all the greater Greek authors of the first eight centuries of the Christian era, *i.e.* the period of the complete development of Byzantine culture, be classified according to the countries of their birth, the significant fact becomes evident that nine-tenths come from the African and Asiatic districts, which were for the most part opened up only after Alexander the Great, and only one-tenth from European Greece. In other words, the old original European Greece was, under the emperors, completely outstripped in intellectual productive force by the newly founded African and Asiatic Greece. This huge tide of conquest which surged from Greece over African and Syrian territories occupied largely by foreign races and ancient civilizations, could not fail to be fraught with serious consequences for the Greeks themselves. The experience of the Romans in their conquest of Greece (*Graecia capta ferum victorem cepit*) repeated itself in the conquest of the East by Greece, though to a minor extent and in a different way. The whole literature of Egypt, Syria and Asia Minor cannot, despite its international and cosmopolitan character, disavow the influence of the Oriental soil on which it was nourished. Yet the growth of too strong a local colouring in its literature was repressed, partly by the checks imposed by ancient Greek tradition, partly by the spirit of Christianity which reconciled all national distinctions. Even more clearly and unmistakably is Oriental influence shown in the province of Byzantine art, as Joseph Strzygowski has conclusively proved.

Language.

The greater portion of Greek literature from the close of ancient times down to the threshold of modern history was written in a language identical in its principal features with the common literary language, the so-called Koinē, which had its origin in the Alexandrian age. This is the literary form of Greek as a universal language, though a form that scintillates with many facets, from an almost Attic diction down to one that approaches the language of everyday life such as we have, for instance, in the New Testament. From what has been already said, it follows that this stable literary language cannot always have remained a language of ordinary life. For, like every living tongue, the vernacular Greek continually changed in pronunciation and form, as well as in vocabulary and grammar, and thus the living language surely and gradually separated itself from the rigid written language. This gulf was, moreover, considerably widened owing to the fact that there took place in the written language a retrograde movement, the so-called “Atticism.” Introduced by Dionysius of Halicarnassus in the 1st century before Christ, this linguistic-literary fashion attained its greatest height in the 2nd century A.D., but still continued to flourish in succeeding centuries, and, indirectly, throughout the whole Byzantine period. It is true that it often seemed as though the living language would be gradually introduced into literature; for several writers, such as the chronicler Malalas in the 6th century, Leontius of Neapolis (the author of *Lives of Saints*) in the 7th century, the chronicler Theophanes at the beginning of the 9th century, and the emperor Constantine Porphyrogenitus in the 10th century, made in their writings numerous concessions to the living language. This progressive tendency might well have led, in the 11th and 12th centuries, to the founding in the Greek vernacular of a new literary language similar to the promising national languages and literature which, at that period, in the Romance countries, developed out of the despised popular idiom. In the case of the Byzantines, unfortunately, such a radical change never took place. All attempts in the direction of a popular reform of the literary language, which were occasionally made in the period from the 6th to the 10th centuries, were in turn extinguished by the resuscitation of classical studies, a movement which, begun in the 9th century by Photius and continued in the 11th by Psellus, attained its full development under the Comneni and the Palaeologi. This classical renaissance turned back the literary language into the old ossified forms, as had previously happened in the case of the Atticism of the early centuries of the empire. In the West, humanism (so closely connected with the Byzantine renaissance under the Comneni and the Palaeologi) also artificially reintroduced the “Ciceronian” Latin, but was unable seriously to endanger the development of the national languages, which had already attained to full vitality. In Byzantium, the humanistic movement came prematurely, and crushed the new language

before it had fairly established itself. Thus the language of the Byzantine writers of the 11th-15th centuries is almost Old Greek in colour; artificially learnt by grammar, lexicon and assiduous reading, it followed Attic models more and more slavishly; to such an extent that, in determining the date of works, the paradoxical principle holds good that the more ancient the language, the more recent the author.

Owing to this artificial return to ancient Greek, the contrast that had long existed with the vernacular was now for the first time fully revealed. The gulf between the two forms of language could no longer be bridged; and this fact found its expression in literature also. While the vulgarizing authors of the 6th-10th centuries, like the Latin-writing Franks (such as Gregory of Tours), still attempted a compromise between the language of the schools and that of conversation, we meet after the 12th century with authors who freely and naturally employed the vernacular in their literary works. They accordingly form the Greek counterpart of the oldest writers in Italian, French and other Romance languages. That they could not succeed like their Roman colleagues, and always remained the pariahs of Greek literature, is due to the all-powerful philological-antiquarian tendency which existed under the Comneni and the Palaeologi. Yet once more did the vernacular attempt to assert its literary rights, *i.e.* in Crete and some other islands in the 16th and 17th centuries. But this attempt also was foiled by the classical reaction of the 19th century. Hence it comes about that Greek literature even in the 20th century employs grammatical forms which were obsolete long before the 10th century. Thus the Greeks, as regards their literary language, came into a *cul de sac* similar to that in which certain rigidly conservative Oriental nations find themselves, *e.g.* the Arabs and Chinese, who, not possessing a literary language suited to modern requirements, have to content themselves with the dead Old-Arabic or the ossified Mandarin language. The divorce of the written and spoken languages is the most prominent and also the most fatal heritage that the modern Greeks have received from their Byzantine forefathers.

General character of Byzantine literature.

The whole Byzantine intellectual life, like that of the Western medieval period, is dominated by theological interests. Theology accordingly, in literature too, occupies the chief place, in regard to both quantity and quality. Next to it comes the writing of history, which the Byzantines cultivated with great conscientiousness until after the fall of the empire. All other kinds of prose writing, *e.g.* in geography, philosophy, rhetoric and the technical sciences, were comparatively neglected, and such works are of value for the most part only in so far as they preserve and interpret old material. In poetry, again, theology takes the lead. The poetry of the Church produced works of high aesthetic merit and enduring value. In secular poetry, the writing of epigrams especially was cultivated with assiduity and often with ability. In popular literature poetry predominates, and many productions worthy of notice, new both in matter and in form, are here met with.

Theology.

The great classical period of Greek theological literature is that of the 4th century. Various factors contributed to this result—some of them positive, particularly the establishment of Christianity as the official religion and the protection accorded to it by the state, others negative, *i.e.* the heretical movements, especially Arianism, which at this period arose in the east of the empire and threatened the unity of the doctrine and organization of the church. It was chiefly against these that the subtle Athanasius of Alexandria directed his attacks. The learned Eusebius founded a new department of literature, church history. In Egypt, Antonius (St Anthony) founded the Greek monastic system; Synesius of Cyrene, like his greater contemporary Augustine in the West, represents both in his life and in his writings the difficult transition from Plato to Christ. At the centre, in the forefront of the great intellectual movement of this century, stand the three great Cappadocians, Basil the Great, the subtle dogmatist, his brother Gregory of Nyssa, the philosophically trained defender of the Christian faith, and Gregory of Nazianzus, the distinguished orator and poet. Closely allied to them was St Chrysostom, the courageous champion of ecclesiastical liberty and of moral purity. To modern readers the greater part of this literature appears strange and foreign; but, in order to be appreciated rightly, it must be regarded as the outcome of the period in which it was produced, a period stirred to its depths by religious emotions. For the times in which they lived and for their readers, the Greek fathers reached the highest attainable; though, of course, they produced nothing of such general human interest, nothing so deep and true, as the *Confessions* of St Augustine, with which the poetical autobiography of Gregory of Nazianzus cannot for a moment be compared.

The glorious bloom of the 4th century was followed by a perceptible decay in theological intellectual activity. Independent production was in succeeding centuries almost solely prompted by divergent dogmatical views and heresies, for the refutation of which orthodox authors were impelled to take up the pen. In the 5th and 6th centuries a more copious

literature was called into existence by the Monophysites, who maintained that there was but *one* nature in Christ; in the 7th century by the Monothelites, who acknowledged but *one* will in Christ; in the 8th century by the Iconoclasts and by the new teaching of Mahomet. One very eminent theologian, whose importance it has been reserved for modern times to estimate aright—Leontius of Byzantium (6th century)—was the first to introduce Aristotelian definitions into theology, and may thus be called the first scholastic. In his works he attacked the heretics of his age, particularly the Monophysites, who were also assailed by his contemporary Anastasius of Antioch. The chief adversaries of the Monothelites were Sophronius, patriarch of Jerusalem (whose main importance, however, is due to his work in other fields, in hagiography and homiletics), Maximus the Confessor, and Anastasius Sinaïtes, who also composed an interpretation of the *Hexaëmeron* in twelve books. Among writers in the departments of critical interpretation and asceticism in this period must be enumerated Procopius of Gaza, who devoted himself principally to the exegesis of the Old Testament; Johannes Climax (6th century), named after his much-read ascetic work *Klimax* (Jacob's ladder); and Johannes Moschus (d. 619), whose chief work *Leimon* ("spiritual pasture") describes monastic life in the form of statements and narratives of their experiences by monks themselves. The last great heresy, which shook the Greek Church to its very foundations, the Iconoclast movement, summoned to the fray the last great Greek theologian, John of Damascus (Johannes Damascenus). Yet his chief merit lies not so much in his polemical speeches against the Iconoclasts, and in his much admired but over-refined poetry, as in his great dogmatic work, *The Fountain of Knowledge*, which contains the first comprehensive exposition of Christian dogma. It has remained the standard work on Greek theology down to the present day. Just as the internal development of the Greek Church in all essentials reached its limit with the Iconoclasts, so also its productive intellectual activity ceased with John of Damascus. Such theological works as were subsequently produced, consisted mostly in the interpretation and revision of old materials. An extremely copious, but unfruitful, literature was produced by the disputes about the reunion of the Greek and Roman Churches. Of a more independent character is the literature which in the 14th century centred round the dissensions of the Hesychasts.

Among theologians after John of Damascus must be mentioned: the emperor Leo VI., the Wise (886-911), who wrote numerous homilies and church hymns, and Theodorus of Studium (759-826), who in his numerous writings affords us instructive glimpses of monastic life. Pre-eminent stands the figure of the patriarch Photius. Yet his importance consists less in his writings, which often, to a remarkable extent, lack independence of thought and judgment, than in his activity as a prince of the church. For he it was who carried the differences which had already repeatedly arisen between Rome and Constantinople to a point at which reconciliation was impossible, and was mainly instrumental in preparing the way for the separation of the Greek and Latin Churches accomplished in 1054 under the patriarch Michael Cerularius. In the 11th century the polyhistor Michael Psellus also wrote polemics against the Euchites, among whom the Syrian Gnosis was reviving. All literature, including theology, experienced a considerable revival under the Comneni. In the reign of Alexius I. Comnenus (1081-1118), Euthymius Zigabenus wrote his great dogmatic work, the *Dogmatic Panoply*, which, like *The Fountain of Knowledge* of John of Damascus in earlier times, was partly positive, furnishing an armoury of theology, partly negative and directed against the sects. In addition to attacking the dead and buried doctrines of the Monothelites, Iconoclasts, &c., to fight which was at this time a mere tilting at windmills, Zigabenus also carried on a polemic against the heretics of his own day, the Armenians, Bogomils and Saracens. Zigabenus's *Panoply* was continued and enlarged a century later by the historian Nicetas Acominatus, who published it under the title *Treasure of Orthodoxy*. To the writings against ancient heresies were next added a flood of tracts, of all shapes and sizes, "against the Latins," *i.e.* against the Roman Church, and among their authors must also be enumerated an emperor, the gifted Theodore II. Lascaris (1254-1258). The chief champion of the union with the Roman Church was the learned Johannes Beccus (patriarch of Constantinople 1275-1282). Of his opponents by far the most eminent was Gregory of Cyprus, who succeeded him on the patriarchal throne. The fluctuations in the fortunes of the two ecclesiastical parties are reflected in the occupation of the patriarchal throne. The battles round the question of the union, which were waged with southern passion, were for a while checked by the dissensions aroused by the mystic tendency of the Hesychasts. The impetus to this great literary movement was given by the monk Barlaam, a native of Calabria, who came forward in Constantinople as an opponent of the Latins and was in 1339 entrusted by Andronicus III. with a mission to Pope Benedict XII. at Avignon. He condemned the doctrine of the Hesychasts, and attacked them both orally and in writing. Among those who shared his views are conspicuous the historian Nicephorus Gregoras and Gregorius Acindynus, the latter of whom closely followed Thomas Aquinas in his writings. In fact the struggle against the

Hesychasts was essentially a struggle between sober western scholasticism and dreamy Graeco-Oriental mysticism. On the side of the Hesychasts fought Gregorius Palamas, who tried to give a dogmatic foundation to the mysticism of the Hesychasts, Cabasilas, and the emperor John VI. Cantacuzenus who, after his deposition, sought, in the peaceful retreat of a monastery, consolation in theological studies, and in his literary works refuted the Jews and the Mahommedans. For the greatest Byzantine "apologia" against Islamism we are indebted to an emperor, Manuel II. Palaeologus (1391-1425), who by learned discussions tried to make up for the deficiency in martial prowess shown by the Byzantines in their struggle with the Turks. On the whole, theological literature was in the last century of the empire almost completely occupied with the struggles for and against the union with Rome. The reason lay in the political conditions. The emperors saw more and more clearly that without the aid of the West they would no longer be able to stand their ground against the Turks, the vanguard of the armies of the Crescent; while the majority of Byzantine theologians feared that the assistance of the West would force the Greeks to unite with Rome, and thereby to forfeit their ecclesiastical independence. Considering the supremacy of the theological party in Byzantium, it was but natural that religious considerations should gain the day over political; and this was the view almost universally held by the Byzantines in the later centuries of the empire; in the words of the chronicler Ducas: "it is better to fall into the hands of the Turks than into those of the Franks." The chief opponent of the union was Marcus Eugenicus, metropolitan of Ephesus, who, at the Council of Florence in 1439, denounced the union with Rome accomplished by John VIII. Palaeologus. Conspicuous there among the partisans of the union, by reason of his erudition and general literary merit, was Bessarion, afterwards cardinal, whose chief activity already falls under the head of Graeco-Italian humanism.

Hagiography.

Hagiography, *i.e.* the literature of the acts of the martyrs and the lives of the saints, forms an independent group and one comparatively unaffected by dogmatic struggles. The main interest centres here round the objects described, the personalities of the martyrs and saints themselves. The authors, on the other hand—the *Acts of the Martyrs* are mostly anonymous—keep more in the background than in other branches of literature. The man whose name is mainly identified with Greek hagiography, Symeon Metaphrastes, is important not as an original author, but only as an editor. Symeon revised in the 10th century, according to the rhetorical and linguistic principles of his day, numerous old *Acts of the Martyrs*, and incorporated them in a collection consisting of several volumes, which was circulated in innumerable copies, and thus to a great extent superseded the older original texts. These *Acts of the Martyrs*, in point of time, are anterior to our period; but of the *Lives of Saints* the greater portion belong to Byzantine literature. They began with biographies of monks distinguished for their saintly living, such as were used by Palladius about 420 in his *Historia Lausiaca*. The most famous work of this description is that by Athanasius of Alexandria, viz. the biography of St Anthony, the founder of monachism. In the 6th century Cyril of Scythopolis wrote several lives of saints, distinguished by a simple and straightforward style. More expert than any one else in reproducing the naïve popular style was Leontius of Neapolis in Cyprus who, in the 7th century, wrote, among other works, a life of St John the Merciful, archbishop of Alexandria, which is very remarkable as illustrating the social and intellectual conditions of the time. From the popular *Lives of Saints*, which for the reading public of the middle ages formed the chief substitute for modern "belles lettres," it is easy to trace the transition to the religious novel. The most famous work of this class is the history of Barlaam and Josaphat (*q.v.*).

Religious poetry.

The religious poetry of the Greeks primarily suffered from the influence of the ancient Greek form, which was fatal to original development. The oldest work of this class is the hymn, composed in anapaestic monometers and dimeters, which was handed down in the manuscripts with the *Paedagogus* of Clement of Alexandria (d. about 215), but was probably not his work. The next piece of this class is the famous "Maidens' Song" in the *Banquet* of St Methodius (d. about 311), in which many striking violations of the old rules of quantity are already apparent. More faithful to the tradition of the schools was Gregory of Nazianzus. But, owing to the fact that he generally employed antiquated versification and very erudite language, his poems failed to reach the people or to find a place in the services of the church. Just as little could the artificial paraphrase of the Psalms composed by the younger Apollinaris, or the subtle poems of Synesius, become popular. It became more and more patent that, with the archaic metre which was out of keeping with the character of the living language, no genuine poetry suited to the age could possibly be produced. Fortunately, an entirely new form of poetical art was discovered, which conferred upon the Greek people the blessings of an intelligible religious poetry—the rhythmic poem. This no longer depended on difference of quantity in the syllables, which had disappeared from the living language, but on the accent. Yet the transition was not effected by the substitution of accent for the old long syllables; the ancient

verse form was entirely abandoned, and in its stead new and variously constructed lines and strophes were formed. In the history of the rhythmic sacred poetry three periods are clearly marked—the preparatory period; that of the hymns; and that of the *Canones*. About the first period we know, unfortunately, comparatively little. It appears that in it church music was in the main confined to the insertion of short songs between the Psalms or other portions of Holy Writ and the acclamations of the congregation. The oldest rhythmic songs date from Gregory of Nazianzus—his "Maidens' Song" and his "Evening Hymn." Church poetry reached its highest expression in the second period, in the grand development of the hymns, *i.e.* lengthy songs comprising from twenty to thirty similarly constructed strophes, each connected with the next in acrostic fashion. Hymnology, again, attained its highest perfection in the first half of the 6th century with Romanos, who in the great number and excellence of his hymns dominated this species of poetry, as Homer did the Greek epic. From this period dates, moreover, the most famous song of the Greek Church, the so-called *Acathistus*, an anonymous hymn of praise to the Virgin Mary, which has sometimes, but erroneously, been attributed to the patriarch Sergius.

Canones.

Church poetry entered upon a new stage, characterized by an increase in artistic finish and a falling off in poetical vigour, with the composition of the *Canones*, songs artfully built up out of eight or nine lyrics, all differently constructed. Andreas, archbishop of Crete (*c.* 650-720), is regarded as the inventor of this new class of song. His chief work, "the great Canon," comprises no less than 250 strophes. The most celebrated writers of *Canones* are John of Damascus and Cosmas of Jerusalem, both of whom flourished in the first half of the 8th century. The "vulgar" simplicity of Romanos was regarded by them as an obsolete method; they again resorted to the classical style of Gregory of Nazianzus, and John of Damascus even took a special delight in the most elaborate tricks of expression. In spite of this, or perhaps on that very account, both he and Cosmas were much admired in later times, were much read, and—as was very necessary—much commentated. Later, sacred poetry was more particularly cultivated in the monastery of the Studium at Constantinople by the abbot Theodorus and others. Again, in the 9th century, Joseph, "the hymn-writer," excelled as a writer of songs, and, finally, John Mauropus (11th century), bishop of Euchaita, John Zonaras (12th century), and Nicephorus Blemmydes (13th century), were also distinguished as authors of sacred poems, *i.e. Canones*. The Basilian Abbey of Grotta Ferrata near Rome, founded in 1004, and still existing, was also a nursery of religious poetry. As regards the rhythmic church poetry, it may now be regarded as certain that its origin was in the East. Old Hebrew and Syrian models mainly stimulated it, and Romanos (*q.v.*) was especially influenced by the metrical homilies of the great Syrian father Ephraem (d. about 373).

Profane literature; historical accounts.

In profane literature the writing of history takes the first place, as regards both form and substance. The Greeks have always been deeply interested in history, and they have never omitted, amid all the vicissitudes of their existence, to hand down a record to posterity. Thus, they have produced a literature extending from the Ionian logographers and Herodotus down to the times of Sultan Mahommed II. In the Byzantine period all historical accounts fall under one of two groups, entirely different, both in form and in matter, (1) historical works, the authors of which described, as did most historians of ancient times, a period of history in which they themselves had lived and moved, or one which only immediately preceded their own times; and (2) chronicles, shortly recapitulating the history of the world. This latter class has no exact counterpart in ancient literature. The most clearly marked stage in the development of a Christian-Byzantine universal history was the chronicle (unfortunately lost) written by the Hellenized Jew, Justus of Tiberias, at the beginning of the 2nd century of the Christian era; this work began with the story of Moses.

Byzantine histories of contemporary events do not differ substantially from ancient historical works, except in their Christian colouring. Yet even this is often very faint and blurred owing to close adherence to ancient methods. Apart from this, neither a new style nor a new critical method nor any radically new views appreciably altered the main character of Byzantine historiography. In their style most Byzantine compilers of contemporary history followed the beaten track of older historians, *e.g.* Herodotus, Thucydides, and, in some details, also Polybius. But, in spite of their often excessive tendency to imitation, they displayed considerable power in the delineation of character and were not wanting in independent judgment. As regards the selection of their matter, they adhered to the old custom of beginning their narrative where their predecessors left off.

The outstripping of the Latin West by the Greek East, which after the close of the 4th century was a self-evident fact, is reflected in historiography also. After Constantine the Great, the history of the empire, although its Latin character was maintained until the 6th

century, was mostly written by Greeks; *e.g.* Eunapius (*c.* 400), Olympiodorus (*c.* 450), Priscus (*c.* 450), Malchus (*c.* 490), and Zosimus, the last pagan historian (*c.* 500), all of whom, with the exception of Zosimus, are unfortunately preserved to us only in fragments. Historiography received a great impulse in the 6th century. The powerful Procopius and Agathias (*q.v.*), tinged with poetical rhetoric, described the stirring and eventful times of Justinian, while Theophanes of Byzantium, Menander Protector, Johannes of Epiphaneia and Theophylactus of Simocatta described the second half of the 6th century. Towards the close of the 6th century also flourished the last independent ecclesiastical historian, Evagrius, who wrote the history of the church from 431 to 593. There now followed, however, a lamentable falling off in production. From the 7th to the 10th century the historical side is represented by a few chronicles, and it was not until the 10th century that, owing to the revival of ancient classical studies, the art of writing history showed some signs of life. Several historical works are associated with the name of the emperor Constantine VII. Porphyrogenitus. To his learned circle belonged also Joseph Genesius, who at the emperor's instance compiled the history of the period from 813 to 886. A little work, interesting from the point of view of historical and ethnographical science, is the account of the taking of Thessalonica by the Cretan Corsairs (A.D. 904), which a priest, Johannes Cameniata, an eyewitness of the event, has bequeathed to posterity. There is also contained in the excellent work of Leo Diaconus (on the period from 959 to 975) a graphic account of the bloody wars of the Byzantines with the Arabs in Crete and with the Bulgarians. A continuation was undertaken by the philosopher Michael Psellus in a work covering the period from 976 to 1077. A valuable supplement to the latter (describing the period from 1034 to 1079) was supplied by the jurist Michael Attaliata. The history of the Eastern empire during the Crusades was written in four considerable works, by Nicephorus Bryennius, his learned consort Anna Comnena, the "honest Aetolian," Johannes Cinnamus, and finally by Nicetas Acominatus in an exhaustive work which is authoritative for the history of the 4th Crusade. The melancholy conditions and the ever increasing decay of the empire under the Palaeologi (13th-15th centuries) are described in the same lofty style, though with a still closer following of classical models. The events which took place between the taking of Constantinople by the Latins and the restoration of Byzantine rule (1203-1261) are recounted by Georgius Acropolita, who emphasizes his own share in them. The succeeding period was written by the versatile Georgius Pachymeres, the erudite and high-principled Nicephorus Gregoras, and the emperor John VI. Cantacuzenus. Lastly, the death-struggle between the East Roman empire and the mighty rising power of the Ottomans was narrated by three historians, all differing in culture and in style, Laonicus Chalcocondyles, Ducas and Georgius Phrantzes. With them may be classed a fourth (though he lived outside the Byzantine period), Critobulus, a high-born Greek of Imbros, who wrote, in the style of the age of Pericles, the history of the times of the sultan Mahommed II. (down to 1467).

Chronicles.

The essential importance of the Byzantine chronicles (mostly chronicles of the history of the world from the Creation) consists in the fact that they in part replace older lost works, and thus fill up many gaps in our historical survey (*e.g.* for the period from about 600 to 800 of which very few records remain). They lay no claim to literary merit, but are often serviceable for the history of language. Many such chronicles were furnished with illustrations. The remains of one such illustrated chronicle on papyrus, dating from the beginning of the 5th century, has been preserved for us by the soil of Egypt.[7] The authors of the chronicles were mostly monks, who wished to compile handbooks of universal history for their brethren and for pious laymen; and this explains the strong clerical and popular tendency of these works. And it is due to these two qualities that the chronicles obtained a circulation abroad, both in the West and also among the peoples Christianized from Byzantium, *e.g.* the Slavs, and in all of them sowed the seeds of an indigenous historical literature. Thus the chronicles, despite the jejuneness of their style and their uncritical treatment of material were for the general culture of the middle ages of far greater importance than the erudite contemporary histories designed only for the highly educated circles in Byzantium. The oldest Byzantine chronicle of universal history preserved to us is that of Malalas (6th century), which is also the purest type of this class of literature. In the 7th century was completed the famous *Easter* or *Paschal Chronicle* (*Chronicon Paschale*). About the end of the 8th or the beginning of the 9th century Georgius Syncellus compiled a concise chronicle, which began with the Creation and was continued down to the year 284. At the request of the author, when on his death-bed, the continuation of this work was undertaken by Theophanes Confessor, who brought down the account from A.D. 284 to his own times (A.D. 813). This exceedingly valuable work of Theophanes was again continued (from 813-961) by several anonymous chroniclers. A contemporary of Theophanes, the patriarch Nicephorus, wrote, in addition to a *Short History* of the period from 602 to 769, a chronological sketch from Adam down to the year of his own death in 829. Of great

influence on the age that followed was Georgius Monachus, only second in importance as chronicler of the early Byzantine period, who compiled a chronicle of the world's history (from Adam until the year 843, the end of the Iconoclast movement), far more theological and monkish in character than the work of Theophanes. Among later chroniclers Johannes Scylitza stands out conspicuously. His work (covering the period from 811 to 1057), as regards the range of its subject-matter, is something between a universal and a contemporary history. Georgius Cedrenus (*c.* 1100) embodied the whole of Scylitza's work, almost unaltered, in his *Universal Chronicle*. In the 12th century the general increase in literary production was evident also in the department of chronicles of the world. From this period dates, for instance, the most distinguished and learned work of this class, the great universal chronicle of John Zonaras. In the same century Michael Glycas compiled his chronicle of the world's history, a work written in the old popular style and designed for the widest circles of readers. Lastly, in the 12th century, Constantine Manasses wrote a universal chronicle in the so-called "political" verse. With this verse-chronicle must be classed the imperial chronicle of Ephraem, written in Byzantine trimeters at the beginning of the 14th century.

Geography.

Geography and topography, subjects so closely connected with history, were as much neglected by the Byzantines as by their political forerunners, the Romans. Of purely practical importance are a few handbooks of navigation, itineraries, guides for pilgrims, and catalogues of provinces and cities, metropolitan sees and bishoprics. The geographical work of Stephanus of Byzantium, which dates from Justinian's time, has been lost. To the same period belongs the only large geographical work which has been preserved to us, the *Christian Topography* of Cosmas Indicopleustes. For the topography of Constantinople a work entitled *Ancient History* (*Patria*) *of Constantinople*, which may be compared to the medieval *Mirabilia urbis Romae*, and in late manuscripts has been wrongly attributed to a certain Codinus, is of great importance.

Philosophy.

Ancient Greek philosophy under the empire sent forth two new shoots—Neopythagoreanism and Neoplatonism. It was the latter with which moribund paganism essayed to stem the advancing tide of Christianity. The last great exponent of this philosophy was Proclus in Athens (d. 485). The dissolution, by order of Justinian, of the school of philosophy at Athens in 529 was a fatal blow to this nebulous system, which had long since outlived the conditions that made it a living force. In the succeeding period philosophical activity was of two main kinds; on the one hand, the old philosophy, *e.g.* that of Aristotle, was employed to systematize Christian doctrine, while, on the other, the old works were furnished with copious commentaries and paraphrases. Leontius of Byzantium had already introduced Aristotelian definitions into Christology; but the real founder of medieval ecclesiastical philosophy was John of Damascus. Owing, however, to his having early attained to canonical authority, the independent progress of ecclesiastical philosophy was arrested; and to this it is due that in this respect the later Byzantine period is far poorer than is the West. Byzantium cannot boast a scholastic like Thomas Aquinas. In the 11th century philosophical studies experienced a satisfactory revival, mainly owing to Michael Psellus, who brought Plato as well as Aristotle again into fashion.

Rhetoric.

Ancient rhetoric was cultivated in the Byzantine period with greater ardour than scientific philosophy, being regarded as an indispensable aid to instruction. It would be difficult to imagine anything more tedious than the numerous theoretical writings on the subject and the examples of their practical application: mechanical school essays, which here count as "literature," and innumerable letters, the contents of which are wholly insignificant. The evil effects of this were felt beyond the proper sphere of rhetoric. The anxious attention paid to the laws of rhetoric and the unrestricted use of its withered flowers were detrimental to a great part of the rest of Byzantine literature, and greatly hampered the development of any individuality and simplicity of style. None the less, among the rhetorical productions of the time are to be found a few interesting pieces, such as the *Philopatris*, in the style of Lucian, which gives us a remarkable picture of the times of Nicephorus Phocas (10th century). In two other smaller works a journey to the dwellings of the dead is described, after the pattern of Lucian's *Nekyomanteia*, viz. in *Timarion* (12th century) and in Mazaris' *Journey to the Underworld* (*c.* 1414). A very charming representative of Byzantine rhetoric is Michael Acominatus, who, in addition to theological works, wrote numerous occasional speeches, letters and poems.

The sciences.

In the field of scientific production, which can be accounted literature in the modern acceptation of the term only in a limited sense, Byzantium was dominated to an extravagant and even grotesque extent by the rules of what in modern times is termed "classical scholarship." The numerous works which belong to this category, such as grammars, dictionaries, commentaries on ancient authors, extracts

from ancient literature, and metrical and musical treatises, are of little general interest, although of great value for special branches of philological study, *e.g.* for tracing the influences through which the ancient works handed down to us have passed, as well as for their interpretation and emendation; for information about ancient authors now lost; for the history of education; and for the underlying principles of intellectual life in Byzantium. The most important monument of Byzantine philology is, perhaps, the *Library* of the patriarch Photius. The period from about 650 to 850 is marked by a general decay of culture. Photius, who in the year 850 was about thirty years of age, now set himself with admirable energy to the task of making ancient literature, now for the most part dead and forgotten, known once more to his contemporaries, thus contributing to its preservation. He gave an account of all that he read, and in this way composed 280 essays, which were collected in what is commonly known as the *Library* or *Myriobiblon*. The character of the individual sketches is somewhat mechanical and formal; a more or less complete account of the contents is followed by critical discussion, which is nearly always confined to the linguistic form. With this work may be compared in importance the great *Lexikon* of Suidas, which appeared about a century later, a sort of encyclopaedia, of which the main feature was its articles on the history of literature. A truly sympathetic figure is Eustathius, the famous archbishop of Thessalonica (12th century). His voluminous commentaries on Homer, however, rivet the attention less than his enthusiastic devotion to science, his energetic action on behalf of the preservation of the literary works of antiquity, and last, not least, his frank and heroic character, which had nothing in it of the Byzantine. If, on the other hand, acquaintance with a caricature of Byzantine philology be desired, it is afforded by Johannes Tzetzes, a contemporary of Eustathius, a Greek in neither name nor spirit, narrow-minded, angular, superficial, and withal immeasurably conceited and ridiculously coarse in his polemics. The transition to Western humanism was effected by the philologists of the period of the Palaeologi, such as Maximus Planudes, whose translations of numerous works renewed the long-broken ties between Byzantium and the West; Manuel Moschopulus, whose grammatical works and commentaries were, down to the 16th century, used as school text-books; Demetrius Triclinius, distinguished as a textual critic; the versatile Theodorus Metochites, and others.

Jurisprudence.

Originally, as is well known, Latin was the exclusive language of Roman law. But with Justinian, who codified the laws in his *Corpus juris*, the Hellenizing of the legal language also began. The *Institutes* and the *Digest* were translated into Greek, and the *Novels* also were issued in a Greek form. Under the Macedonian dynasty there began, after a long stagnation, the resuscitation of the code of Justinian. The emperor Basilius I. (867-886) had extracts made from the existing law, and made preparations for the codifying of all laws. But the whole work was not completed till the time of Leo VI. the Wise (886-912), and Constantine VII. Porphyrogenitus (912-959), when it took the form of a grand compilation from the *Digests*, the *Codex*, and the *Novels*, and is commonly known as the *Basilica* (Τὰ βασιλικά). In the East it completely superseded the old Latin *Corpus juris* of Justinian. More that was new was produced, during the Byzantine period, in canon law than in secular legislation. The purely ecclesiastical rules of law, the *Canones*, were blended with those of civil law, and thus arose the so-called *Nomocanon*, the most important edition of which is that of Theodorus Bestes in 1090. The alphabetical handbook of canon law written by Matthaeus Blastares about the year 1335 also exercised a great influence.

Mathematics and astronomy.

In the province of mathematics and astronomy the remarkable fact must be recorded that the revival among the Greeks of these long-forgotten studies was primarily due to Perso-Arabian influence. The *Great Syntaxis* of Ptolemy operated in the oriental guise of the *Almagest*. The most important direct source of this intellectual loan was not Arabia, however, but Persia. Towards the close of the 13th century the Greeks became acquainted with Persian astronomy. At the beginning of the 14th century Georgius Chrysococca and Isaac Argyrus wrote astronomical treatises based on Persian works. Then the Byzantines themselves, notably Theodorus Metochites and Nicephorus Gregoras, at last had recourse to the original Greek sources.

Military science.

The Byzantines did much independent work in the field of military science. The most valuable work of the period on this subject is one on tactics, which has come down to posterity associated with the name of Leo VI., the Wise.

Profane

Of profane poetry—in complete contrast to sacred poetry—the general characteristic was its close imitation of the antique in point of form. All works belonging to this category reproduce the ancient style and are framed after ancient models. The metre is, for the most part, either the Byzantine regular twelve-

poetry. syllable trimeter, or the "political" verse; more rarely the heroic and Anacreontic measures.

Epic. Epic popular poetry, in the ancient sense, begins only with the vernacular Greek literature (see below); but among the literary works of the period there are several which can be compared with the epics of the Alexandrine age. Nonnus (*c.* 400) wrote, while yet a pagan, a fantastic epic on the triumphal progress of the god Dionysus to India, and, as a Christian, a voluminous commentary on the gospel of St John. In the 7th century, Georgius Pisides sang in several lengthy iambic poems the martial deeds of the emperor Heraclius, while the deacon Theodosius (10th century) immortalized in extravagant language the victories of the brave Nicephorus Phocas.

Didactic poems. From the 11th century onwards, religious, grammatical, astrological, medical, historical and allegorical poems, framed partly in duodecasyllables and partly in "political" verse, made their appearance in large quantities. Didactic religious poems were composed, for example, by Philippus (ὁ Μονότροπος, Solitarius, *c.* 1100), grammatico-philological poems by Johannes Tzetzes, astrological by Johannes Camaterus (12th century), others on natural science by Manuel Philes (14th century) and a great moral, allegorical, didactic epic by Georgius Lapithes (14th century).

Romances. To these may be added some voluminous poems, which in style and matter must be regarded as imitations of the ancient Greek romances. They all date from the 12th century, a fact evidently connected with the general revival of culture which characterizes the period of the Comneni. Two of these romances are written in the duodecasyllable metre, viz. the story of Rodanthe and Dosicles by Theodorus Prodromus, and an imitation of this work, the story of Drusilla and Charicles by Nicetas Eugenianus; one in "political" verse, the love story of Aristander and Callithea by Constantine Manasses, which has only been preserved in fragments, and lastly one in prose, the story of Hysmine and Hysminias, by Eustathius (or Eumathius) Macrembolita, which is the most insipid of all.

Lyrics. The objective point of view which dominated the whole Byzantine period was fatal to the development of a profane lyrical poetry. At most a few poems by Johannes Geometres and Christophorus of Mytilene and others, in which personal experiences are recorded with some show of taste, may be placed in this category. The dominant form for all subjective poetry was the epigram, which was employed in all its variations from playful trifles to long elegiac and narrative poems. Georgius Pisides (7th century) treated the most diverse themes. In the 9th century Theodorus of Studium had

The epigram. lighted upon the happy idea of immortalizing monastic life in a series of epigrams. The same century produced the only poetess of the Byzantine period, Casia, from whom we have several epigrammatic productions and church hymns, all characterized by originality. Epigrammatic poetry reached its highest development in the 10th and 11th centuries, in the productions of Johannes Geometres, Christophorus of Mytilene and John Mauropus. Less happy are Theodorus Prodromus (12th century) and Manuel Philes (14th century). From the beginning of the 10th century also dates the most valuable collection of ancient and of Byzantine epigrammatic poems, the *Anthologia Palatina* (see Anthology).

Drama. Dramatic poetry, in the strict sense of the term, was as completely lacking among the Byzantine Greeks as was the condition precedent to its existence, namely, public performance. Apart from some moralizing allegorical dialogues (by Theodorus Prodromus, Manuel Philes and others), we possess only a single work of the Byzantine period that, at least in external form, resembles a drama: the *Sufferings of Christ* (Χριστὸς Πάσχων). This work, written probably in the 12th century, or at all events not earlier, is a cento, *i.e.* is in great measure composed of verses culled from ancient writers, *e.g.* Aeschylus, Euripides and Lycophron; but it was certainly not written with a view to the dramatic production.

Vernacular Greek literature. The vernacular literature stands alone, both in form and in contents. We have here remarkable originality of conception and probably also entirely new and genuinely medieval matter. While in the artificial literature prose is pre-eminent, in the vernacular literature, poetry, both in quantity and quality, takes the first place, as was also the case among the Latin nations, where the vulgar tongue first invaded the field of poetry and only later that of prose. Though a few preliminary attempts were made (proverbs, acclamations addressed by the people to the emperor, &c.), the Greek vernacular was employed for larger works only from the 12th century onwards; at first in poems, of which the major portion were cast in

"political" verse, but some in the trochaic eight-syllabled line. Towards the close of the 15th century rhyme came into use. The subjects treated in this vernacular poetry are exceedingly diverse. In the capital city a mixture of the learned and the popular language was first used in poems of admonition, praise and supplication. In this oldest class of "vulgar" works must be reckoned the *Spaneas*, an admonitory poem in imitation of the letter of Pseudo-Isocrates addressed to Demonicus; a supplicatory poem composed in prison by the chronicler Michael Glycas, and several begging poems of Theodorus Prodromus (Ptochoprodromos). In the succeeding period erotic poems are met with, such as the Rhodian love songs preserved in a MS. in the British Museum (ed. W. Wagner, Leipzig, 1879), fairy-tale like romances such as the *Story of Ptocholeon*, oracles, prayers, extracts from Holy Writ, lives of saints, &c. Great epic poems, in which antique subjects are treated, such as the legends of Troy and of Alexander, form a separate group. To these may be added romances in verse after the manner of the works written in the artificial classical language, *e.g. Callimachus and Chrysorrhoë*, *Belthandrus and Chrysantza*, *Lybistrus and Rhodamne*, also romances in verse after the Western pattern, such as *Phlorius* and *Platziaphlora* (the old French story of *Flore et Blanchefleur*). Curious are also sundry legends connected with animals and plants, such as an adaptation of the famous medieval animal fables of the *Physiologus*, a history of quadrupeds, and a book of birds, both written with a satirical intention, and, lastly, a rendering of the story of Reynard the Fox. Of quite peculiar originality also are several legendary and historical poems, in which famous heroes and historical events are celebrated. There are, for instance, poems on the fall of Constantinople, the taking of Athens and Trebizond, the devastating campaign of Timur, the plague in Rhodes in 1498, &c. In respect of importance and antiquity the great heroic epic of Digenis Akritas stands pre-eminent.

"Vulgar" prose works.

Among prose works written in the vulgar tongue, or at least in a compromise with it, may be mentioned the Greek rendering of two works from an Indian source, the *Book of the Seven Wise Masters* (as *Syntipas the Philosopher* by Michael Andreopulus), and the *Hitopadera* or *Mirror of Princes* (through the Arabic *Kalilah and Dimnah* by Simeon Sethus as Στεφανίτης καὶ Ἰκνηλάτης), a fish book, a fruit book (both skits on the Byzantine court and official circles). To these must be added the Greek laws of Jerusalem and of Cyprus of the 12th and 13th centuries, chronicles, &c. In spite of many individual successes, the literature written in the vulgar tongue succumbed, in the race for existence, to its elder sister, the literature written in classical and polished Greek. This was mainly due to the continuous employment of the ancient language in the state, the schools and the church.

General significance of Byzantine literature.

The importance of Byzantine culture and literature in the history of the world is beyond dispute. The Christians of the East Roman empire guarded for more than a thousand years the intellectual heritage of antiquity against the violent onslaught of the barbarians. They also called into life a peculiar medieval culture and literature. They communicated the treasures of the old pagan as well as of their own Christian literature to neighbouring nations; first to the Syrians, then to the Copts, the Armenians, the Georgians; later, to the Arabians, the Bulgarians, the Serbs and the Russians. Through their teaching they created a new East European culture, embodied above all in the Russian empire, which, on its religious side, is included in the Orthodox Eastern Church, and from the point of view of nationality touches the two extremes of Greek and Slav. Finally the learned men of the dying Byzantine empire, fleeing from the barbarism of the Turks, transplanted the treasures of old Hellenic wisdom to the West, and thereby fertilized the Western peoples with rich germs of culture.

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hymns was published by W. Christ and M. Paranikas, entitled *Anthologia Graeca carminum Christianorum* (1871). Many unedited texts, particularly the songs of Romanos, were published by Cardinal J. B. Pitra, under the title *Analecta sacra spicilegio Solesmensi parata* (1876). A complete edition of the hymns is edited by K. Krumbacher.

4. Historical literature: A collective edition of the Byzantine historians and chroniclers was begun under Louis XIV., and continued later (1648-1819), called the *Paris Corpus*. This whole collection was on B. G. Niebuhr's advice republished with some additions (Bonn, 1828-1878), under the title *Corpus scriptorum historiae Byzantinae*. The most important authors have also appeared in the *Bibliotheca Teubneriana*. A few Byzantine and oriental historical works are also contained in the collection edited by J. B. Bury (1898 seq.).

5. Vernacular Greek literature: The most important collective editions are: W. Wagner, *Medieval Greek Texts* (1870), *Carmina Graeca Medii Aevi* (1874), *Trois Poèmes grecs du moyen âge* (1881); E. Legrand, *Collection de monuments pour servir à l'étude de la langue néo-hellénique* (in 26 parts, 1869-1875), *Bibliothèque grecque vulgaire* (in 8 vols., 1880-1896).

(K. Kr.)

III. Modern Greek Literature (1453-1908)

After the capture of Constantinople, the destruction of Greek national life and the almost total effacement of Greek civilization naturally involved a more or less complete cessation of Greek literary production in the regions subjected to the rule of a barbarous conqueror. Learned Greeks found a refuge away from their native land; they spoke the languages of foreign people, and when they wrote books they often used those languages, but in most cases they also wrote in Greek. The fall of Constantinople must not therefore be taken as indicating a break in the continuity of Greek literary history. Nor had that event so decisive an influence as has been supposed on the revival of learning in western Europe. The crusades had already brought the Greeks and Westerns together, and the rule of the Franks at Constantinople and in the Levant had rendered the contact closer. Greeks and Latins had keenly discussed the dogmas which divided the Eastern and Western Churches; some Greeks had adopted the Latin faith or had endeavoured to reconcile the two communions, some had attained preferment in the Roman Church. Many had become connected by marriage or other ties with the Italian nobles who ruled in the Aegean or the Heptanesos, and circumstances led them to settle in Italy. Of the writers who thus found their way to the West before the taking of Constantinople the most prominent were Leon or Leontios Pilatos, Georgius Gemistus, or Pletho, Manuel and John Chrysoloras, Theodore Gazes, George of Trebizond and Cardinal Bessarion.

The Klephtic poetry.

The Ottoman conquest had reduced the Christian races in the plains to a condition of serfdom, but the spirit of liberty continued to breathe in the mountains, where groups of desperate men, the Klephts and the Haiduks, maintained the struggle against alien tyranny. The adventurous and romantic life of these champions of freedom, spent amid the noblest solitudes of nature and often tinged with the deepest tragedy, naturally produced a poetry of its own, fresh, spontaneous and entirely indigenous. The Klephtic ballads, all anonymous and composed in the language of the people, are unquestionably the best and most genuine Greek poetry of this epoch. They breathe the aroma of the forests and mountains; like the early rhapsodies of antiquity, which peopled nature with a thousand forms, they lend a voice to the trees, the rocks, the rivers and to the mountains themselves, which sing the prowess of the Klepht, bewail his death and comfort his disconsolate wife or mother. Olympia boasts to Ossa that the footstep of the Turk has never desecrated its valleys; the standard of freedom floats over its springs; there is a Klepht beneath every tree of its forests; an eagle sits on its summit with the head of a warrior in its talons. The dying Klepht bids his companions make him a large and lofty tomb that he may stand therein and load his musket: "Make a window in the side that the swallows may tell me that spring has come, that the nightingales may sing me the approach of flowery May." The wounded Vervos is addressed by his horse: "Rise, my master, let us go and find our comrades." "My bay horse, I cannot rise; I am dying: dig me a tomb with thy silver-shod hoof; take me in thy teeth and lay me therein. Bear my arms to my companions and this handkerchief to my beloved, that she may see it and lament me." Another type of the popular poetry is presented by the folk-songs of the Aegean islanders and the maritime population of the Asiatic coast. In many of the former the influence of the Frankish conquest is apparent. Traces of the ancient mythology are often to be found in the popular songs. Death is commonly personified by Charon, who struggles with his victim; Charon is sometimes worsted, but as a rule he triumphs in the conflict.

In Crete, which for nearly two centuries after the fall of Constantinople remained under Venetian rule, a school of Greek poetry arose strongly impressed with Italian influences. The language employed is the dialect of the Candiotes, with its large admixture of Venetian words. The first product of this somewhat hybrid literature was *Erotocritos*, an epic poem in five cantos, which relates the love story of Aretē, daughter of Hercules, king of Athens, and Erotocritos, the son of his minister. The poem presents an interesting picture of Greece under the feudal Frankish princes, though professing to describe an episode of the classical epoch; notwithstanding some tedious passages, it possesses considerable merit and contains some charming scenes. The metre is the rhymed alexandrine. Of the author, Vicence Cornaro, who lived in the middle or end of the 16th century, little is known; he probably belonged to the ducal family of that name, from which Tasso was descended. The second poem is the *Erophile* of George Chortakis, a Cretan, also written in the Candiote dialect. It is a tragic drama, the scene of which is laid in Egypt. The dialogue is poor, but there are some fine choral interludes, which perhaps are by a different hand. Chortakis, who was brought up at Retimo, lived at the end of the 16th and beginning of the 17th centuries. The third Cretan poem worthy of notice is the *Shepherdess*, a charming and graceful idyll written by Nicolas Drimyticos, a native of Apokorona, early in the 17th century. Other Cretan poets were J. Gregoropoulos and G. Melissinos (1500), who wrote epigrams, and Maroulos (1493), who endeavoured to write Pindaric odes.

Cretan poets.

Among the Greeks who were prominent in spreading a knowledge of Greek in Europe after the fall of Constantinople were John Argyropulos, Demetrius Chalcondyles, Constantine and John Lascaris and Marcus Musurus, a Cretan. These men wrote in the accepted literary language; in general, however, they were rather employed about literature than engaged in producing it. They taught Greek; several of them wrote Greek grammars; they transcribed and edited Greek classical writers, and they collected manuscripts. Their stores enriched the newly founded libraries of St Mark at Venice, of the Escorial, of the Vatican and of the National Library in Paris. But none of them accomplished much in literature strictly so called. The question which most deeply interested them was that of the rival merits of the Platonic and Aristotelian philosophies, over which a controversy of extraordinary bitterness broke out towards the close of the 15th century. The dispute was in reality theological rather than philosophical; the cause of Plato was championed by the advocates of a union between the Eastern and Western Churches, that of Aristotle was upheld by the opposing party, and all the fury of the old Byzantine dogmatic controversies was revived. The patriarch, George Kurtesios or Gennadius, whom Mahommed II. had appointed after the capture of Constantinople, wrote a treatise in favour of Aristotle and excommunicated Gemistus Pletho, the principal writer among the Platonists. On the other hand, George of Trebizond, who attacked Pletho with unmeasured virulence, was compelled to resign his post of secretary to Pope Nicholas V. and was imprisoned by Pope Paul I. Scholarship was not wholly extinct in Greece or among the Greeks for a considerable time after the Turkish conquest. Arsenius, who succeeded Musurus as bishop of Monemvasia (1510), wrote commentaries on Aristophanes and Euripides; his father, Apostoles, made a collection of Greek proverbs. Aemilius Portos, a Cretan, and Leo Allatios (1600-1650) of Chios edited a number of works of the classical and later periods with commentaries and translations; Allatios also wrote Greek verses showing skill and cleverness. Constantine Rhodokanakes, physician to Charles II. of England, wrote verses on the return of that monarch to England. About the time of the fall of Constantinople we meet with some versifiers who wrote poems in the spoken dialect on historical subjects; among these were Papaspondylos Zotikos (1444), Georgilas Limenitis (1450-1500) and Jacobos Trivoles (beginning of the 16th century); their poems have little merit, but are interesting as specimens of the popular language of the day and as illustrating the manners and ideas of contemporary Greeks.

Literary activity after the fall of Constantinople.

Among the prose writers of the 16th century were a number of chroniclers. At the end of the 15th, Kritobulos of Imbros, who had been private secretary of Mahommed II., wrote the history of his master, Emmanuel Melaxos a history of the patriarchate, and Phranzes a history of the Palaeologi. Theodosius Zygomalas (1580) wrote a history of Constantinople from 1391 to 1578. In the 17th century Demetrius Cantemir, a Moldavian by birth, wrote a history of the Ottoman empire, and G. Kontares tales of ancient Athens. Others composed chronicles of Cyprus and Crete, narratives of travels and biographies of saints. Most of these works are written in the literary language, the study of which was kept alive by the patriarchate and the schools which it maintained at Constantinople and elsewhere. Various theological and philosophical works, grammars and dictionaries were written during this period, but elegant literature practically disappears.[8]

Historical works.

A literary revival followed in the 18th century, the precursor of the national uprising which resulted in the independence of Greece. The efforts of the great Phanariote families at Constantinople, the educational zeal of the higher Greek clergy and the munificence of wealthy Greeks in the provinces, chiefly merchants who had acquired fortunes by commerce, combined to promote the spread of education among a people always eager for instruction. The Turks, indifferent to educational matters, failed to discern the significance of the movement. Schools were established in every important Greek town, and school-books and translations from Western languages issued from the presses of Venice, Triest, Vienna and other cities where the Greeks possessed colonies. Young men completed their studies in the Western universities and returned to the East as the missionaries of modern civilization. For the greater part of the 18th century the literature was mainly theological. Notable theological writers of this epoch were Elias Miniates, an elegant preacher, whose sermons are written in the popular language, and Meletios of Iannina, metropolitan of Athens, whose principal works were an ecclesiastical history, written in ancient Greek, and a descriptive geography of Greece in the modern language, composed, like the work of Pausanias, after a series of tours. The works of two distinguished prelates, both natives of Corfu and both ardent partisans of Russia, Nikephoros Theotokes (1731?-1800) and Eugenios Bulgares (1715-1806), mark the beginning of the national and literary renaissance. They wrote much in defence of Greek orthodoxy against Latin heresy. Theotokes, famous as a preacher, wrote, besides theological and controversial works, treatises on mathematics, geography and physics. Bulgares was a most prolific author; he wrote numerous translations and works on theology, archaeology, philosophy, mathematics, physics and astronomy; he translated the *Aeneid* and *Georgics* of Virgil into Homeric verse at the request of Catherine II. His writings exercised a considerable influence over his contemporaries.

The literary revival.

The poets of the earlier period of the Greek revival were Constantinos Rhigas (*q.v.*), the Alcman of the revolutionary movement, whose songs fired the spirit of his fellow-countrymen; Christopoulos (1772-1847), a Phanariote, who wrote some charming Anacreontics, and Jacobos Rizos Neroulos (1778-1850), also a Phanariote, author of tragedies, comedies and lyrics, and of a work in French on modern Greek literature. They are followed in the epoch of Greek independence by the brothers Panagiotes and Alexander Soutzos (1800-1868 and 1803-1863) and Alexander Rhizos Rhangabēs (Rhankaves, 1810-1892), all three Phanariotes. Both Soutzos had a rich command of musical language, were highly ideal in their conceptions, strongly patriotic and possessed an ardent love of liberty. Both imitated to some extent Byron, Lamartine and Béranger; they tried various forms of poetry, but the genius of Panagiotes was essentially lyrical, that of Alexander satirical. The other great poet of the Greek revival, Alexander Rizos Rhangabē, was a writer with a fine poetic feeling, exquisite diction and singular beauty and purity of thought and sentiment. Besides numerous odes, hymns, ballads, narrative poems, tragedies and comedies, he wrote several prose works, including a history of ancient Greece, a history of modern Greek literature, several novels and works on ancient art and archaeology. Among the numerous dramatic works of this time may be mentioned the Μαρία Δοξιπατρῆ of Demetrios Bernardakes, a Cretan, the scene of which is laid in the Morea at the time of the crusades.

Poets of the Greek revival.

In prose composition, as in poetry, the national revival was marked by an abundant output. Among the historians the greatest is Spiridon Trikoupis, whose *History of the Revolution* is a monumental work. It is distinguished by beauty of style, clearness of exposition and an impartiality which is all the more remarkable as the author played a leading part in the events which he narrates. Almost all the chiefs of the revolutionary movement left their memoirs; even Kolokotrones, who was illiterate, dictated his recollections. John Philemon, of Constantinople, wrote a history of the revolution in six volumes. He was an ardent partisan of Russia, and as such was opposed to Trikoupis, who was attached to the English party. K. Paparrhegopoulos's *History of the Greek Nation* is especially valuable in regard to the later periods; in regard to the earlier he largely follows Gibbon and Grote. With him may be mentioned Moustoxides of Corfu, who wrote on Greek history and literature; Sakellarios, who dealt with the topography and history of Cyprus; N. Dragoumes, whose historical memoirs treat of the period which followed the revolution; K. Assopios, who wrote on Greek literature and history. In theology Oeconomos fills the place occupied by Miniates in the 17th century as a great preacher. Kontogones is well known by his *History of Patristic Literature of the First Three Centuries* and his *Ecclesiastical History*, and Philotheos Bryennios, bishop of Serres, by his elaborate edition of *Clemens Romanus*. Kastorches wrote well on Latin literature. Great literary activity in the domains of law, political economy, mathematics, the physical sciences and archaeology displayed itself in the generation after the establishment of the Greek kingdom.

Prose writers of the revival.

But the writer who at the time of the national revival not only exercised the greatest influence over his contemporaries but even to a large extent shaped the future course of Greek literature was Adamantios Coraës (Korais) of Chios. This remarkable man, who devoted his life to philological studies, was at the same time an ardent patriot, and in the prolegomena to his numerous editions of the classical writers, written In Greek or French, he strove to awake the interest of his countrymen in the past glories of their race or administered to them sage counsels, at the same time addressing ardent appeals to civilized Europe on their behalf. The great importance of Coraës, however, lies in the fact that he was practically the founder of the modern literary language.

Coraës.

In contemporary Greek literature two distinct forms of the modern language present themselves—the vernacular (ἡ καθομιλουμένη) and the purified (ἡ καθαρεύουσα). The former is the oral language, spoken by the whole Greek world, with local dialectic variations; the latter is based on the Greek of the Hellenistic writers, modified, but not essentially altered, in successive ages by the popular speech. At the time of the War of Independence the enthusiasm of the Greeks and the Philhellenes was fired by the memory of an illustrious past, and at its close a classical reaction followed: the ancient nomenclature was introduced in every department of the new state, towns and districts received their former names, and children were christened after Greek heroes and philosophers instead of the Christian saints. In the literary revival which attended the national movement, two schools of writers made their appearance—the purists, who, rejecting the spoken idiom as degenerate and corrupt, aimed at the restoration of the classical language, and the vulgarists, who regarded the vernacular or “Romaic” as the genuine and legitimate representative of the ancient tongue. A controversy which had existed in former times was thus revived, with the result that a state of confusion still prevails in the national literature. The classical scholar who is as yet unacquainted with modern Greek will find, in the pages of an ordinary periodical or newspaper, specimens of the conventional literary language, which he can read with ease side by side with poems or even prose in the vernacular which he will be altogether unable to interpret.

The modern literary language.

The vernacular or oral language is never taught, but is universally spoken. It has been evolved from the ancient language by a natural and regular process, similar to that which has produced the Romance languages from the Latin, or the Russian, Bulgarian and Servian from the old Slavonic. It has developed on parallel lines with the modern European languages, and in obedience to the same laws; like them, it might have grown into a literary language had any great writers arisen in the middle ages to do for it what Dante and his successors of the *trecento* did for Italian. But the effort to adapt it to the requirements of modern literature could hardly prove successful. In the first place, the national sentiment of the Greeks prompts them to imitate the classical writers, and so far as possible to appropriate their diction. The beauty and dignity of the ancient tongue possesses such an attraction for cultivated writers that they are led insensibly to adopt its forms and borrow from its wealth of phrase and idiom. In the next place, a certain literary tradition and usage has already been formed which cannot easily be broken down. For more than half a century the generally accepted written language, half modern half ancient, has been in use in the schools, the university, the parliament, the state departments and the pulpit, and its influence upon the speech of the more educated classes is already noticeable. It largely owes its present form—though a fixed standard is still lacking—to the influence and teaching of Coraës. As in the time of the decadence a κοινὴ διάλεκτος stood midway between the classical language and the popular speech, so at the beginning of the 19th century there existed a common literary dialect, largely influenced by the vernacular, but retaining the characteristics of the old Hellenistic, from which it was derived by an unbroken literary tradition. This written language Coraës took as the basis of his reforms, purging it of foreign elements, preserving its classical remnants and enlarging its vocabulary with words borrowed from the ancient lexicon or, in case of need, invented in accordance with a fixed principle. He thus adopted a middle course, discountenancing alike the pedantry of the purists and the over-confident optimism of the vulgarists, who found in the uncouth popular speech all the material for a *langue savante*. The language which he thus endeavoured to shape and reconstruct is, of course, conventional and artificial. In course of time it will probably tend to approach the vernacular, while the latter will gradually be modified by the spread of education. The spoken and written languages, however, will always be separated by a wide interval.

Reforms of Coraës.

Many of the best poets of modern Greece have written in the vernacular, which is best adapted for the natural and spontaneous expression of the feelings. Dionysios Solomos (1798-

Poetical writers in the vernacular.

1857), the greatest of them all, employed the dialect of the Ionian Islands. Of his lyrics, which are full of poetic fire and inspiration, the most celebrated is his “Ode to Liberty.” Other poets, of what may be described as the Ionic school, such as Andreas Kalvos (1796-1869), Julius Typaldos (1814-1883), John Zampelios (1787-1856), and Gerasimos Markoras (b. 1826), followed his example in using the Heptanesian dialect. On the other hand, Georgios Terzetes (1806-1874), Aristotle Valaorites (1824-1879) and Gerasimos Mavrogiannes, though natives of the Ionian Islands, adopted in their lyrics the language of the Klephtic ballads—in other words, the vernacular of the Pindus range and the mountainous district of Epirus. This dialect had at least the advantage of being generally current throughout the mainland, while it derived distinction from the heroic exploits of the champions of Greek liberty. The poems of Valaorites, which are characterized by vivid imagination and grace of style, have made a deep impression on the nation. Other poets who largely employed the Epirotic dialect and drew their inspiration from the Klephtic songs were John Vilaras (1771-1823), George Zalokostas (1805-1857) in his lyric pieces, and Theodore Aphentoules, a Cretan (d. 1893). With the poems of this group may be classed those of Demetrius Bikelas (b. 1835). The popular language has been generally adopted by the younger generation of poets, among whom may be mentioned Aristomenes Probelegios (b. 1850), George Bizyenos (1853-1896), George Drosines, Kostes Palamas (b. 1859), John Polemes, Argyres Ephthaliotes, and Jacob Polylas (d. 1896).

Poetical writers in the conventional language.

Contemporary with the first-mentioned or Ionic group, there existed at Constantinople a school of poets who wrote in the accepted literary language, and whose writings serve as models for the later group which gathered at Athens after the emancipation of Greece. The literary traditions founded by Alexander Rizos Rhangabēs (1810-1892) and the brothers Alexander and Panagiotis Soutzos (1803-1863 and 1800-1868), who belonged to Phanariot families, were maintained in Athens by Spiridion Basiliades (1843-1874) Angelos Vlachos (b. 1838), John Karasoutzas (1824-1873), Demetrios Paparrhegopoulos (1843-1873), and Achilles Paraschos (b. 1838). The last, a poet of fine feeling, has also employed the popular language. In general the practice of versification in the conventional literary language has declined, though sedulously encouraged by the university of Athens, and fostered by annual poetic competitions with prizes provided by patriotic citizens. Greek lyric poetry during the first half of the century was mainly inspired by the patriotic sentiment aroused by the struggle for independence, but in the present generation it often shows a tendency towards the philosophic and contemplative mood under the influence of Western models.

Dramatists, translators and satirists.

There has been an abundant production of dramatic literature in recent years. In succession to Alexander Rhangabēs, John Zampelios and the two Soutzos, who belong to the past generation, Kleon Rhangabēs, Angelos Vlachos, Demetrios Koromelas, Basiliades and Bernadakes are the most prominent among modern dramatic writers. Numerous translations of foreign masterpieces have appeared, among which the metrical versions of *Romeo and Juliet*, *Othello*, *King Lear*, *Hamlet*, *Macbeth* and *The Merchant of Venice*, by Demetrios Bikelas, deserve mention as examples of artistic excellence. Goethe’s *Faust* has been rendered into verse by Probelegios, and *Hamlet*, *Antony and Cleopatra*, *Coriolanus and Julius Caesar*, into prose by Damiroles. Among recent satirists, George Soures (b. 1853) occupies a unique position. He reviews social and political events in the Ῥωμῆος, a witty little newspaper written entirely in verse, which is read with delight by all classes of the population.

Recent prose writers.

Almost all the prose writers have employed the literary language. In historical research the Greeks continue to display much activity and erudition, but no great work comparable to Spiridion Trikoupis’s *History of the Revolution* has appeared in the present generation. A history of the Greek nation from the earliest times to the present day, by Spiridion Lampros, and a general history of the 19th century by Karolides, have recently been published. The valuable Μνημεῖα of Sathas, the μελέται Βυζαντινῆς ἱστορίας of Spiridion Zampelios and Mavrogiannes’s *History of the Ionian Islands* deserve special mention, as well as the essays of Bikelas, which treat of the Byzantine and modern epochs of Greek history. Some of the last-named were translated into English by the late marquis of Bute. Among the writers on jurisprudence are Peter Paparrhegopoulos, Kalligas, Basileios Oekonomedes and Nikolaos Saripolos. Brailas-Armenes and John Skaltzounes, the latter an opponent of Darwin, have written philosophical works. The *Ecclesiastical History* of Diomedes Kyriakos and the *Theological Treatises* of Archbishop Latas should be noted. The best-known writers of philological works are Constantine Kontos, a strong advocate of literary purism, George Hatzidakes, Theodore Papademetrakopoulos and John Psichari; in archaeology, Stephen Koumanoudes, Panagiotes Kavvadias and Christos Tsountas have won a recognized position among scholars. John Svoronos is a high authority

on numismatics. The works of John Hatzidakes on mathematics, Anast. Christomanos on chemistry, and Demetrios Aeginetes on astronomy are well known.

Fiction.

The earlier works of fiction, written in the period succeeding the emancipation of Greece, were much affected by foreign influence. Modern Greece has not produced any great novelist. The Κρητικοὶ γάμοι of Spiridion Zampelios, the scene of which is laid in Crete, and the *Thanos Blechas* of Kalligas are interesting, the former for accuracy of historical detail, the latter as a picture of peasant life in the mountains of Greece. Original novel writing has not been much cultivated, but translations of foreign romances abound. In later times the short story has come into vogue through the example of D. Bikelas, whose tales have acquired great popularity; one of them, *Loukis Laras*, has been translated into many languages. The example of Bikelas has been followed by Drosines Karkavitzas, Ephthaliotis, Xenopoulos and many others.

Prose writers in the vernacular.

The most distinguished of the writers who adhere to the vernacular in prose is John Psichari, professor of the École des Hautes Études in Paris. He is the recognized leader of the vulgarists. Among the best known of his works are Τὸ ταξεῖδι μου, a narrative of a journey in Greek lands, Τὄνειρο τοῦ Γιαννίρη, Ἡ Ζούλεα, and ὁ Μάγος. The tales of Karkavitzas and Ephthaliotis are also in the vernacular. Among the younger of M. Psichari's followers is M. Palli, who has recently published a translation of the *Iliad*. Owing to the limited resources of the popular language, the writers of this school are sometimes compelled to employ strange and little-known words borrowed from the various dialects. The vernacular has never been adopted by writers on scientific subjects, owing to its inherent unsuitability and the incongruity arising from the introduction of technical terms derived from the ancient language. Notwithstanding the zeal of its adherents, it seems unlikely to maintain its place in literature outside the domain of poetry; nor can any other result be expected, unless its advocates succeed in reforming the system of public instruction in Greece.

Periodicals and Journals.

Many periodicals are published at Athens, among which may be mentioned the *Athena*, edited by Constantine Kontos, the *Ethniké Agoge*, a continuation of the old *Hestia*, the *Harmonia* and the Διάπλασις τῶν παίδων, an educational review. The Parnassos, the Archaeological Society and other learned bodies issue annual or quarterly reports. The Greek journals are both numerous and widely read. They contain much clever writing, which is often marred by inaccuracy and a deficient sense of responsibility. Their tendency to exaggerated patriotic sentiment sometimes borders on the ludicrous. For many years the Nea *Heméra* of Trieste exerted a considerable influence over the Greek world, owing to the able political reviews of its editor, Anastasios Byzantios (d. 1898), a publicist of remarkable insight and judgment.

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(J. D. B.)

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1 For authorities and criticisms see T. W. Allen in *Classical Quarterly* (Jan. and April 1908).

2 Others attribute it, as well as the *Margites*, to Pigres of Halicarnassus, the supposed brother of the Carian queen Artemisia, who fought on the side of Xerxes at the battle of Salamis.

3 The extant fragments of Solon have been augmented by lengthy quotations in the *Constitution of Athens*.

4 Since the above was written, four considerable fragments generally assigned to Sappho have been discovered: a prayer to the Nereids for the safe return of her brother Charaxus; the leave-taking of a favourite pupil; a greeting to Atthis, one of her friends, in Lydia; the fourth, much mutilated, addressed to another pupil, Gongyla. They are of great beauty and throw considerable light on the personality of Sappho and the language and metre of her poems.

5 Recently increased by specimens of the *Partheneia* (choral songs for maidens) and paeans.

6 His Constitution of Athens (*q.v.*), of which a papyrus MS. was found in Egypt and published in 1891, forms part of a larger work on the constitution of 158 Greek and foreign cities.

7 See Ad. Bauer and J. Strzygowski, “Eine alexandrinische Weltchronik” (1905) (*Denkschrift der kaiserlich. Akademie der Wissenschaften*, li.).

8 The patriarch Cyrillos Lucares (1572-1638), who had studied for a time in England and whose sympathies with Protestantism made him many enemies, established a Greek printing-press at Constantinople, from which he had the temerity to issue a work condemning the faith of Mahomet; he was denounced to the Turks by the Jesuits, and his printing-press was suppressed.

GREEK RELIGION. The recent development of anthropological science and of the comparative study of religions has enabled us at last to assign to ancient Greek religion its proper place in the classification of creeds and to appreciate its importance for the history of civilization. In spite of all the diversities of local cults we may find a general definition of the theological system of the Hellenic communities, and with sufficient accuracy may describe it as an anthropomorphic polytheism, preserving many traces of a pre-anthropomorphic period, unchecked by any exacting dogma or tradition of revelation, and therefore pliantly adapting itself to all the changing circumstance of the social and political history of the race, and easily able to assimilate alien ideas and forms. Such a religion, continuing in whole or in part throughout a period of at least 2000 years, was more capable of progress than others, possibly higher, that have crystallized at an early period into a fixed dogmatic type; and as, owing to its essential character, it could not be convulsed by any inner revolution that might obliterate the deposits of its earlier life, it was likely to preserve the imprints of the successive ages of culture, and to reveal more clearly than any other testimony the evolution of the race from savagery to civilization. Hence it is that Greek religion appears to teem with incongruities, the highest forms of religious life being often confronted with the most primitive. And for this reason the student of savage anthropology and the student of the higher religions of the world are equally rewarded by its study.

Modern ethnology has arrived at the conviction that the Hellenic nation, like others that have played great parts in history, was the product of a blend of populations, the conquering tribes of Aryan descent coming from the north and settling among and upon certain pre-Hellenic Mediterranean stocks. The conclusion that is naturally drawn from this is that Hellenic religion is also the product of a blend of early Aryan or Indo-Germanic beliefs with the cult-ideas and practices of the Mediterranean area that were from of old indigenous in the lands which the later invaders conquered. But to disentangle these two component parts of the whole, which might seem to be the first problem for the history of the development of this religion, is by no means an easy task; we may advance further towards its solution, when the mysterious pre-Hellenic Mediterranean language or group of languages, of which traces remain in Hellenic place-names, and which may be lying uninterpreted on the brick-tablets of

the palace of Cnossus, has found its interpreter. For the first question is naturally one of language. But the comparative study of the Indo-European speech-group, great as its philological triumphs have been, has been meagre in its contributions to our positive knowledge of the original belief of the primitive stock. It is not possible to reconstruct a common Indo-European religion. The greater part of the separate Aryan cult-systems may have developed after the diffusion and may have been the result of contact in prehistoric days with non-Aryan peoples. And many old religious etymological equations, such as Οὐρανός = Sanskrit Varuna, Ἑρμῆς = Sarameyās, Athena = Ahana, were uncritically made and have been abandoned. The chief fact that philology has revealed concerning the religious vocabulary of the Aryan peoples is that many of them are found to have designated a high god by a word derived from a root meaning "bright," and which appears in Zeus, Jupiter, Sanskrit *Dyaus*. This is important enough, but we should not exaggerate its importance, nor draw the unwarranted inference that therefore the primitive Indo-Europeans worshipped one supreme God, the Sky-Father. Besides the word "Zeus," the only other names of the Hellenic pantheon that can be explained wholly or partly as words of Aryan formation are Poseidon, Demeter, Hestia, Dionysus (whose name and cult were derived from the Aryan stock of the Thraco-Phrygians) and probably Pan. But other names, such as Athena, Ares, Apollo, Artemis, Hera, Hermes, have no discovered affinities with other Aryan speech-groups; and yet there is nothing suspiciously non-Aryan in the formation of these words, and they may all have belonged to the earliest Hellenic-Aryan vocabulary. In regard to others, such as Rhea, Hephaestus and Aphrodite, it is somewhat more probable that they belonged to an older pre-Hellenic stock that survived in Crete and other islands, and here and there on the mainland; while we know that Zeus derived certain unintelligible titles in Cretan cult from the indigenous Eteo-cretan speech.

A minute consideration of a large mass of evidence justifies the conclusion that the main tribes of the Aryan Hellenes, pushing down from the north, already possessed certain deities in common such as Zeus, Poseidon and Apollo with whom they associated certain goddesses, and that they maintained the cult of Hestia or "Holy Hearth." Further, a comparison of the developed religions of the respective Aryan peoples suggests that they tended to give predominance to the male divinity, although we have equally good reason to assert that the cult of goddesses, and especially of the earth-goddess, is a genuinely "Aryan" product. But when the tribes of this family poured into the Greek peninsula, it is probable that they would find in certain centres of a very ancient civilization, such as Argolis and Crete, the dominant cult of a female divinity.[1] The recent excavations on the site of the Hera temple at Argos prove that a powerful goddess was worshipped here many centuries before it is probable that the Hellenic invader appeared. He may have even found the name Hera there, or may have brought it with him and applied it to the indigenous divinity. Again, we are certain that the great mother-goddess of Crete, discovered by Dr Arthur Evans, is the ancestress of Rhea and of the Greek "Mother of the gods": and it is a reasonable conjecture that she accounts for many of the forms of Artemis and perhaps for Athena. But the evidence by no means warrants us in assuming as an axiom that wherever we find a dominant goddess-cult, as that of Demeter at Eleusis, we are confronted with a non-Hellenic religious phenomenon. The very name "Demeter" and the study of other Aryan religions prove the prominence of the worship of the earth-goddess in our own family of the nations. Finally, we must reckon with the possibility that the other great nations which fringed the Mediterranean, Hittite, Semitic and Egyptian peoples, left their impress on early Greek religion, although former scholars may have made rash use of this hypothesis.[2]

Recognizing then the great perplexity of these problems concerning the ethnic origins of Hellenic religion, we may at least reduce the tangle of facts to some order by distinguishing its lower from its higher forms, and thus provide the material for some theory of evolution. We may collect and sift the phenomena that remain over from a pre-anthropomorphic period, the imprints of a savage past, the beliefs and practices that belong to the animistic or even the pre-animistic period, fetishism, the worship of animals, human sacrifice. We shall at once be struck with the contrast between such civilized cults as those of Zeus, Athena, Apollo, high personal divinities to whom the attributes of a progressive morality could be attached, and practices that long survived in backward communities, such as the Arcadian worship of the thunder and the winds, the cult of Zeus Κεραυνός "the thunder" at Mantinea and Zeus Καππώτας in Laconia, who is none other than the mysterious meteoric stone that falls from heaven. These are examples of a religious view in which certain natural phenomena or objects are regarded as mysteriously divine or sacred in their own right and a personal divinity has not yet emerged or been separated from them. A noteworthy product of primitive animistic feeling is the universally prevalent cult of Hestia, who is originally "Holy Hearth" pure and simple, and who even under the developed polytheism, in which she played no small part, was never

Animism.

established as a separate anthropomorphic personage.

Fetishism

The animistic belief that certain material objects can be charged with a divine potency or spirit gives rise to fetishism, a term which properly denotes the worshipful or superstitious use of objects made by art and invested with mysterious power, so as to be used like amulets for the purposes of protective magic or for higher purposes of communion with the divinity. From the earliest discoverable period down to the present day fetishism has been a powerful factor in the religion of the Graeco-Roman world. The importance of the sacred stone and pillar in the “Mycenaean” or “Minoan” period which preceded Homer has been impressively shown by Dr Arthur Evans, and the same fetishistic worship continued throughout the historic ages of classic paganism, the rude aniconic emblem of pillar or tree-trunk surviving often by the side of the iconic masterpiece. It is a reasonable conjecture that the earliest anthropomorphic images of divinities, which were beginning to make their appearance by the time of Homer, were themselves evolved by slow transformation from the upright sacred column. And the altar itself may have arisen as another form of this; the simple heap of stones, such as those erected to Hermes by the way-side and called Ἑρμαῖοι λόφοι, may have served both as a place of worship and as an *agalma* that could attract and absorb a divine potency into itself. Hence the fetishistic power of the altar was fully recognized in Greek ritual, and hence also in the cult of Apollo Agyieus the god and the altar are called by the same name.

It has been supposed that the ancestors of the historic Greeks, before they were habituated to conceive of their divinities as in human form, may have been accustomed to invest them with animal attributes and traits. We must not indeed suppose it to be a general law of religious evolution that “theriomorphism” must always precede anthropomorphism and that the latter transcends and obliterates the former. The two systems can exist side by side, and savages of low religious development can conceive of their deities as assuming at one time human, at another bestial, shape. Now the developed Greek religion was devotedly anthropomorphic, and herein lay its strength and its weakness; nevertheless, the advanced Hellene could imagine his Dionysus entering temporarily into the body of the sacrificial bull or goat, and the men of Phigalia in Arcadia were attached to their horse-headed Demeter, and the primitive Laconians possibly to a ram-headed Apollo. Theriolatry in itself, *i.e.* the worship of certain animals as of divine power in their own right, apart from any association with higher divinities, can scarcely be traced among the Greek communities at any period. They are not found to have paid reverence to any species, though individual animals could acquire temporarily a divine character through communion with the altar or with the god. The wolf might at one time have been regarded as the incarnation of Apollo, the wolf-god, and here and there we find faint traces of a wolf-sacrifice and of offerings laid out for wolves. But the occasional propitiation of wild beasts may fall short of actual worship. The Athenian who slew a wolf might give it a sumptuous funeral, probably to avoid a blood-feud with the wolf’s relatives, yet the Athenian state offered rewards for a wolf’s head. Nor did any Greek individual or state worship flies as a class, although a small oblation might be thrown to the flies before the great sacrifice to Apollo on the Leucadian rock, to please them and to persuade them not to worry the worshippers at the great solemnity, where the reek of roast flesh would be likely to attract them.

Totemism.

Theriolatry suggests totemism; and though we now know that the former can arise and exist quite independently of the latter, recent anthropologists have interpreted the apparent sanctity or prestige of certain animals in parts of Greek mythology and religion as the deposit of an earlier totemistic system. But this interpretation, originated and maintained with great acumen by Andrew Lang and W. Robertson Smith, appears now somewhat hazardous; and as a scientific hypothesis there are many flaws in it. The more observant study of existing totem-tribes has weakened our impression of the importance of totemism as a primitive religious phenomenon. It is in reality more important as a social than as a religious factor. If indeed we choose to regard totemism as a mere system of nomenclature, by which a tribe names itself after some animal or plant, then we might quote a few examples of Hellenic tribes totemistic in this sense. But totemism is a fact of importance only when it affects the tribal marriage laws or the tribal religion. And the tribal marriage laws of ancient Greece, so far as they are known, betray no clear mark of totemistic arrangements; nor does the totemism of contemporary savages appear to affect their religion in any such way as to suggest a natural explanation for any of the peculiar phenomena of early Hellenic polytheism. Here and there we have traces of a snake-tribe in Greece, the Ὀφιεῖς in Aetolia, the Ὀφιογενεῖς in Cyprus and Parium, but we are not told that these worshipped the snake, though the latter clan were on terms of intimacy with it. Where the snake was actually worshipped in Hellenic cult—the cases are few and doubtful—it may have been regarded as the incarnation of the ancestor or

as the *avatar* of the under-world divinity.

Finally, among the primitive or savage phenomena the practice of human sacrifice looms large. Encouraged at one time by the Delphic oracle, it was becoming rare and repellent to the conscience by the 6th century B.C.; but it was not wholly extinct in the Greek world even by the time of Porphyry. The facts are very complex and need critical handling, and a satisfying scientific explanation of them all is still to be sought.

Human sacrifice.

We can now observe the higher aspects of the advanced polytheism. And at the outset we must distinguish between mythology and religion strictly understood, between the stories about the divinities and the private or public religious service. No doubt the former are often a reflection of the latter, in many cases being suggested by the ritual which they may have been invented to interpret, and often envisaging important cult-ideas. Such for example are the myths about the purification and trial of Orestes, Theseus, Ixion, the story of Demeter's sorrow, of the sufferings and triumph of Dionysus, and those about the abolition of human sacrifice. Yet Greek mythology as a whole was irresponsible, without reserve, and unchecked by dogma or sacerdotal prohibition; and frequently it sank below the level of the current religion, which was almost free from the impurities which shock the modern reader of Hellenic myths. Nor again did any one feel himself called upon to believe any particular myth; in fact, faith, understood in the sense in which the term is used in Christian theology, as the will to believe certain dogmatic statements about the nature and action of divinity, is a concept which was neither named nor recognized in Hellenic ethics or religious doctrine; only, if a man proclaimed his disbelief in the existence of the gods and refused to join in the ritual of the community, he would become "suspect," and might at times be persecuted by his fellows. Greek religion was not so much an affair of doctrine as of ritual, religious formulae of which the cult-titles of the divinities were an important component, and prayer; and the most illuminative sources of our knowledge of it are the ritual-inscriptions and other state-documents, the private dedications, the monuments of religious art and certain passages in the literature, philology and archaeology being equally necessary to the equipment of the student.

We are tempted to turn to Homer as the earliest authority. And though Homer is not primitive and does not present even an approximately complete account of Greek religion, we can gather from his poems a picture of an advanced polytheism which in form and structure at least is that which was presented to the world of Aeschylus. We discern a pantheon already to some extent systematized, a certain hierarchy and family of divinities in which the supremacy of Zeus is established as incontestable. And the anthropomorphic impulse, the strongest trend in the Greek religious imagination, which filled the later world with fictitious personages, generating transparent shams such as an Ampidromus for the ritual of the Ampidromia, Amphiction for the Amphictiones, a hero Κέραμος for the gild of potters, is already at its height in the Homeric poems. The deities are already clear-cut, individual personalities of distinct ethos, plastically shaped figures such as the later sculpture and painting could work upon, not vaguely conceived *numina* like the forms of the old Roman religion. Nor can we call them for the most part nature-deities like the personages of the Vedic system, thinly disguised "personifications" of natural phenomena. Athena is not the blue sky nor Apollo the sun; they are simply Athena and Apollo, divine personages with certain powers and character, as real for their people as Christ and the Virgin for Christendom. By the side of these, though generally in a subordinate position, we find that Homer recognized certain divinities that we may properly call nature-powers, such as Helios, Gaia and the river-deities, forms descending probably from a remote animistic period, but maintaining themselves within the popular religion till the end of Paganism. Again, though Homer may talk and think at times with levity and *banalité* about his deities, his deeper utterances impute an advanced morality to the supreme God. His Zeus is on the whole a power of righteousness, dealing with men by a righteous law of nemesis, never being himself the author of evil—an idea revealed in the opening passage of the *Odyssey*—but protecting the good and punishing the wicked. Vengeance, indeed, was one of the attributes of divinity both for Homer and the average Greek of the later period, as it is in Judaic and Christian theology, though Plato and Euripides protested strongly against such a view. But the Homeric Zeus is equally a god of pity and mercy, and the man who neglects the prayers of the sorrowful and afflicted, who violates the sanctity of the suppliant and guest, or oppresses the poor or the wanderer, may look for divine punishment. Though not regarded as the physical author of the universe or the Creator, he is in a moral sense the father of gods and men. And though the sense of sin and the need of piacular sacrifice are expressed in the Homeric poems, the relations between gods and men that they reveal are on the whole genial and social; the deity sits unseen at the

Religion in Homer.

good man's festal sacrifice, and there is a simple apprehension of the idea of divine communion. There is also indeed a glimmering of the dark background of the nether world, and the chthonian powers that might send up the Erinys to fulfil the curse of the wronged. Yet on the whole the religious atmosphere is generally cheerful and bright; freer than that of the later ages from the taint of magic and superstition; nor is Homer troubled much about the life after death; he scarcely recognizes the cult of the dead,[3] and is not oppressed by fear of the ghost-world.

If we look now broadly over the salient facts of the Greek public and private worship of the historic period we find much in it that agrees with Homeric theology. His "Olympian" system retains a certain life almost to the end of Paganism, and it is a serious mistake to suppose that it had lost its hold upon the people of the 5th and 4th century B.C. We find it, indeed, enriched in the post-Homeric period with new figures of prestige and power; Dionysus, of whom Homer had only faintly heard, becomes a high god with a worship full of promise for the future. Demeter and Kore, the mother and the girl, whom Homer knew well enough but could not use for his epic purposes, attract the ardent affections and hopes of the people; and Asclepius, whom the old poet did not recognize as a god, wins a conspicuous place in the later shrines. But much that has been said of the Homeric may be said of the later classical theology. The deities remain anthropomorphic, and appear as clearly defined individuals. A certain hierarchy is recognized; Zeus is supreme, even in the city of Athena, but each of the higher divinities played many parts, and local enthusiasm could frustrate the departmental system of divine functions; certain members of the pantheon had a preference for the life of the fields, but as the *polis* emerged from the village communities, Demeter, Hermes, Artemis and others, the gods and goddesses of the husbandmen and shepherds, become powers of the council-chamber and the market-place. The moral ideas that we find in the Homeric religion are amply attested by cult-records of the later period. The deities are regarded on the whole as beneficent, though revengeful if wronged or neglected; the cult-titles used in prayer, which more than any other witnesses reveal the thought and wish of the worshipper, are nearly always euphemistic, the doubtful title of Demeter Erinys being possibly an exception. The important cults of Zeus Ἱκέσιος and Προστρόπαιος, the suppliant's protecting deity, embody the ideas of pity and mercy that mark advanced religion; and many momentous steps in the development of morality and law were either suggested or assisted by the state-religion. For example, the sanctity of the oath, the main source of the secular virtue of truthfulness, was originally a religious sanction, and though the Greek may have been prone to perjury, yet the Hellenic like the Hebraic religious ethics regarded it as a heinous sin. The sanctity of family duties, the sacredness of the life of the kinsman, were ideas fostered by early Hellenic religion before they generated principles of secular ethics. In the post-Homeric period, the development of the doctrine of purity, which was associated with the Apolline religion, combining with a growing dread of the ghost-world, stimulated and influenced in many important ways the evolution of the Greek law concerning homicide.[4] And the beginnings of international law and morality were rooted in religious sanctions and taboo. In fact, Greek state-life was indebted in manifold ways to Greek religion, and the study of the Greek oracles would alone supply sufficient testimony of this. In many cases the very origin of the state was religious, the earliest *polis* sometimes having arisen under the shadow of the temple.

The post-Homeric period.

Yet as Greek religion was always in the service of the state, and the priest a state-official, society was the reverse of theocratic. Secular advance, moral progress and the march of science, could never long be thwarted by religious tradition; on the contrary, speculative thought and artistic creation were considered as attributes of divinity. We may say that the religion of Hellas penetrated the whole life of the people, but rather as a servant than as a master.

Distinct and apart from these public worships and those of the clan and family were the mystic cults of Eleusis, Andania and Samothrace, and the private services of the mystic brotherhoods. The latter were scattered broadcast over Hellas, and the influence of the former was strengthened and their significance intensified by the wave of mysticism that spread at first from the north from the beginning of the 7th century onwards, and derived its strength from the power of Dionysus and the Orphic brotherhoods. New ideals and hopes began to stir in the religious consciousness, and we find a strong Salvationist tendency, the promise of salvation relying on mystic communion with the deity. Also a new and vital principle is at work; Orphism is the only force in Greek religion of a clear apostolic purpose, for it broke the barriers of the old tribal and civic cults, and preached its message to bond and free, Hellene and barbarian.

The later history of Greek paganism is mainly concerned with its gradual penetration by

Oriental ideas and worships, and the results of this θεοκρασία are discerned in an ever increasing mysticism and a tendency towards monotheism. Obliterated as the old Hellenic religion appeared to be by Christianity, it nevertheless retained a certain life, though transformed, under the new creed to which it lent much of its hieratic organization and religious terminology. The indebtedness of Christianity to Hellenism is one of the most interesting problems of comparative religion; and for an adequate estimate a minute knowledge of the ritual and the mystic cults of Hellas is one of the essential conditions.

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(L. R. F.)

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1 This has often been explained as a result of *Mutterrecht*, or reckoning descent through the female: for reasons against this hypothesis see L. R. Farnell in *Archiv für vergleichende Religionswissenschaft* (1904); cf. A. J. Evans, "Mycenaean Tree and Pillar Cult," in *Journ. of Hellenic Studies* (1901).

2 V. Bérard has recently revived the discredited theory of a prevalent Phoenician influence in his ingenious but uncritical work, *L'Origine des cultes arcadiens*. M. P. Foucart believes in very early borrowing from Egypt, as explaining much in the religion of Demeter and Dionysus; see *Les Grands Mystères d'Éleusis* and *Le Culte de Dionysos en Attique*.

3 This became very powerful from the 7th century onward, and there are reasons for supposing that it existed in the pre-Homeric, or Mycenaean, period; *vide* Rohde's *Psyche* (new edition), Tsountas and Manatt, *The Mycenaean Age*.

4 See L. R. Farnell, *Evolution of Religion* (Hibbert Lectures, 1905), pp. 139-152.

GREELEY, HORACE (1811-1872), American statesman and man of letters, was born at Amherst, New Hampshire, on the 3rd of February 1811. His parents were of Scottish-Irish descent, but the ancestors of both had been in New England for several generations. He was the third of seven children. His father, Zaccheus Greeley, owned a farm of 50 acres of stony, sterile land, from which a bare support was wrung. Horace was a feeble and precocious lad, taking little interest in the ordinary sports of childhood, learning to read before he was able to talk plainly, and the prodigy of the neighbourhood for accurate spelling. Before Horace was ten years old (1820), his father became bankrupt, his home was sold by the sheriff, and Zaccheus Greeley himself fled the state to escape arrest for debt. The family soon removed to West Haven, Vermont, where, all working together, they made a scanty living as day labourers. Horace from childhood desired to be a printer, and, when barely eleven years old, tried to be taken as an apprentice in an office at Whitehall, New York, but was rejected on account of his youth. After three years more with the family as a day labourer at West Haven, he succeeded, with his father's consent, in being apprenticed in the office of *The Northern Spectator*, at East Poultney, Vermont. Here he soon became a good workman, developed a passion for politics and especially for political statistics, came to be depended upon for more or less of the editing of the paper, and was a figure in the village debating society. He received only $40 a year, but he sent most of his money to his father. In June 1830 *The Northern Spectator* was suspended. Meantime his father had removed to a small tract of wild land in the dense forests of Western Pennsylvania, 30 m. from Erie. The released apprentice

now visited his parents, and worked for a little time with them on the farm, meanwhile seeking employment in various printing offices, and, when he got it, giving nearly all his earnings to his father. At last, with no further prospect of work nearer home, he started for New York. He travelled on foot and by canal-boat, entering New York in August 1831, with all his clothes in a bundle carried over his back with a stick, and with but $10 in his pocket. More than half of this sum was exhausted while he made vain efforts to find employment. Many refused to employ him, in the belief that he was a runaway apprentice, and his poor, ill-fitting apparel and rustic look were everywhere greatly against him. At last he found work on a 32mo New Testament, set in agate, double columns, with a middle column of notes in pearl. It was so difficult and so poorly paid that other printers had all abandoned it. He barely succeeded in making enough to pay his board bill, but he finished the task, and thus found subsequent employment easier to get.

In January 1833 Greeley formed a partnership with Francis V. Story, a fellow-workman. Their combined capital amounted to about $150. Procuring their type on credit, they opened a small office, and undertook the printing of the *Morning Post*, the first cheap paper published in New York. Its projector, Dr Horatio D. Shepard, meant to sell it for one cent, but under the arguments of Greeley he was persuaded to fix the price at two cents. The paper failed in less than three weeks, the printers losing only $50 or $60 by the experiment. They still had a *Bank Note Reporter* to print, and soon got the printing of a tri-weekly paper, the *Constitutionalist*, the organ of some lottery dealers. Within six months Story was drowned, but his brother-in-law, Jonas Winchester, took his place in the firm. Greeley was now asked by James Gordon Bennett to go into partnership with him in starting *The Herald*. He declined the venture, but recommended the partner whom Bennett subsequently took. On the 2nd of March 1834, Greeley and Winchester issued the first number of *The New Yorker*, a weekly literary and news paper, the firm then supposing itself to be worth about $3000. Of the first number they sold about 100 copies; of the second, nearly 200. There was an average increase for the next month of about 100 copies per week. The second volume began with a circulation of about 4550 copies, and with a loss on the first year’s publication of $3000. The second year ended with 7000 subscribers and a further loss of $2000. By the end of the third year *The New Yorker* had reached a circulation of 9500 copies, and had sustained a total loss of $7000. It was published seven years (until the 20th of September 1841), and was never profitable, but it was widely popular, and it gave Greeley, who was its sole editor, much prominence. On the 5th of July 1836 Greeley married Miss Mary Y. Cheney, a Connecticut school teacher, whom he had met in a Grahamite (vegetarian) boarding-house in New York.

During the publication of *The New Yorker* he added to the scanty income which the job printing brought him by supplying editorials to the short-lived *Daily Whig* and various other publications. In 1838 he had gained such standing as a writer that he was selected by Thurlow Weed, William H. Seward, and other leaders of the Whig Party, for the editorship of a campaign paper entitled *The Jeffersonian*, published at Albany. He continued *The New Yorker*, and travelled between Albany and New York each week to edit the two papers. The *Jeffersonian* was a quiet and instructive rather than a vehement campaign sheet, and the Whigs believed that it had a great effect upon the elections of the next year. When, on the 2nd of May 1840, some time after the nomination by the Whig party of William Henry Harrison for the Presidency, Greeley began the publication of a new weekly campaign paper, *The Log Cabin*, it sprang at once into a great circulation; 40,000 copies of the first number were sold, and it finally rose to 80,000. It was considered a brilliant political success, but it was not profitable, and in September 1841 was merged in the *Weekly Tribune*. On the 3rd of April 1841, Greeley announced that on the following Saturday (April 10th) he would begin the publication of a daily newspaper of the same general principles, to be called *The Tribune*. He was now entirely without money. From a personal friend, James Coggeshall, he borrowed $1000, on which capital and the editor’s reputation *The Tribune* was founded. It began with 500 subscribers. The first week’s expenses were $525 and the receipts $92. By the end of the fourth week it had run up a circulation of 6000, and by the seventh reached 11,000, which was then the full capacity of its press. It was alert, cheerful and aggressive, was greatly helped by the attacks of rival papers, and promised success almost from the start.

From this time Greeley was popularly identified with *The Tribune*, and its share in the public discussion of the time is his history. It soon became moderately prosperous, and his assured income should have placed him beyond pecuniary worry. His income was long above $15,000 per year, frequently as much as $35,000 or more. But he lacked business thrift, inherited a disposition to endorse for his friends, and was often unable to distinguish between deserving applicants for aid and adventurers. He was thus frequently straitened, and, as his necessities pressed, he sold successive interests in his newspaper. At the outset he owned the whole of it. When it was already firmly established (in July 1841), he took in

Thomas McElrath as an equal partner, upon the contribution of $2000 to the common fund. By the 1st of January 1849 he had reduced his interest to 31½ shares out of 100; by July 2nd, 1860, to 15 shares; in 1868 he owned only 9; and in 1872, only 6. In 1867 the stock sold for $6500 per share, and his last sale was for $9600. He bought wild lands, took stock in mining companies, desiccated egg companies, patent looms, photo-lithographic companies, gave away profusely, lent to plausible rascals, and was the ready prey of every new inventor who chanced to find him with money or with property that he could readily convert into money.

In September 1841 Greeley merged his weekly papers, *The Log Cabin* and *The New Yorker*, into *The Weekly Tribune*, which soon attained as wide circulation as its predecessors, and was much more profitable. It rose in a time of great political excitement to a total circulation of a quarter of a million, and it sometimes had for successive years 140,000 to 150,000. For several years it was rarely much below 100,000. Its subscribers were found throughout all quarters of the northern half of the Union from Maine to Oregon, large packages going to remote districts beyond the Mississippi or Missouri, whose only connexion with the outside world was through a weekly or semi-weekly mail. The readers of this weekly paper acquired a personal affection for its editor, and he was thus for many years the American writer most widely known and most popular among the rural classes. The circulation of *The Daily Tribune* was never proportionately great—its advocacy of a protective tariff, prohibitory liquor legislation and other peculiarities, repelling a large support which it might otherwise have commanded in New York. It rose within a short time after its establishment to a circulation of 20,000, reached 50,000 and 60,000 during the Civil War, and thereafter ranged at from 30,000 to 45,000. After May 1845 a semi-weekly edition was also printed, which ultimately reached a steady circulation of from 15,000 to 25,000.

From the outset it was a cardinal principle with Greeley to hear all sides, and to extend a special hospitality to new ideas. In March 1842 *The Tribune* began to give one column daily to a discussion of the doctrines of Charles Fourier, contributed by Albert Brisbane. Gradually Greeley came to advocate some of these doctrines editorially. In 1846 he had a sharp discussion upon them with a former subordinate, Henry J. Raymond, then employed upon a rival journal. It continued through twelve articles on each side, and was subsequently published in book form. Greeley became personally interested in one of the Fourierite associations, the North American Phalanx, at Red Bank, N. J. (1843-1855), while the influence of his discussions doubtless led to or gave encouragement to other socialistic experiments, such as that at Brook Farm. When this was abandoned, its leader George Ripley, with one or two other members, sought employment from Greeley upon *The Tribune*. Greeley dissented from many of Fourier's propositions, and in later years was careful to explain that the principle of association for the common good of working men and the elevation of labour was the chief feature which attracted him. Co-operation among working men he continued to urge throughout his life. In 1850 the Fox Sisters, on his wife's invitation, spent several weeks in his house. His attitude towards their "rappings" and "spiritual manifestations" was one of observation and inquiry; and in his *Recollections* he wrote concerning these manifestations: "That some of them are the result of juggle, collusion or trick I am confident; that others are *not*, I decidedly believe."

From boyhood he had believed in a protective tariff, and throughout his active life he was its most trenchant advocate and propagandist. Besides constantly urging it in the columns of *The Tribune*, he appeared as early as 1843 in a public debate on "The Grounds of Protection," with Samuel J. Tilden and Parke Godwin as his opponents. A series of popular essays on the subject were published over his own signature in *The Tribune* in 1869, and subsequently republished in book form, with a title-page describing protection to home industry as a system of national co-operation for the elevation of labour. He opposed woman suffrage on the ground that the majority of women did not want it and never would, and declared that until woman should "emancipate herself from the thraldom to etiquette," he "could not see how the 'woman's rights theory' is ever to be anything more than a logically defensible abstraction." He aided practical efforts, however, for extending the sphere of woman's employments. He opposed the theatres, and for a time refused to publish their advertisements. He held the most rigid views on the sanctity of marriage and against easy divorce, and vehemently defended them in controversies with Robert Dale Owen and others. He practised and pertinaciously advocated total abstinence from spirituous liquors, but did not regard prohibitory laws as always wise. He denounced the repudiation of state debts or the failure to pay interest on them. He was zealous for Irish repeal, once held a place in the "Directory of the Friends of Ireland," and contributed liberally to its support. He used the occasion of Charles Dickens's first visit to America to urge international copyright, and was one of the few editors to avoid alike the flunkeyism with which Dickens was first received, and the ferocity with which he was assailed after the publication of his *American Notes*. On

the occasion of Dickens's second visit to America, Greeley presided at the great banquet given him by the press of the country. He made the first elaborate reports of popular scientific lectures by Louis Agassiz and other authorities. He gave ample hearing to the advocates of phonography and of phonographic spelling. He was one of the most conspicuous advocates of the Pacific railroads, and of many other internal improvements.

But it is as an anti-slavery leader, and as perhaps the chief agency in educating the mass of the Northern people to that opposition through legal forms to the extension of slavery which culminated in the election of Abraham Lincoln and the Civil War, that Greeley's main work was done. Incidents in it were his vehement opposition to the Mexican War as a scheme for more slavery territory, the assault made upon him in Washington by Congressman Albert Rust of Arkansas in 1856, an indictment in Virginia in the same year for circulating incendiary documents, perpetual denunciation of him in Southern newspapers and speeches, and the hostility of the Abolitionists, who regarded his course as too conservative. His anti-slavery work culminated in his appeal to President Lincoln, entitled "The Prayer of Twenty Millions," in which he urged "that all attempts to put down the rebellion and at the same time uphold its inciting cause" were preposterous and futile, and that "every hour of deference to slavery" was "an hour of added and deepened peril to the Union." President Lincoln in his reply said: "My paramount object is to save the Union, and not either to save or destroy slavery.... What I do about slavery and the coloured race, I do because I believe it helps to save this Union; and what I forbear, I forbear because I do not believe it would help to save the Union ... I have here stated my purpose according to my views of official duty; and I intend no modification of my oft-expressed personal wish that all men everywhere could be free." Precisely one month after the date of this reply the Emancipation Proclamation was issued.

Greeley's political activity, first as a Whig, and then as one of the founders of the Republican party, was incessant; but he held few offices. In 1848-1849 he served a three months' term in Congress, filling a vacancy. He introduced the first bill for giving small tracts of government land free to actual settlers, and published an exposure of abuses in the allowance of mileage to members, which corrected the evil, but brought him much personal obloquy. In the National Republican Convention in 1860, not being sent by the Republicans of his own state on account of his opposition to William Seward as a candidate, he was made a delegate for Oregon. His active hostility to Seward did much to prevent the success of that statesman, and to bring about instead the nomination of Abraham Lincoln. This was attributed by his opponents to personal motives, and a letter from Greeley to Seward, the publication of which he challenged, was produced, to show that in his struggling days he had been wounded at Seward's failure to offer him office. In 1861 he was a candidate for United States senator, his principal opponent being William M. Evarts. When it was clear that Evarts could not be elected, his supporters threw their votes for a third candidate, Ira Harris, who was thus chosen over Greeley by a small majority. At the outbreak of the war he favoured allowing the Southern states to secede, provided a majority of their people at a fair election should so decide, declaring "that he hoped never to live in a Republic whereof one section was pinned to the other by bayonets." When the war began he urged the most vigorous prosecution of it. The "On to Richmond" appeal, which appeared day after day in *The Tribune*, was incorrectly attributed to him, and it did not wholly meet his approval; but after the defeat in the first battle of Bull Run he was widely blamed for it. In 1864 he urged negotiations for peace with representatives of the Southern Confederacy in Canada, and was sent by President Lincoln to confer with them. They were found to have no sufficient authority. In 1864 he was one of the Lincoln Presidential electors for New York. At the close of the war, contrary to the general feeling of his party, he urged universal amnesty and impartial suffrage as the basis of reconstruction. In 1867 his friends again wished to elect him to the Senate of the United States, and the indications were all in his favour. But he refused to be elected under any misapprehension of his attitude, and with what his friends thought unnecessary candour re-stated his obnoxious views on universal amnesty at length, just before the time for the election, with the certainty that this would prevent his success. Some months later he signed the bail bond of Jefferson Davis, and this provoked a torrent of public indignation. He had written a popular history of the late war, the first volume having an immense sale and bringing him unusually large profits. The second was just issued, and the subscribers, in their anger, refused by thousands to receive it. An unsuccessful attempt was also made to expel him from the Union League Club of New York.

In 1867 he was a delegate-at-large to the convention for the revision of the state constitution, and in 1869 and 1870 he was the Republican candidate for controller of the state and member of Congress respectively, but in each case was defeated.

He was dissatisfied with General Grant's administration, and became its sharp critic. The

discontent which he did much to develop ended in the organization of the Liberal Republican party, which held its National Convention at Cincinnati in 1872, and nominated Greeley for the presidency. For a time the tide of feeling ran strongly in his favour. It was first checked by the action of his life-long opponents, the Democrats, who also nominated him at their National Convention. He expected their support, on account of his attitude toward the South and hostility to Grant, but he thought it a mistake to give him their formal nomination. The event proved his wisdom. Many Republicans who had sympathized with his criticisms of the administration, and with the declaration of principles adopted at the first convention, were repelled by the coalition. This feeling grew stronger until the election. His old party associates regarded him as a renegade, the Democrats gave him a half-hearted support. The tone of the canvass was one of unusual bitterness, amounting sometimes to actual ferocity. In August, on representations of the alarming state of the contest, he took the field in person, and made a series of campaign speeches, beginning in New England and extending throughout Pennsylvania, Ohio and Indiana, which aroused great enthusiasm, and were regarded at the time by both friends and opponents as the most brilliant continuous exhibition of varied intellectual power ever made by a candidate in a presidential canvass. General Grant received in the election 3,597,070 votes, Greeley 2,834,079. The only states Greeley carried were Georgia, Kentucky, Maryland, Missouri, Tennessee and Texas.

He had resigned his editorship of *The Tribune* immediately after the nomination; he now resumed it cheerfully; but it was soon apparent that his powers had been overstrained. For years he had suffered greatly from sleeplessness. During the intense excitement of the campaign the difficulty was increased. Returning from his campaign tour, he went immediately to the bedside of his dying wife, and for some weeks had practically no sleep at all. This resulted in an inflammation of the upper membrane of the brain, delirium and death. He expired on the 29th of November 1872. His funeral was a simple but impressive public pageant. The body lay in state in the City Hall, where it was surrounded by crowds of many thousands. The ceremonies were attended by the President and Vice-President of the United States, the Chief-Justice of the Supreme Court, and a large number of eminent public men of both parties, who followed the hearse in a solemn procession, preceded by the mayor and other civic authorities, down Broadway. He had been the target of constant attack during his life, and his personal foibles, careless dress and mental eccentricities were the theme of endless ridicule. But his death revealed the high regard in which he was generally held as a leader of opinion and faithful public servant. “Our later Franklin” Whittier called him, and it is in some such light his countrymen remember him.

In 1851 Greeley visited Europe for the first time, serving as a juryman at the Crystal Palace Exhibition, appearing before a committee of the House of Commons on newspaper taxes, and urging the repeal of the stamp duty on advertisements. In 1855 he made a second trip to Europe. In Paris he was arrested on the suit of a sculptor, whose statue had been injured in the New York World’s Fair (of which he had been a director), and spent two days in Clichy, of which he gave an amusing account. In 1859 he visited California by the overland route, and had numerous public receptions. In 1871 he visited Texas, and his trip through the southern country, where he had once been so hated, was an ovation. About 1852 he purchased a farm at Chappaqua, New York, where he afterwards habitually spent his Saturdays, and experimented in agriculture. He was in constant demand as a lecturer from 1843, when he made his first appearance on the platform, always drew large audiences, and, in spite of his bad management in money matters, received considerable sums, sometimes $6000 or $7000 for a single winter’s lecturing. He was also much sought for as a contributor, over his own signature, to the weekly newspapers, and was sometimes largely paid for these articles. In religious faith he was from boyhood a Universalist, and for many years was a conspicuous member of the leading Universalist church in New York.

His published works are: *Hints Toward Reforms* (1850); *Glances at Europe* (1851); *History of the Struggle for Slavery Extension* (1856); *Overland Journey to San Francisco* (1860); *The American Conflict* (2 vols., 1864-1866); *Recollections of a Busy Life* (1868; new edition, with appendix containing an account of his later years, his argument with Robert Dale Owen on Marriage and Divorce, and Miscellanies, 1873); *Essays on Political Economy* (1870); and *What I know of Farming* (1871). He also assisted his brother-in-law, John F. Cleveland, in editing *A Political Text-book* (1860), and supervised for many years the annual issues of *The Whig Almanac* and *The Tribune Almanac*, comprising extensive political statistics.

The best Lives of Greeley are those by James Parton (New York, 1855; new ed., Boston, 1872) and W. A. Linn (N.Y. 1903). Lives have also been written by L. U. Reavis (New York, 1872), and L. D. Ingersoll (Chicago, 1873); and there is a *Memorial of Horace Greeley* (New York, 1873).

(W. R.)

GREELEY, a city and the county-seat of Weld county, Colorado, U.S.A., about 50 m. N. by E. of Denver. Pop. (1890) 2395; (1900) 3023 (286 foreign-born); (1910) 8179. It is served by the Union Pacific and the Colorado & Southern railways. In 1908 a franchise was granted to the Denver & Greeley Electric railway. The city is the seat of the State Normal School of Colorado (1889). There are rich coal-fields near the city. The county is naturally arid and unproductive, and its agricultural importance is due to an elaborate system of irrigation. In 1899 Weld county had under irrigation 226,613 acres, representing an increase of 102.2% since 1889, and a much larger irrigated area than in any other county of the state. Irrigation ditches are supplied with water chiefly from the Cache la Poudre, Big Thompson and South Platte rivers, near the foothills. The principal crops are potatoes, sugar beets, onions, cabbages and peas; in 1899 Weld county raised 2,821,285 bushels of potatoes on 23,195 acres (53% of the potato acreage for the entire state). The manufacture of beet sugar is a growing industry, a large factory having been established at Greeley in 1902. Beets are also grown as food for live stock, especially sheep. Peas, tomatoes, cabbages and onions are canned here. Greeley was founded in 1870 by Nathan Cook Meeker (1817-1879), agricultural editor of the New York *Tribune*. With the support of Horace Greeley (in whose honour the town was named), he began in 1869 to advocate in *The Tribune* the founding of an agricultural colony in Colorado. Subsequently President Hayes appointed him Indian agent at White River, Colorado, and he was killed at what is now Meeker, Colorado, in an uprising of the Ute Indians. Under Meeker's scheme, which attracted mainly people from New England and New York state, most of whom were able to contribute at least a little capital, the Union Colony of Colorado was organized and chartered, and bought originally 11,000 acres of land, each member being entitled to buy from it one residence lot, one business lot, and a tract of farm land. The funds thus acquired were, to a large extent, expended in making public improvements. A clause inserted in all deeds forbade the sale of intoxicating liquors on the land concerned, under pain of the reversion of such property to the colony. The initiation fees ($5) were used for the expenses of locating the colony, and the membership certificate fees ($150) were expended in the construction of irrigating ditches, as was the money received from the sale of town lots, except about $13,000 invested in a school building (now the Meeker Building). Greeley was organized as a town in 1871, and was chartered as a city of the second class in 1886. The "Union Colony of Colorado" still exists as an incorporated body and holds reversionary rights in streets, alleys and public grounds, and in all places "where intoxicating liquors are manufactured, sold or given away, as a beverage."

See Richard T. Ely, "A Study of a 'Decreed' Town," *Harper's Magazine*, vol. 106 (1902-1903), p. 390 sqq.

GREEN, ALEXANDER HENRY (1832-1896), English geologist, son of the Rev. Thomas Sheldon Green, master of the Ashby Grammar School, was born at Maidstone on the 10th of October 1832. He was educated partly at his father's school, Ashby-de-la-Zouch, and afterwards at Gonville and Caius College, Cambridge, where he graduated as sixth wrangler in 1855 and was elected a fellow of his college. In 1861 he joined the Geological Survey of Great Britain, and surveyed large areas of the midland counties, Derbyshire and Yorkshire. He wrote (wholly or in part) memoirs on the Geology of Banbury (1864), of Stockport (1866), of North Derbyshire (1869, 2nd ed. 1887), and of the Yorkshire Coal-field (1878). In 1874 he retired from the Geological Survey, having been appointed professor of geology in the Yorkshire College at Leeds; in 1885 he became also professor of mathematics, while for many years he held the lectureship on geology at the school of military engineering at Chatham. He was elected F.R.S. in 1886, and two years later was chosen professor of geology in the university of Oxford. His manual of *Physical Geology* (1876, 3rd ed. 1882) is an excellent book. He died at Boar's Hill, Oxford, on the 19th of August 1896.

A portrait of him, with brief memoir, was published in *Proc. Yorksh. Geol. and Polytechnic Soc.* xiii. 232.

GREEN, DUFF (1791-1875), American politician and journalist, was born in Woodford county, Kentucky, on the 15th of August 1791. He was a school teacher in his native state, served during the War of 1812 in the Kentucky militia, and then settled in Missouri, where he worked as a schoolmaster and practised law. He was a member of the Missouri Constitutional Convention of 1820, and was elected to the state House of Representatives in 1820 and to the state Senate in 1822, serving one term in each house. Becoming interested in journalism, he purchased and for two years edited the St Louis *Enquirer*. In 1825 he bought and afterwards edited in Washington, D.C., *The United States Telegraph*, which soon became the principal organ of the Jackson men in opposition to the Adams administration. Upon Andrew Jackson's election to the presidency, the *Telegraph* became the principal mouthpiece of the administration, and received printing patronage estimated in value at $50,000 a year, while Green became one of the coterie of unofficial advisers of Jackson known as the "Kitchen Cabinet." In the quarrel between Jackson and John C. Calhoun, Green supported the latter, and through the columns of the *Telegraph* violently attacked the administration. In consequence, his paper was deprived of the government printing in the spring of 1831. Green, however, continued to edit it in the Calhoun interest until 1835, and gave vigorous support to that leader's nullification views. From 1835 to 1838 he edited *The Reformation*, a radically partisan publication, devoted to free trade and the extreme states' rights theory. In 1841-1843 he was in Europe on behalf of the Tyler administration, and he is said to have been instrumental in causing the appointment of Lord Ashburton to negotiate in Washington concerning the boundary dispute between Maine and Canada. In January 1843 Green established in New York City a short-lived journal, *The Republic*, to combat the spoils system and to advocate free trade. In September 1844 Calhoun, then secretary of state, sent Green to Texas ostensibly as consul at Galveston, but actually, it appears, to report to the administration, then considering the question of the annexation of Texas, concerning the political situation in Texas and Mexico. After the close of the war with Mexico Green was sent to that country in 1849 by President Taylor to negotiate concerning the moneys which, by the treaty of Guadalupe Hidalgo, the United States had agreed to pay; and he saved his country a considerable sum by arranging for payment in exchange instead of in specie. Subsequently Green was engaged in railway building in Georgia and Alabama. On the 10th of June 1875 he died in Dalton, Georgia, a city which in 1848 he had helped to found.

GREEN, JOHN RICHARD (1837-1883), English historian, was born at Oxford on 12th December 1837, and educated at Magdalen College School and at Jesus College, where he obtained an open scholarship. On leaving Oxford he took orders and became the incumbent of St Philip's, Stepney. His preaching was eloquent and able; he worked diligently among his poor parishioners and won their affection by his ready sympathy. Meanwhile he studied history in a scholarly fashion, and wrote much for the *Saturday Review*. Partly because his health was weak and partly because he ceased to agree with the teaching of the Church of England, he abandoned clerical life and devoted himself to history; in 1868 he took the post of librarian at Lambeth, but his health was already breaking down and he was attacked by consumption. His *Short History of the English People* (1874) at once attained extraordinary popularity, and was afterwards expanded in a work of four volumes (1877-1880). Green is pre-eminently a picturesque historian; he had a vivid imagination and a keen eye for colour. His chief aim was to depict the progressive life of the English people rather than to write a political history of the English state. In accomplishing this aim he worked up the results of wide reading into a series of brilliant pictures. While generally accurate in his statement of facts, and showing a firm grasp of the main tendency of a period, he often builds more on his authorities than is warranted by their words, and is apt to overlook points which would have forced him to modify his representations and lower the tone of his colours. From his animated pages thousands have learned to take pleasure in the history of their own people, but could scarcely learn to appreciate the complexity inherent in all historical movement. His style is extremely bright, but it lacks sobriety and presents some affectations. His later histories, *The Making of England* (1882) and *The Conquest of England* (1883), are more soberly written than his earlier books, and are valuable contributions to historical knowledge. Green died at Mentone on the 7th of March 1883. He was a singularly attractive man, of wide intellectual sympathies and an enthusiastic temperament; his good-humour was unfailing and he was a brilliant talker; and his work was done with admirable courage in spite of ill-health. It is said that Mrs Humphry Ward's *Robert Elsmere* is largely a portrait of him. In 1877 Green married Miss Alice Stopford; and Mrs Green, besides writing a memoir of her

husband, prefixed to the 1888 edition of his *Short History*, has herself done valuable work as an historian, particularly in her *Henry II.* in the "English Statesmen" series (1888), her *Town Life in the 15th Century* (1894), and *The Making of Ireland and its Undoing* (1908).

See the *Letters of J. R. Green* (1901), edited by Leslie Stephen.

(W. Hu.)

GREEN, MATTHEW (1696-1737), English poet, was born of Nonconformist parents. He had a post in the custom house, and the few anecdotes that have been preserved of him show him to have been as witty as his poems would lead one to expect. He died unmarried at his lodging in Nag's Head Court, Gracechurch Street, in 1737. His *Grotto*, a poem on Queen Caroline's grotto at Richmond, was printed in 1732; and his chief poem, *The Spleen*, in 1737 with a preface by his friend Richard Glover. These and some other short poems were printed in Dodsley's collection (1748), and subsequently in various editions of the British poets. They were edited In 1796 with a preface by Dr Aikin and in 1883 by R. E. A. Willmott with the poems of Gray and others. *The Spleen* is an epistle to Mr Cuthbert Jackson, advocating cheerfulness, exercise and a quiet content as remedies. It is full of witty sayings. Thomas Gray said of it: "There is a profusion of wit everywhere; reading would have formed his judgment, and harmonized his verse, for even his wood-notes often break out into strains of real poetry and music."

GREEN, THOMAS HILL (1836-1882), English philosopher, the most typical English representative of the school of thought called *Neo-Kantian*, or *Neo-Hegelian*, was born on the 7th of April 1836 at Birkin, a village in the West Riding of Yorkshire, of which his father was rector. On the paternal side he was descended from Oliver Cromwell, whose honest, sturdy independence of character he seemed to have inherited. His education was conducted entirely at home until, at the age of fourteen, he entered Rugby, where he remained five years. In 1855 he became an undergraduate member of Balliol College, Oxford, of which society he was, in 1860, elected fellow. His life henceforth, was devoted to teaching (mainly philosophical) in the university—first as college tutor, afterwards, from 1878 until his death (at Oxford on the 26th of March 1882) as Whyte's Professor of Moral Philosophy. The lectures he delivered as professor form the substance of his two most important works, viz. the *Prolegomena to Ethics* and the *Lectures on the Principles of Political Obligation*, which contain the whole of his positive constructive teaching. These works were not published until after his death, but Green's views were previously known indirectly through the *Introduction* to the standard edition of Hume's works by Green and T. H. Grose (d. 1906), fellow of Queen's College, in which the doctrine of the "English" or "empirical" philosophy was exhaustively examined.

Hume's empiricism, combined with a belief in biological evolution (derived from Herbert Spencer), was the chief feature in English thought during the third quarter of the 19th century. Green represents primarily the reaction against doctrines which, when carried out to their logical conclusion, not only "rendered all philosophy futile," but were fatal to practical life. By reducing the human mind to a series of unrelated atomic sensations, this teaching destroyed the possibility of knowledge, and further, by representing man as a "being who is simply the result of natural forces," it made conduct, or any theory of conduct, unmeaning; for life in any human, intelligible sense implies a personal self which (1) *knows* what to do, (2) has *power* to do it. Green was thus driven, not theoretically, but as a practical necessity, to raise again the whole question of man in relation to nature. When (he held) we have discovered what man in himself is, and what his relation to his environment, we shall then know his function—what he is fitted to do. In the light of this knowledge we shall be able to formulate the moral code, which, in turn, will serve as a criterion of actual civic and social institutions. These form, naturally and necessarily, the objective expression of moral ideas, and it is in some civic or social whole that the moral ideal must finally take concrete shape.

To ask "What is man?" is to ask "What is experience?" for experience means that of which I

am conscious. The facts of consciousness are the only facts which, to begin with, we are justified in asserting to exist. On the other hand, they are valid evidence for whatever is necessary to their own explanation, *i.e.* for whatever is logically involved in them. Now the most striking characteristic of man, that in fact which marks him specially, as contrasted with other animals, is *self*-consciousness. The simplest mental act into which we can analyse the operations of the human mind—the act of sense-perception—is never merely a *change*, physical or psychical, but is the *consciousness* of a change. Human experience consists, not of processes in an animal organism, but of these processes recognized as such. That which we perceive is from the outset an apprehended fact—that is to say, it cannot be analysed into isolated elements (so-called sensations) which, as such, are not constituents of consciousness at all, but exists from the first as a synthesis of relations in a consciousness which keeps distinct the "self" and the various elements of the "object," though holding all together in the unity of the act of perception. In other words, the whole mental structure we call knowledge consists, in its simplest equally with its most complex constituents, of the "work of the mind." Locke and Hume held that the work of the mind was *eo ipso* unreal because it was "made by" man and not "given to" man. It thus represented a subjective creation, not an objective fact. But this consequence follows only upon the assumption that the work of the mind is arbitrary, an assumption shown to be unjustified by the results of exact science, with the distinction, universally recognized, which such science draws between truth and falsehood, between the real and "mere ideas." This (obviously valid) distinction logically involves the consequence that the object, or content, of knowledge, viz. reality, is an intelligible ideal reality, a system of thought relations, a spiritual cosmos. How is the existence of this ideal whole to be accounted for? Only by the existence of some "principle which renders all relations possible and is itself determined by none of them"; an eternal self-consciousness which knows in whole what we know in part. To God the world *is*, to man the world *becomes*. Human experience is God gradually made manifest.

Carrying on the same analytical method into the special department of moral philosophy, Green held that ethics applies to the peculiar conditions of social life that investigation into man's nature which metaphysics began. The faculty employed in this further investigation is no "separate moral faculty," but that same reason which is the source of all our knowledge—ethical and other. Self-reflection gradually reveals to us human capacity, human function, with, consequently, human responsibility. It brings out into clear consciousness certain potentialities in the realization of which man's true good must consist. As the result of this analysis, combined with an investigation into the surroundings man lives in, a "content"—a moral code—becomes gradually evolved. Personal good is perceived to be realizable only by making actual the conceptions thus arrived at. So long as these remain potential or ideal, they form the motive of action; motive consisting always in the idea of some "end" or "good" which man presents to himself as an end in the attainment of which he would be satisfied, that is, in the realization of which he would find his true self. The determination to realize the self in some definite way constitutes an "act of will," which, as thus constituted, is neither arbitrary nor externally determined. For the motive which may be said to be its cause lies *in* the man himself, and the identification of the self with such a motive is a *self*-determination, which is at once both rational and free. The "freedom of man" is constituted, not by a supposed ability to do anything he may choose, but in the power to identify himself with that true good which reason reveals to him as *his* true good. This good consists in the realization of personal character; hence the final good, *i.e.* the moral ideal, as a whole, can be realized only in some society of persons who, while remaining ends to themselves in the sense that their individuality is not lost but rendered more perfect, find this perfection attainable only when the separate individualities are integrated as part of a social whole. Society is as necessary to form persons as persons are to constitute society. Social union is the indispensable condition of the development of the special capacities of the individual members. Human self-perfection cannot be gained in isolation; it is attainable only in inter-relation with fellow-citizens in the social community.

The law of our being, so revealed, involves in its turn civic or political duties. Moral goodness cannot be limited to, still less constituted by, the cultivation of self-regarding virtues, but consists in the attempt to realize in practice that moral ideal which self-analysis has revealed to us as *our* ideal. From this fact arises the ground of political obligation, for the institutions of political or civic life are the concrete embodiment of moral ideas in terms of our day and generation. But, as society exists only for the proper development of persons, we have a criterion by which to test these institutions, viz. do they, or do they not, contribute to the development of moral character in the individual citizens? It is obvious that the final moral ideal is not realized in any body of civic institutions actually existing, but the same analysis which demonstrates this deficiency points out the direction which a true development will take. Hence arises the conception of rights and duties which *should* be

maintained by law, as opposed to those actually maintained; with the further consequence that it may become occasionally a moral duty to rebel against the state in the interest of the state itself, that is, in order better to subserve that end or function which constitutes the *raison d'être* of the state. The state does not consist in any definite concrete organization formed once for all. It represents a "general will" which is a desire for a common good. Its basis is not a coercive authority imposed upon the citizens from without, but consists in the spiritual recognition, on the part of the citizens, of that which constitutes their true nature. "Will, not force, is the basis of the state."

Green's teaching was, directly and indirectly, the most potent philosophical influence in England during the last quarter of the 19th century, while his enthusiasm for a common citizenship, and his personal example in practical municipal life, inspired much of the effort made, in the years succeeding his death, to bring the universities more into touch with the people, and to break down the rigour of class distinctions.

Of his philosophical doctrine proper, the most striking characteristic is Integration, as opposed to Disintegration, both in thought and in reality. "That which is" is a *whole*, not an *aggregate*; an organic complex of parts, not a mechanical mass; a "whole" too not material but spiritual, a "world of thought-relations." On the critical side this teaching is now admittedly valid against the older empiricism, and the cogency of the reasoning by which his constructive theory is supported is generally recognized. Nevertheless, Green's statement of his conclusions presents important difficulties. Even apart from the impossibility of conceiving a whole of relations which are relations and nothing else (this objection is perhaps largely verbal), no explanation is given of the fact (obvious in experience) that the spiritual entities of which the Universe is composed *appear* material. Certain elements present themselves in feeling which seem stubbornly to resist any attempt to explain them in terms of thought. While, again, legitimately insisting upon personality as a fundamental constituent in any true theory of reality, the relation between human individualities and the divine Person is left vague and obscure; nor is it easy to see how the existence of several individualities—human or divine—in one cosmos is theoretically possible. It is at the solution of these two questions that philosophy in the immediate future may be expected to work.

Green's most important treatise—the *Prolegomena to Ethics*—practically complete in manuscript at his death—was published in the year following, under the editorship of A. C. Bradley (4th ed., 1899). Shortly afterwards R. L. Nettleship's standard edition of his *Works* (exclusive of the *Prolegomena*) appeared in three volumes: vol. i. containing reprints of Green's criticism of Hume, Spencer, Lewes; vol. ii. Lectures on Kant, on Logic, on the Principles of Political Obligation; vol. iii. Miscellanies, preceded by a full *Memoir* by the Editor. The *Principles of Political Obligation* was afterwards published in separate form. A criticism of *Neo-Hegelianism* will be found in Andrew Seth (Pringle Pattison), *Hegelianism and Personality*. See also articles in *Mind* (January and April 1884) by A. J. Balfour and Henry Sidgwick, in the *Academy* (xxviii. 242 and xxv. 297) by S. Alexander, and in the *Philosophical Review* (vi., 1897) by S. S. Laurie; W. H. Fairbrother, *Philosophy of T. H. Green* (London and New York, 1896); D. G. Ritchie, *The Principles of State Interference* (London, 1891); H. Sidgwick, *Lectures on the Philosophy of Kant* (London, 1905); J. H. Muirhead, *The Service of the State: Four Lectures on the Political Teaching of T. H. Green* (1908); A. W. Benn, *English Rationalism in the XIXth Century* (1906), vol. ii., pp. 401 foll.

(W. H. F.,* X.)

GREEN, VALENTINE (1739-1813), British engraver, was born at Halesowen. He was placed by his father in a solicitor's office at Evesham, where he remained for two years; but ultimately he decided, on his own responsibility, to abandon the legal profession and became a pupil of a line engraver at Worcester. In 1765 he migrated to London and began work as a mezzotint engraver, having taught himself the technicalities of this art, and quickly rose to a position in absolutely the front rank of British engravers. He became a member of the Incorporated Society of Artists in 1767, an associate-engraver of the Royal Academy in 1775, and for some forty years he followed his profession with the greatest success. The exclusive right of engraving and publishing plates from the pictures in the Düsseldorf gallery was granted him by the duke of Bavaria in 1789, but, after he had issued more than twenty of these plates, the siege of that city by the French put an end to this undertaking and caused him serious financial loss. From this cause, and through the failure of certain other speculations, he was reduced to poverty; and in consequence he took the post of keeper of the British Institution in 1805, and continued in this office for the remainder of his life.

During his career as an engraver he produced some four hundred plates after portraits by Reynolds, Romney, and other British artists, after the compositions of Benjamin West, and after pictures by Van Dyck, Rubens, Murillo, and other old masters. It is claimed for him that he was one of the first engravers to show how admirably mezzotint could be applied to the translation of pictorial compositions as well as portraits, but at the present time it is to his portraits that most attention is given by collectors. His engravings are distinguished by exceptional richness and subtlety of tone, and by very judicious management of relations of light and shade; and they have, almost without exception, notable freshness and grace of handling.

See *Valentine Green*, by Alfred Whitman (London, 1902).

GREEN, WILLIAM HENRY (1825-1900), American Hebrew scholar, was born in Groveville, near Bordentown, New Jersey, on the 27th of January 1825. He was descended in the sixth generation from Jonathan Dickinson, first president of the College of New Jersey (now Princeton University), and his ancestors had been closely connected with the Presbyterian church. He graduated in 1840 from Lafayette College, where he was tutor in mathematics (1840-1842) and adjunct professor (1843-1844). In 1846 he graduated from Princeton Theological Seminary, and was instructor in Hebrew there in 1846-1849. He was ordained in 1848 and was pastor of the Central Presbyterian church of Philadelphia in 1849-1851. From August 1851 until his death, in Princeton, New Jersey, on the 10th of February 1900, he was professor of Biblical and Oriental Literature in Princeton Theological Seminary. From 1859 the title of his chair was Oriental and Old Testament Literature. In 1868 he refused the presidency of Princeton College; as senior professor he was long acting head of the Theological Seminary. He was a great Hebrew teacher: his *Grammar of the Hebrew Language* (1861, revised 1888) was a distinct improvement in method on Gesenius, Roediger, Ewald and Nordheimer. All his knowledge of Semitic languages he used in a “conservative Higher Criticism,” which is maintained in the following works: *The Pentateuch Vindicated from the Aspersions of Bishop Colenso* (1863), *Moses and the Prophets* (1883), *The Hebrew Feasts in their Relation to Recent Critical Hypotheses Concerning the Pentateuch* (1885), *The Unity of the Book of Genesis* (1895), *The Higher Criticism of the Pentateuch* (1895), and *A General Introduction to the Old Testament*, vol. i. Canon (1898), vol. ii. *Text* (1899). He was the scholarly leader of the orthodox wing of the Presbyterian church in America, and was moderator of the General Assembly of 1891. Green was chairman of the Old Testament committee of the Anglo-American Bible revision committee.

See the articles by John D. Davis in *The Biblical World*, new series, vol. xv., pp. 406-413 (Chicago, 1900), and *The Presbyterian and Reformed Review*, vol. xi. pp. 377-396 (Philadelphia, 1900).

GREENAWAY, KATE (1846-1901), English artist and book illustrator, was the daughter of John Greenaway, a well-known draughtsman and engraver on wood, and was born in London on the 17th of March 1846. After a course of study at South Kensington, at “Heatherley’s” life classes, and at the Slade School, Kate Greenaway began, in 1868, to exhibit water-colour drawings at the Dudley Gallery, London. Her more remarkable early work, however, consisted of Christmas cards, which, by reason of their quaint beauty of design and charm of draughtsmanship, enjoyed an extraordinary vogue. Her subjects were, in the main, young girls, children, flowers, and landscape; and the air of artless simplicity, freshness, humour, and purity of these little works so appealed to public and artists alike that the enthusiastic welcome habitually accorded to them is to be attributed to something more than love of novelty. In the line she had struck out Kate Greenaway was encouraged by H. Stacy Marks, R.A., and she refused to listen to those friends who urged her to return to a more conventional manner. Thenceforward her illustrations for children (such as for *Little Folks*, 1873, *et seq.*) attracted much attention. In 1877 her drawings at the Dudley Gallery were sold for £54, and her Royal Academy picture for eighteen guineas; and in the same year she began to draw for the *Illustrated London News*. In the year 1879 she produced *Under the*

Window, of which 150,000 copies are said to have been sold, and of which French and German editions were also issued. Then followed *The Birthday Book*, *Mother Goose*, *Little Ann*, and other books for children which were appreciated not less by adults, and were to be found on sale in the bookshops of every capital in Europe and in the cities of America. The extraordinary success achieved by the young girl may be estimated by the amounts paid to her as her share of the profits: for *Under the Window* she received £1130; for *The Birthday Book*, £1250; for *Mother Goose*, £905; and for *Little Ann*, £567. These four books alone produced a clear return of £8000. "Toy-books" though they were, these little works created a revolution in illustration, and so were of real importance; they were loudly applauded by John Ruskin (*Art of England* and *Fors Clavigera*), by Ernest Chesneau and Arsène Alexandre in France, by Dr Muther in Germany, and by leading art-critics throughout the world. In 1890 Kate Greenaway was elected a member of the Royal Institute of Painters in Water Colours, and in 1891, 1894 and 1898 she exhibited water-colour drawings, including illustrations for her books, at the gallery of the Fine Art Society (by which a representative selection was exhibited in 1902), where they surprised the world by the infinite delicacy, tenderness, and grace which they displayed. A leading feature in Miss Greenaway's work was her revival of the delightfully quaint costume of the beginning of the 19th century; this lent humour to her fancy, and so captivated the public taste that it has been said, with poetic exaggeration, that "Kate Greenaway dressed the children of two continents." Her drawings of children have been compared with Stothard's for grace and with Reynolds's for naturalness, and those of flowers with the work of van Huysum and Botticelli. From 1883 to 1897, with a break only in 1896, she issued a series of *Kate Greenaway's Almanacs*. Although she illustrated *The Pied Piper of Hamelin* and other works, the artist preferred to provide her own text; the numerous verses which were found among her papers after her death prove that she might have added to her reputation with her pen. She had great charm of character, but was extremely shy of public notice, and not less modest in private life. She died at Hampstead on the 6th of November 1901.

See the *Life*, by M. H. Spielmann and G. S. Layard (1905).

(M. H. S.)

GREENBACKS, a form of paper currency in the United States, so named from the green colour used on the backs of the notes. They are treasury notes, and were first issued by the government in 1862, "as a question of hard necessity," to provide for the expenses of the Civil War. The government, following the example of the banks, had suspended specie payment. The new notes were therefore for the time being an inconvertible paper currency, and, since they were made legal tender, were really a form of fiat money. The first act, providing for the issue of notes to the amount of $150,000,000, was that of the 25th February 1862; the acts of 11th July 1862 and 3rd March 1863 each authorized further issues of $150,000,000. The notes soon depreciated in value, and at the lowest were worth only 35 cents on the dollar. The act of 12th April 1866 authorized the retirement of $10,000,000 of notes within six months and of $4,000,000 per month thereafter; this was discontinued by act of 4th February 1868. On 1st January 1879 specie payment was resumed, and the nominal amount of notes then stood at $346,681,000, which is still outstanding.

The so-called *Greenback party* (also called the *Independent*, and the *National* party) first appeared in a presidential campaign in 1876, when its candidate, Peter Cooper, received 81,740 votes. It advocated increasing the volume of greenbacks, forbidding bank issues, and the paying in greenbacks of the principal of all government bonds not expressly payable in coin. In 1878 the party, by various fusions, cast over 1,000,000 votes and elected 14 Congressmen; and in 1880 there was fusion with labour reformers and it cast 308,578 votes for its presidential candidate, J. B. Weaver, and elected 8 Congressmen. In 1884 their candidate Benjamin F. Butler (also the candidate of the Anti-Monopoly party) received 175,370 votes. Subsequently the party went out of existence.

GREEN BAY, a city and the county-seat of Brown county, Wisconsin, U.S.A., at the S.

extremity of Green Bay, at the mouth of the Fox river, 114 m. N. of Milwaukee. Pop. (1890) 9069; (1900) 18,684, of whom 4022 were foreign-born and 33 were negroes; (1910 census) 25,236. The city is served by the Chicago & North-Western, the Chicago, Milwaukee & St Paul, the Kewaunee, Green Bay & Western, and the Green Bay & Western railways, by an inter-urban electric railway connecting with other Fox River Valley cities, and by lake and river steamboat lines. Green Bay lies on high level ground on both sides of the river, which is here crossed by several bridges. The city has the Kellogg Public Library, the Brown County Court House, two high schools, a business college, several academies, two hospitals, an orphan asylum and the State Odd Fellows' Home. It is the seat of a Roman Catholic cathedral, the bishopric being the earliest established in the North-west. The so-called "Tank Cottage," now in Washington Park, is said to be the oldest house in Wisconsin; it was built on the W. bank of the river near its mouth by Joseph Roy, a French-Canadian *voyageur*, in 1766, was subsequently somewhat modified, and in 1908 was bought and removed to its present site by the Green Bay Historical Society. Midway between Green Bay and De Pere (5 m. S.W. of Green Bay) is the state reformatory, opened in 1899-1901. Green Bay's fine harbour accommodates a considerable lake commerce, and the city is the most important railway and wholesale distributing centre in N.E. Wisconsin. Its manufactures include lumber and lumber products, furniture, wagons, woodenware, farm implements and machinery, flour, beer, canned goods, brick and tile and dairy products; and it has lumber yards, grain elevators, fish warehouses and railway repair shops. The total value of the factory product in 1905 was $4,873,027, an increase of 79.9% since 1900. The first recorded visit of a European to the vicinity of what is now Green Bay is that of Jean Nicolet, who was sent west by Champlain in 1634, and found, probably at the Red Banks, some 10 m. below the present city, a village of Winnebago Indians, who he thought at first were Chinese. Between 1654 and 1658 Radisson and Groseilliers and other *coureurs des bois* were at Green Bay. Claude Jean Allouez, the Jesuit missionary, established a mission on the W. shore of the bay, about 20 m. from the present city. Later he removed his mission to the Red Banks, and in the winter of 1671-1672 established it permanently 5 m. above the present city, at Rapides des Pères, on the E. shore of the Fox river. In 1673 Joliet and Marquette visited the spot. In 1683-1685 Le Sueur and Nicholas Perrot traded with the Indians here. In 1718-1720 Fort St Francis was erected at the mouth of the river on the W. bank, and after being several times deserted was permanently re-established in 1732. About 1745 Augustin de Langlade established a trading post at La Baye and later brought his family there from Mackinac. This was the first permanent settlement at Green Bay and in Wisconsin. The British garrison which occupied the fort from 1761 to 1763, during which time the fort received the name of Fort Edward Augustus, was removed at the time of Pontiac's rising, and the fort was never re-garrisoned by the English, except for a short time during the War of 1812. The inhabitants of La Baye were, however, acknowledged subjects of Great Britain, the jurisdiction of the United States being practically a dead letter until the American fort (Fort Howard) was garrisoned in 1816. As early as 1810 fur traders, employed by John Jacob Astor, were stationed here; about 1820 Astor erected a warehouse and other buildings; and for many years Green Bay consisted of two distinct settlements, Astor and Navarino, which were finally united in 1839 as Green Bay. The city was chartered in 1854. In 1893 Fort Howard was consolidated with it. The Green Bay *Intelligencer*, the first newspaper in Wisconsin, began publication here in 1833.

See Neville and Martin, *Historic Green Bay* (Green Bay, 1893); and Martin and Beaumont, *Old Green Bay* (Green Bay, 1900).

GREENCASTLE, a city and the county-seat of Putnam county, Indiana, U.S.A., about 38 m. W. by S. of Indianapolis and on the Big Walnut river. Pop. (1900) 3661; (1910) 3790. It is served by the Cleveland, Cincinnati, Chicago & St. Louis, the Chicago, Indianapolis & Louisville, the Vandalia, and the Terre Haute, Indianapolis & Eastern (electric) railways. It has manufactures of some importance, including lumber, pumps, kitchen-cabinets, drag-saws, lightning-rods and tin-plate, is in the midst of a blue grass region, and is a shipping point for beef cattle. The city has a Carnegie library and is the seat of the de Pauw University (co-educational), a Methodist Episcopal institution, founded as Indiana Asbury University in 1837, and renamed in 1884 in honour of Washington Charles de Pauw (1822-1887), a successful capitalist, banker and glass manufacturer. The total gifts of Mr de Pauw and his family to the institution amount to about $600,000. Among the presidents of the university have been Bishop Matthew Simpson, Bishop Thomas Bowman (b. 1817), and Bishop Edwin

Holt Hughes (b. 1866), all of the Methodist Episcopal church. The university comprises the Asbury College of Liberal Arts, a School of Music, a School of Art and an Academy, and had in 1909-1910 43 instructors, a library of 37,000 volumes, and 1017 students. Greencastle was first settled about 1820, and was chartered as a city in 1861.

GREENE, GEORGE WASHINGTON (1811-1883), American historian, was born at East Greenwich, Rhode Island, on the 8th of April 1811, the grandson of Major-General Nathanael Greene. He entered Brown University in 1824, left in his junior year on account of ill-health, was in Europe during the next twenty years, except in 1833-1834, when he was principal of Kent Academy at East Greenwich, and was the United States consul at Rome from 1837 to 1845. He was instructor in modern languages in Brown University from 1848 to 1852; and in 1871-1875 was non-resident lecturer in American history in Cornell University. He died at East Greenwich, Rhode Island, on the 2nd of February 1883. His published works include French and Italian text-books; *Historical Studies* (1850); *Biographical Studies* (1860); *Historical View of the American Revolution* (1865); *Life of Nathanael Greene* (3 vols., 1867-1871); *The German Element in the War of American Independence* (1876); and a *Short History of Rhode Island* (1877).

GREENE, MAURICE (1695-1755) English musical composer, was born in London. He was the son of a clergyman in the city, and soon became a chorister of St Paul's cathedral, where he studied under Charles King, and subsequently under Richard Brind, organist of the cathedral from 1707 to 1718, whom, on his death in the last-named year, he succeeded. Nine years later he became organist and composer to the chapel royal, on the death of Dr Croft. In 1730 he was elected to the chair of music in the university of Cambridge, and had the degree of doctor of music conferred on him. Dr Greene was a voluminous composer of church music, and his collection of *Forty Select Anthems* became a standard work of its kind. He wrote a "Te Deum," several oratorios, a masque, *The Judgment of Hercules*, and a pastoral opera, *Phoebe* (1748); also glees and catches: and a collection of *Catches and Canons for Three and Four Voices* is amongst his compositions. In addition he composed many occasional pieces for the king's birthday, having been appointed master of the king's band in 1735. But it is as a composer of church music that Greene is chiefly remembered. It is here that his contrapuntal skill and his sound musical scholarship are chiefly shown. With Handel, Greene was originally on intimate terms, but his equal friendship for Buononcini, Handel's rival, estranged the German master's feelings from him, and all personal intercourse between them ceased. Greene, in conjunction with the violinist Michael Christian Festing (1727-1752) and others, originated the Society of Musicians, for the support of poor artists and their families. He died on the 1st of December 1755.

GREENE, NATHANAEL (1742-1786), American general, son of a Quaker farmer and smith, was born at Potowomut, in the township of Warwick, Rhode Island, on the 7th of August (not, as has been stated, 6th of June) 1742. Though his father's sect discouraged "literary accomplishments," he acquired a large amount of general information, and made a special study of mathematics, history and law. At Coventry, R.I., whither he removed in 1770 to take charge of a forge built by his father and his uncles, he was the first to urge the establishment of a public school; and in the same year he was chosen a member of the legislature of Rhode Island, to which he was re-elected in 1771, 1772 and 1775. He sympathized strongly with the Whig, or Patriot, element among the colonists, and in 1774 joined the local militia. At this time he began to study the art of war. In December 1774 he was on a committee appointed by the assembly to revise the militia laws. His zeal in attending to military duty led to his expulsion from the Society of Friends.

In 1775, in command of the contingent raised by Rhode Island, he joined the American forces at Cambridge, and on the 22nd of June was appointed a brigadier by Congress. To him Washington assigned the command of the city of Boston after it was evacuated by Howe in March 1776. Greene's letters of October 1775 and January 1776 to Samuel Ward, then a delegate from Rhode Island to the Continental Congress, favoured a declaration of independence. On the 9th of August 1776 he was promoted to be one of the four new major-generals and was put in command of the Continental troops on Long Island; he chose the place for fortifications (practically the same as that picked by General Charles Lee) and built the redoubts and entrenchments of Fort Greene on Brooklyn Heights. Severe illness prevented his taking part in the battle of Long Island. He was prominent among those who advised a retreat from New York and the burning of the city, so that the British might not use it. Greene was placed in command of Fort Lee, and on the 25th of October succeeded General Israel Putnam in command of Fort Washington. He received orders from Washington to defend Fort Washington to the last extremity, and on the 11th of October Congress had passed a resolution to the same effect; but later Washington wrote to him to use his own discretion. Greene ordered Colonel Magaw, who was in immediate command, to defend the place until he should hear from him again, and reinforced it to meet General Howe's attack. Nevertheless, the blame for the losses of Forts Washington and Lee was put upon Greene, but apparently without his losing the confidence of Washington, who indeed himself assumed the responsibility. At Trenton Greene commanded one of the two American columns, his own, accompanied by Washington, arriving first; and after the victory here he urged Washington to push on immediately to Princeton, but was over-ruled by a council of war. At the Brandywine Greene commanded the reserve. At Germantown Greene's command, having a greater distance to march than the right wing under Sullivan, failed to arrive in good time—a failure which Greene himself thought (without cause) would cost him Washington's regard; on this, with the affair of Fort Washington, Bancroft based his unfavourable estimate of Greene's ability. But on their arrival, Greene and his troops distinguished themselves greatly.

At the urgent request of Washington, on the 2nd of March 1778, at Valley Forge, he accepted the office of quartermaster-general (succeeding Thomas Mifflin), and of his conduct in this difficult work, which Washington heartily approved, a modern critic, Colonel H. B. Carrington, has said that it was "as good as was possible under the circumstances of that fluctuating uncertain force." He had become quartermaster-general on the understanding, however, that he should retain the right to command troops in the field; thus we find him at the head of the right wing at Monmouth on the 28th of June. In August Greene and Lafayette commanded the land forces sent to Rhode Island to co-operate with the French admiral d'Estaing, in an expedition which proved abortive. In June 1780 Greene commanded in a skirmish at Springfield, New Jersey. In August he resigned the office of quartermaster-general, after a long and bitter struggle with Congress over the interference in army administration by the Treasury Board and by commissions appointed by Congress. Before his resignation became effective it fell to his lot to preside over the court which, on the 29th of September, condemned Major John André to death.

On the 14th of October he succeeded Gates as commander-in-chief of the Southern army, and took command at Charlotte, N.C., on the 2nd of December. The army was weak and badly equipped and was opposed by a superior force under Cornwallis. Greene decided to divide his own troops, thus forcing the division of the British as well, and creating the possibility of a strategic interplay of forces. This strategy led to General Daniel Morgan's victory of Cowpens (just over the South Carolina line) on the 17th of January 1781, and to the battle at Guilford Court House, N.C. (March 15), in which after having weakened the British troops by continual movements, and drawn in reinforcements for his own army, Greene was defeated indeed, but only at such cost to the victor that Tarleton called it "the pledge of ultimate defeat." Three days after this battle Cornwallis withdrew toward Wilmington. Greene's generalship and judgment were again conspicuously illustrated in the next few weeks, in which he allowed Cornwallis to march north to Virginia and himself turned swiftly to the reconquest of the inner country of South Carolina. This, in spite of a reverse sustained at Lord Rawdon's hands at Hobkirk's Hill (2 m. N. of Camden) on the 25th of April, he achieved by the end of June, the British retiring to the coast. Greene then gave his forces a six weeks' rest on the High Hills of the Santee, and on the 8th of September, with 2600 men, engaged the British under Lieut.-Colonel James Stuart (who had succeeded Lord Rawdon) at Eutaw Springs; the battle, although tactically drawn, so weakened the British that they withdrew to Charleston, where Greene penned them during the remaining months of the war. Greene's Southern campaign showed remarkable strategic features that remind one of those of Turenne, the commander whom he had taken as his model in his studies before the war. He excelled in dividing, eluding and tiring his opponent by long marches, and in actual conflict forcing him to pay for a temporary advantage a price that he could not afford. He was

greatly assisted by able subordinates, including the Polish engineer, Tadeusz Kosciusko, the brilliant cavalry captains, Henry (“Light-Horse Harry”) Lee and William Washington, and the partisan leaders, Thomas Sumter and Francis Marion.

South Carolina and Georgia voted Greene liberal grants of lands and money. The South Carolina estate, Boone’s Barony, S. of Edisto in Bamberg County, he sold to meet bills for the rations of his Southern army. On the Georgia estate, Mulberry Grove, 14 m. above Savannah, on the river, he settled in 1785, after twice refusing (1781 and 1784) the post of secretary of war, and there he died of sunstroke on the 19th of June 1786. Greene was a singularly able, and—like other prominent generals on the American side—a self-trained soldier, and was second only to Washington among the officers of the American army in military ability. Like Washington he had the great gift of using small means to the utmost advantage. His attitude towards the Tories was humane and even kindly, and he generously defended Gates, who had repeatedly intrigued against him, when Gates’s conduct of the campaign in the South was criticized. There is a monument to Greene in Savannah (1829). His statue, with that of Roger Williams, represents the state of Rhode Island in the National Hall of Statuary in the Capitol at Washington; in the same city there is a bronze equestrian statue of him by H. K. Brown.

See the *Life of Nathanael Greene* (3 vols., 1867-1871), by his grandson, George W. Greene, and the biography (New York, 1893), by Brig.-Gen. F. V. Greene, in the “Great Commanders Series.”

GREENE, ROBERT (*c.* 1560-1592), English dramatist and miscellaneous writer, was born at Norwich about 1560. The identity of his father has been disputed, but there is every reason to believe that he belonged to the tradesmen’s class and had small means. It is doubtful whether Robert Greene attended Norwich grammar school; but, as an eastern counties man (to one of whose plays, *Friar Bacon*, the Norfolk and Suffolk borderland owes a lasting poetic commemoration) he naturally found his way to Cambridge, where he entered St John’s College as a sizar in 1575 and took his B.A. thence in 1579, proceeding M.A. in 1583 from Clare Hall. His life at the university was, according to his own account, spent “among wags as lewd as himself, with whom he consumed the flower of his youth.” In 1588 he was incorporated at Oxford, so that on some of his title-pages he styles himself “utriusque Academiae in Artibus Magister”; and Nashe humorously refers to him as “utriusque Academiae Robertus Greene.” Between the years 1578 and 1583 he had travelled abroad, according to his own account very extensively, visiting France, Germany, Poland and Denmark, besides learning at first-hand to “hate the pride of Italie” and to know the taste of that poet’s fruit, “Spanish mirabolones.” The grounds upon which it has been suggested that he took holy orders are quite insufficient; according to the title-page of a pamphlet published by him in 1585 he was then a “student in phisicke.” Already, however, after taking his M.A. degree, he had according to his own account begun his London life, and his earliest extant literary production was in hand as early as 1580. He now became “an author of playes and a penner of love-pamphlets, so that I soone grew famous in that qualitie, that who for that trade growne so ordinary about London as Robin Greene?” “Glad was that printer,” says Nashe, “that might bee so blest to pay him deare for the very dregs of his wit.” By his own account he rapidly sank into the worst debaucheries of the town, though Nashe declares that he never knew him guilty of notorious crime. He was not without passing impulses towards a more righteous and sober life, and was derided in consequence by his associates as a “Puritane and Presizian.” It is possible that he, as well as his bitter enemy, Gabriel Harvey, exaggerated the looseness of his conduct. His marriage, which took place in 1585 or 1586, failed to steady him; if Francesco, in Greene’s pamphlet *Never too late to mend* (1590), is intended for the author himself, it had been a runaway match; but the fiction and the autobiographical sketch in the *Repentance* agree in their account of the unfaithfulness which followed on the part of the husband. He lived with his wife, whose name seems to have been Dorothy (“Doll”; and cf. Dorothea in *James IV.*), for a while; “but forasmuch as she would perswade me from my wilful wickednes, after I had a child by her, I cast her off, having spent up the marriage-money which I obtained by her. Then left I her at six or seven, who went into Lincolnshire, and I to London,” where his reputation as a playwright and writer of pamphlets of “love and vaine fantasyes” continued to increase, and where his life was a feverish alternation of labour and debauchery. In his last years he took it upon himself to make war on the cutpurses and “conny-catchers” with whom he came into contact in the slums, and whose doings he fearlessly exposed in his writings. He tells us how at last he was friendless “except

it were in a fewe alehouses," where he was respected on account of the score he had run up. When the end came he was a dependant on the charity of the poor and the pitying love of the unfortunate. Henri Murger has drawn no picture more sickening and more pitiful than the story of Greene's death, as told by his Puritan adversary, Gabriel Harvey—a veracious though a far from unprejudiced narrator. Greene had taken up the cudgels provided by the Harvey brothers on their intervention in the Marprelate controversy, and made an attack (immediately suppressed) upon Gabriel's father and family in the prose-tract *A Quip for an Upstart Courtier, or a Quaint Dispute between Velvet Breeches and Cloth Breeches* (1592). After a banquet where the chief guest had been Thomas Nashe—an old associate and perhaps a college friend of Greene's, any great intimacy with whom, however, he seems to have been anxious to disclaim—Greene had fallen sick "of a surfeit of pickle herringe and Rennish wine." At the house of a poor shoemaker near Dowgate, deserted by all except his compassionate hostess (Mrs Isam) and two women—one of them the sister of a notorious thief named "Cutting Ball," and the mother of his illegitimate son, Fortunatus Greene—he died on the 3rd of September 1592. Shortly before his death he wrote under a bond for £10 which he had given to the good shoemaker, the following words addressed to his long-forsaken wife: "Doll, I charge thee, by the loue of our youth and by my soules rest, that thou wilte see this man paide; for if hee and his wife had not succoured me, I had died in the streetes.—Robert Greene."

Four Letters and Certain Sonnets, Harvey's attack on Greene, appeared almost 540
immediately after his death, as to the circumstances of which his relentless adversary had taken care to inform himself personally. Nashe took up the defence of his dead friend and ridiculed Harvey in *Strange News* (1593); and the dispute continued for some years. But, before this, the dramatist Henry Chettle published a pamphlet from the hand of the unhappy man, entitled *Greene's Groat's-worth of Wit bought with a Million of Repentance* (1592), containing the story of Roberto, who may be regarded, for practical purposes, as representing Greene himself. This ill-starred production may almost be said to have done more to excite the resentment of posterity against Greene's name than all the errors for which he professed his repentance. For in it he exhorted to repentance three of his *quondam* acquaintance. Of these three Marlowe was one—to whom and to whose creation of "that Atheist Tamberlaine" he had repeatedly alluded. The second was Peele, the third probably Nashe. But the passage addressed to Peele contained a transparent allusion to a fourth dramatist, who was an actor likewise, as "an vpstart crow beautified with our feathers, that with his *Tygres heart wrapt in a player's hyde* supposes hee is as well able to bombast out a blanke-verse as the best of you; and being an absolute Iohannes-fac-totum, is in his owne conceyt the onely shake-scene in a countrey." The phrase italicized parodies a passage occurring in *The True Tragedie of Richard, Duke of York*, &c., and retained in Part III. of Henry VI. If Greene (as many eminent critics have thought) had a hand in *The True Tragedie*, he must here have intended a charge of plagiarism against Shakespeare. But while it seems more probable that (as the late R. Simpson suggested) the upstart crow beautified with the feathers of the three dramatists is a sneering description of the actor who declaimed their verse, the *animus* of the whole attack (as explained by Dr Ingleby) is revealed in its concluding phrases. This "shake-scene," *i.e.* this *actor* had ventured to intrude upon the domain of the regular staff of playwrights—their monopoly was in danger!

Two other prose pamphlets of an autobiographical nature were issued posthumously. Of these, *The Repentance of Robert Greene, Master of Arts* (1592), must originally have been written by him on his death-bed, under the influence, as he says, of Father Parsons's *Booke of Resolution* (*The Christian Directorie, appertayning to Resolution*, 1582, republished in an enlarged form, which became very popular, in 1585); but it bears traces of having been improved from the original; while *Greene's Vision* was certainly not, as the title-page avers, written during his last illness.

Altogether not less than thirty-five prose-tracts are ascribed to Greene's prolific pen. Nearly all of them are interspersed with verses; in their themes they range from the "misticall" wonders of the heavens to the familiar but "pernitious sleights" of the sharpers of London. But the most widely attractive of his prose publications were his "love-pamphlets," which brought upon him the outcry of Puritan censors. The earliest of his novels, as they may be called, *Mamillia*, was licensed in 1583. This interesting story may be said to have accompanied Greene through life; for even part ii., of which, though probably completed several years earlier, the earliest extant edition bears the date 1593, had a sequel, *The Anatomie of Love's Flatteries*, which contains a review of suitors recalling Portia's in *The Merchant of Venice*. *The Myrrour of Modestie* (the story of Susanna) (1584); *The Historie of Arhasto, King of Denmarke* (1584); *Morando, the Tritameron of Love* (a rather tedious imitation of the *Decameron* (1584); *Planetomachia* (1585) (a contention in story-telling

between Venus and Saturn); *Penelope's Web* (1587) (another string of stories); *Alcida*, *Greene's Metamorphosis* (1588), and others, followed. In these popular productions he appears very distinctly as a follower of John Lyly; indeed, the first part of *Mamillia* was entered in the Stationers' Registers in the year of the appearance of *Euphues*, and two of Greene's novels are by their titles announced as a kind of sequel to the parent romance: *Euphues his Censure to Philautus* (1587), *Menaphon. Camilla's Alarum to Slumbering Euphues* (1589), named in some later editions *Greene's Arcadia*. This pastoral romance, written in direct emulation of Sidney's, with a heroine called Samila, contains St Sephestia's charming lullaby, with its refrain "Father's sorowe, father's joy." But, though Greene's style copies the balanced oscillation, and his diction the ornateness (including the proverbial philosophy) of Lyly, he contrives to interest by the matter as well as to attract attention by the manner of his narratives. Of his highly moral intentions he leaves the reader in no doubt, since they are exposed on the title-pages. The full title of the *Myrrour of Modestie* for instance continues: "wherein appeareth as in a perfect glasse how the Lord delivereth the innocent from all imminent perils, and plagueth the blood-thirsty hypocrites with deserved punishments," &c. On his *Pandosto, The Triumph of Time* (1588) Shakespeare founded *A Winter's Tale*; in fact, the novel contains the entire plot of the comedy, except the device of the living statue; though some of the subordinate characters in the play, including Autolycus, were added by Shakespeare, together with the pastoral fragrance of one of its episodes.

In Greene's *Never too Late* (1590), announced as a "Powder of Experience: sent to all youthfull gentlemen" for their benefit, the hero, Francesco, is in all probability intended for Greene himself, the sequel or second part is, however, pure fiction. This episodical narrative has a vivacity and truthfulness of manner which savour of an 18th century novel rather than of an Elizabethan tale concerning the days of "Palmerin, King of Great Britain." Philador, the prodigal of *The Mourning Garment* (1590), is obviously also in some respects a portrait of the writer. The experiences of the Roberto of *Greene's Groat's-worth of Wit* (1592) are even more palpably the experiences of the author himself, though they are possibly overdrawn—for a born rhetorician exaggerates everything, even his own sins. Besides these and the posthumous pamphlets on his repentance, Greene left realistic pictures of the very disreputable society to which he finally descended, in his pamphlets on "conny-catching": *A Notable Discovery of Coosnage* (1591), *The Blacke Bookes Messenger, Laying open the Life and Death of Ned Browne, one of the most Notable Cutpurses, Crossbiters, and Conny-catchers that ever lived in England* (1592). Much in Greene's manner, both in his romances and in his pictures of low life, anticipated what proved the slow course of the actual development of the English novel; and it is probable that his true *métier*, and that which best suited the bright fancy, ingenuity and wit of which his genius was compounded, was pamphlet-spinning and story-telling rather than dramatic composition. It should be added that, euphuist as Greene was, few of his contemporaries in their lyrics warbled wood-notes which like his resemble Shakespeare's in their native freshness.

Curiously enough, as Mr Churton Collins has pointed out, Greene, except in the two pamphlets written just before his death, never refers to his having written plays; and before 1592 his contemporaries are equally silent as to his labours as a playwright. Only four plays remain to us of which he was indisputably the sole author. The earliest of these seems to have been the *Comicall History of Alphonsus, King of Arragon*, of which Henslowe's *Diary* contains no trace. But it can hardly have been first acted long after the production of Marlowe's *Tamburlaine*, which had, in all probability, been brought on the stage in 1587. For this play, "comical" only in the negative sense of having a happy ending, was manifestly written in emulation as well as in direct imitation of Marlowe's tragedy. While Greene cannot have thought himself capable of surpassing Marlowe as a tragic poet, he very probably wished to outdo him in "business," and to equal him in the rant which was sure to bring down at least part of the house. *Alphonsus* is a *history* proper—a dramatized chronicle or narrative of warlike events. Its fame could never equal that of Marlowe's tragedy; but its composition showed that Greene could seek to rival the most popular drama of the day, without falling very far short of his model.

In the *Honourable History of Friar Bacon and Friar Bungay* (not known to have been acted before February, 1592, but probably written in 1589) Greene once more attempted to emulate Marlowe; and he succeeded in producing a masterpiece of his own. Marlowe's *Doctor Faustus*, which doubtless suggested the composition of Greene's comedy, reveals the mighty tragic genius of its author; but Greene resolved on an altogether distinct treatment of a cognate theme. Interweaving with the popular tale of Friar Bacon and his wondrous doings a charming idyl (so far as we know, of his own invention), the story of Prince Edward's love for the Fair Maid of Fressingfield, he produced a comedy brimful of amusing action and genial fun. *Friar Bacon* remains a dramatic picture of English Elizabethan life with which *The*

Merry Wives alone can vie; and not even the ultra-classicism in the similes of its diction can destroy the naturalness which constitutes its perennial charm. *The History of Orlando Furioso, one of the Twelve Peeres of France* has on unsatisfactory evidence been dated as before 1586, and is known to have been acted on the 21st of February 1592. It is a free dramatic adaptation of Ariosto, Harington's translation of whom appeared in 1591, and who in one passage is textually quoted; and it contains a large variety of characters and a superabundance oí action. Fairly lucid in arrangement and fluent in style, the treatment of the madness oí Orlando lacks tragic power. Very few dramatists from Sophocles to Shakespeare have succeeded in subordinating the grotesque effect of madness to the tragic; and Greene is not to be included in the list.

In *The Scottish Historie of James IV.* (acted 1592, licensed for publication 1594) Greene seems to have reached the climax of his dramatic powers. The "historical" character of this play is pure pretence. The story is taken from one of Giraldi Cinthio's tales. Its theme is the illicit passion of King James for the chaste lady Ida, to obtain whose hand he endeavours, at the suggestion of a villain called Ateukin, to make away with his own wife. She escapes in doublet and hose, attended by her faithful dwarf; but, on her father's making war upon her husband to avenge her wrongs, she brings about a reconciliation between them. Not only is this well-constructed story effectively worked out, but the characters are vigorously drawn, and in Ateukin there is a touch of Iago. The fooling by Slipper, the clown of the piece, is unexceptionable; and, lest even so the play should hang heavy on the audience, its action is carried off by a "pleasant comédie"—*i.e.* a prelude and some dances between the acts —"presented by Oboram, King of Fayeries," who is, however, a very different person from the Oberon of *A Midsummer Night's Dream*.

George-a-Greene the Pinner of Wakefield (acted 1593, printed 1599), a delightful picture of English life fully worthy of the author of *Friar Bungay*, has been attributed to him; but the external evidence is very slight, and the internal unconvincing. Of the comedy of *Fair Em*, which resembles *Friar Bacon* in more than one point, Greene cannot have been the author; the question as to the priority between the two plays is not so easily solved. The conjecture as to his supposed share in the plays on which the second and third parts of *Henry VI.* are founded has been already referred to. He was certainly joint author with Thomas Lodge of the curious drama called *A Looking Glasse for London and England* (acted in 1592 and printed in 1594)—a dramatic apologue conveying to the living generation of Englishmen the warning of Nineveh's corruption and prophesied doom. The lesson was frequently repeated in the streets of London by the "Ninevitical motions" of the puppets; but there are both fire and wealth of language in Greene and Lodge's oratory. The comic element is not absent, being supplied in abundance by Adam, the clown of the piece, who belongs to the family of Slipper, and of Friar Bacon's servant, Miles.

Greene's dramatic genius has nothing in it of the intensity of Marlowe's tragic muse; nor perhaps does he ever equal Peele at his best. On the other hand, his dramatic poetry is occasionally animated with the breezy freshness which no artifice can simulate. He had considerable constructive skill, but he has created no character of commanding power—unless Ateukin be excepted; but his personages are living men and women, and marked out from one another with a vigorous but far from rude hand. His comic humour is undeniable, and he had the gift of light and graceful dialogue. His diction is overloaded with classical ornament, but his versification is easy and fluent, and its cadence is at times singularly sweet. He creates his best effects by the simplest means; and he is indisputably one of the most attractive of early English dramatic authors.

Greene's dramatic works and poems were edited by Alexander Dyce in 1831 with a life of the author. This edition was reissued in one volume in 1858. His complete works were edited for the Huth Library by A. B. Grosart. This issue (1881-1886) contains a translation of Nicholas Storojhenko's monograph on Greene (Moscow, 1878). Greene's plays and poems were edited with introductions and notes by J. Churton Collins in 2 vols. (Oxford, 1905); the general introduction to this edition has superseded previous accounts of Greene and his dramatic and lyrical writings. An account of his pamphlets is to be found in J. J. Jusserand's *English Novel in the Time of Shakespeare* (Eng. trans., 1890). See also W. Bernhardi, *Robert Greenes Leben und Schriften* (1874); F. M. Bodenstedt, in *Shakespeare's Zeitgenossen und ihre Werke* (1858); and an introduction by A. W. Ward to *Friar Bacon and Friar Bungay* (Oxford, 1886, 4th ed., 1901).

(A. W. W.)

GREENFIELD, a township and the county-seat of Franklin county, in N.E. Massachusetts, U.S.A., including an area of 20 sq. m. of meadow and hill country, watered by the Green and Deerfield rivers and various small tributaries. Pop. (1890) 5252, (1900) 7927, of whom 1431 were foreign-born; (1910 census) 10,427. The principal village, of the same name as the township, is situated on the N. bank of the Deerfield river, and on the Boston & Maine railway and the Connecticut Valley street railway (electric). Among Greenfield's manufactures are cutlery, machinery, and taps and dies. Greenfield, originally part of Deerfield, was settled about 1682, was established as a "district" in 1753, and on the 23rd of August 1775 was, by a general Act, separated from Deerfield and incorporated as a separate township, although it had assumed full township rights in 1774 by sending delegates to the Provincial Congress. In 1793 part of it was taken to form the township of Gill; in 1838 part of it was annexed to Bernardston; and in 1896 it annexed a part of Deerfield. It was much disaffected at the time of Shays's Rebellion.

See F. M. Thompson, *History of Greenfield* (2 vols., Greenfield, 1904).

GREENFINCH (Ger. *Grünfink*), or Green Linnet, as it is very often called, a common European bird, the *Fringilla chloris* of Linnaeus, ranked by many systematists with one section of hawfinches, *Coccothraustes*, but apparently more nearly allied to the other section *Hesperiphona*, and perhaps justifiably deemed the type of a distinct genus, to which the name *Chloris* or *Ligurinus* has been applied. The cock, in his plumage of yellowish-green and yellow is one of the most finely coloured of common English birds, but he is rather heavily built, and his song is hardly commended. The hen is much less brightly tinted. Throughout Britain, as a rule, this species is one of the most plentiful birds, and is found at all seasons of the year. It pervades almost the whole of Europe, and in Asia reaches the river Ob. It visits Palestine, but is unknown in Egypt. It is, however, abundant in Mauritania, whence specimens are so brightly coloured that they have been deemed to form a distinct species, the *Ligurinus aurantiiventris* of Dr Cabanis, but that view is now generally abandoned. In the north-east of Asia and its adjacent islands occur two allied species—the *Fringilla sinica* of Linnaeus and the *F. kawarahiba* of Temminck.

(A. N.)

GREENHEART, one of the most valuable of timbers, the produce of *Nectandra Rodiaei*, natural order Lauraceae, a large tree, native of tropical South America and the West Indies. The Indian name of the tree is *sipiri* or *bibiru*, and from its bark and fruits is obtained the febrifuge principle bibirine. Greenheart wood is of a dark-green colour, sap wood and heart wood being so much alike that they can with difficulty be distinguished from each other. The heart wood is one of the most durable of all timbers, and its value is greatly enhanced by the fact that it is proof against the ravages of many marine borers which rapidly destroy piles and other submarine structures of most other kinds of wood available for such purposes. In the Kelvingrove Museum, Glasgow, there are two pieces of planking from a wreck submerged during eighteen years on the west coast of Scotland. The one specimen—greenheart—is merely slightly pitted on the surface, the body of the wood being perfectly sound and untouched, while the other—teak—is almost entirely eaten away. Greenheart, tested either by transverse or by tensile strain, is one of the strongest of all woods, and it is also exceedingly dense, its specific gravity being about 1150. It is included in the second line of Lloyd's Register for shipbuilding purposes, and it is extensively used for keelsons, beams, engine-bearers and planking, &c., as well as in the general engineering arts, but its excessive weight unfits it for many purposes for which its other properties would render it eminently suitable.

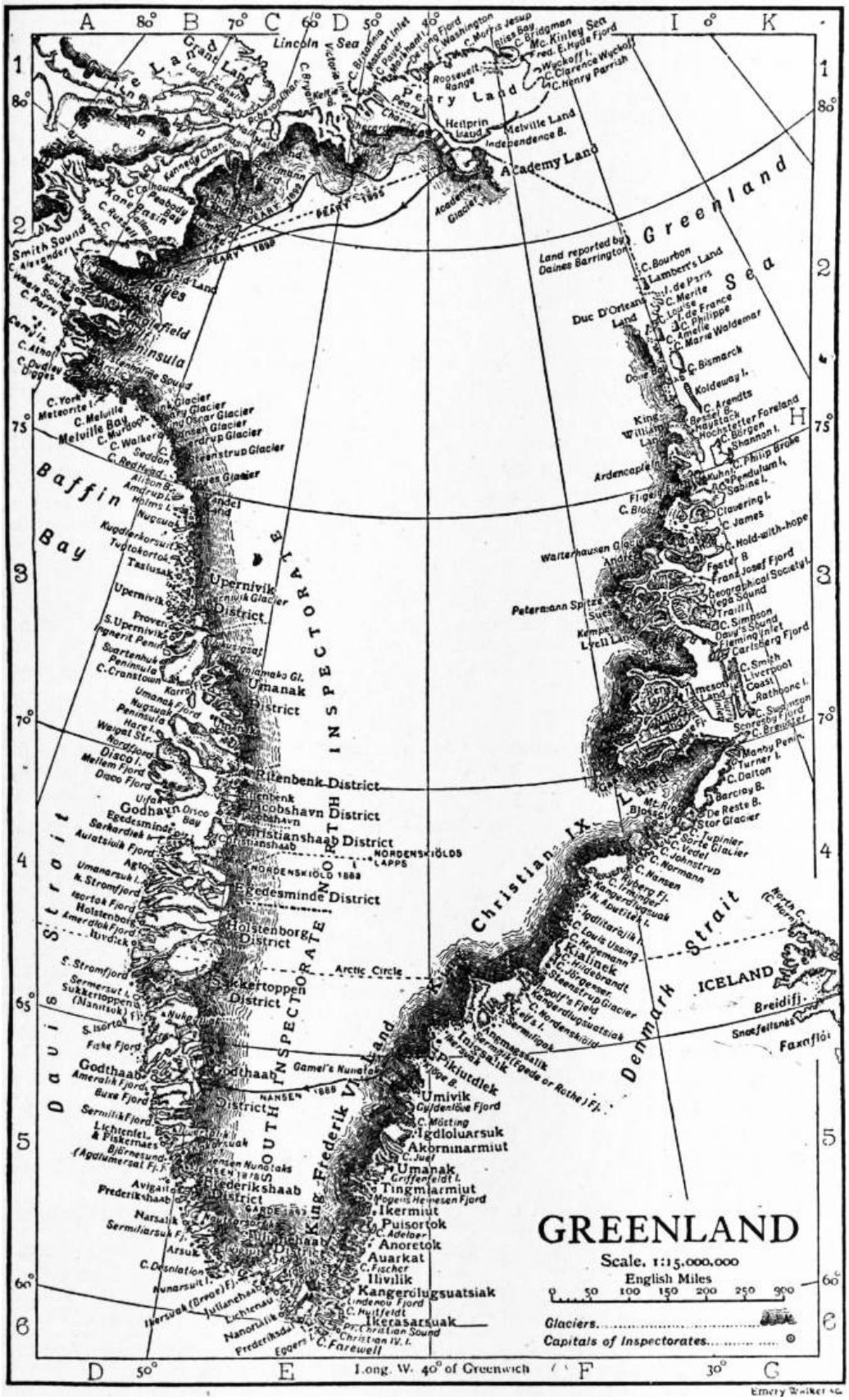
GREENLAND (Danish, &c., *Grönland*), a large continental island, the greater portion of which lies within the Arctic Circle, while the whole is arctic in character. It is not connected with any portion of Europe or America except by suboceanic ridges; but in the extreme north it is separated only by a narrow strait from Ellesmere Land in the archipelago of the American continent. It is bounded on the east by the North Atlantic, the Norwegian and Greenland Seas—Jan Mayen, Iceland, the Faeroe Islands and the Shetlands being the only lands between it and Norway. Denmark Strait is the sea between it and Iceland, and the northern Norwegian Sea or Greenland Sea separates it from Spitsbergen. On the west Davis Strait and Baffin Bay separate it from Baffin Land. The so-called bay narrows northward into the strait successively known as Smith Sound, Kane Basin, Kennedy Channel and Robeson Channel. A submarine ridge, about 300 fathoms deep at its deepest, unites Greenland with Iceland (across Denmark Strait), the Faeroes and Scotland. A similar submarine ridge unites it with the Cumberland Peninsula of Baffin Land, across Davis Strait. Two large islands (with others smaller) lie probably off the north coast, being apparently divided from it by very narrow channels which are not yet explored. If they be reckoned as integral parts of Greenland, then the north coast, fronting the polar sea, culminates about 83° 40′ N. Cape Farewell, the most southerly point (also on a small island), is in 59° 45′ N. The extreme length of Greenland may therefore be set down at about 1650 m., while its extreme breadth, which occurs about 77° 30′ N., is approximately 800 m. The area is estimated at 827,275 sq. m. Greenland is a Danish colony, inasmuch as the west coast and also the southern east coast belong to the Danish crown. The scattered settlements of Europeans on the southern parts of the coasts are Danish, and the trade is a monopoly of the Danish government.

The southern and south-western coasts have been known, as will be mentioned later, since the 10th century, when Norse settlers appeared there, and the names of many famous arctic explorers have been associated with the exploration of Greenland. The communication between the Norse settlements in Greenland and the motherland Norway was broken off at the end of the 14th and the beginning of the 15th century, and the Norsemen's knowledge about their distant colony was gradually more or less forgotten. The south and west coast of Greenland was then re-discovered by John Davis in July 1585, though previous explorers, as Cortereal, Frobisher and others, had seen it, and at the end of the 16th and the beginning of the 17th century the work of Davis (1586-1588). Hudson (1610) and Baffin (1616) in the western seas afforded some knowledge of the west coast. This was added to by later explorers and by whalers and sealers. Among explorers who in the 19th century were specially connected with the north-west coast may be mentioned E. A. Inglefield (1852) who sailed into Smith's Sound,[1] Elisha Kent Kane (1853-1855)[2] who worked northward through Smith Sound into Kane Basin, and Charles Francis Hall (1871) who explored the strait (Kennedy Channel and Robeson Channel) to the north of this.[3]

The northern east coast was sighted by Hudson (1607) in about 73° 30′ N. (C. Hold with Hope), and during the 17th century and later this northern coast was probably visited by many Dutch whalers. The first who gave more accurate information was the Scottish whaler, Captain William Scoresby, jun. (1822), who, with his father, explored the coast between 69° and 75° N., and gave the first fairly trustworthy map of it.[4] Captains Edward Sabine and Clavering (1823) visited the coast between 72° 5′ and 75° 12′ N. and met the only Eskimo ever seen in this part of Greenland. The second German polar expedition in 1870, under Carl Christian Koldewey[5] (1837-1908), reached 77° N. (Cape Bismarck); and the duke of Orleans, in 1905, ascertained that this point was on an island (the Dove Bay of the German expedition being in reality a strait) and penetrated farther north, to about 78° 16′. From this point the north-east coast remained unexplored, though a sight was reported in 1670 by a whaler named Lambert, and again in 1775 as far north as 79° by Daines Barrington, until a Danish expedition under Mylius Erichsen in 1906-1908 explored it, discovering North-East Foreland, the easternmost point (see Polar Regions and map). The southern part of the east coast was first explored by the Dane Wilhelm August Graah (1829-1830) between Cape Farewell and 65° 16′ N.[6] In 1883-1885 the Danes G. Holm and T. V. Garde carefully explored and mapped the coast from Cape Farewell to Angmagssalik, in 66° N.[7] F. Nansen and his companions also travelled along a part of this coast in 1888.[8] A. E. Nordenskiöld, in the "Sophia," landed near Angmagssalik, in 65° 36′ N., in 1883.[9] Captain C. Ryder, in 1891-1892, explored and mapped the large Scoresby Sound, or, more correctly, Scoresby Fjord.[10] Lieutenant G. Amdrup, in 1899, explored the coast from Angmagssalik north to 67° 22′ N.[11] A part of this coast, about 67° N., had also been seen by Nansen in 1882.[12] In 1899 Professor A. G. Nathorst explored the land between Franz Josef Fjord and Scoresby Fjord, where the large King Oscar Fjord, connecting Davy's Sound with Franz Joseph Fjord, was discovered.[13] In 1900 Lieutenant Amdrup explored the still unknown east coast from 690 10′ N. south to 67° N.[14]

From the work of explorers in the north-west it had been possible to infer the approximate

latitude of the northward termination of Greenland long before it was definitely known. Towards the close of the 19th century several explorers gave attention to this question. Lieutenant (afterwards Admiral) L. A. Beaumont (1876), of the Nares Expedition, explored the coast north-east of Robeson Channel to 82° 20′ N.[15] In 1882 Lieut. J. B. Lockwood and Sergeant (afterwards Captain) D. L. Brainard, of the U.S. expedition to Lady Franklin Bay,[16] explored the north-west coast beyond Beaumont's farthest to a promontory in 83° 24′ N. and 40° 46′ E. and they saw to the north-east Cape Washington, in about 83° 38′ N. and 39° 30′ E., the most northerly point of land till then observed. In July 1892 R. E. Peary and E. Astrup, crossing by land from Inglefield Gulf, Smith Sound, discovered Independence Bay on the north-east coast in 81° 37′ N. and 34° 5′ W.[17] In May 1895 it was revisited by Peary, who supposed this bay to be a sound communicating with Victoria Inlet on the north-west coast. To the north Heilprin Land and Melville Land were seen stretching northwards, but the probability seemed to be that the coast soon trended north-west. In 1901 Peary rounded the north point, and penetrated as far north as 83° 50′ N. The scanty exploration of the great ice-cap, or inland ice, which may be asserted to cover the whole of the interior of Greenland, has been prosecuted chiefly from the west coast. In 1751 Lars Dalager, a Danish trader, took some steps in this direction from Frederikshaab. In 1870 Nordenskiöld and Berggren walked 35 m. inland from the head of Aulatsivik Fjord (near Disco Bay) to an elevation of 2200 ft. The Danish captain Jens Arnold Dietrich Jensen reached, in 1878, the Jensen Nunataks (5400 ft. above the sea), about 45 m. from the western margin, in 62° 50′ N.[18] Nordenskiöld penetrated in 1883 about 70 m. inland in 68° 20′ N., and two Lapps of his expedition went still farther on skis, to a point nearly under 45° W. at an elevation of 6600 ft. Peary and Maigaard reached in 1886 about 100 m. inland, a height of 7500 ft. in 69° 30′ N. Nansen with five companions in 1888 made the first complete crossing of the inland ice, working from the east coast to the west, about 64° 25′ N., and reached a height of 8922 ft. Peary and Astrup, as already indicated, crossed in 1892 the northern part of the inland ice between 78° and 82° N., reaching a height of about 8000 ft., and determined the northern termination of the ice-covering. Peary made very nearly the same journey again in 1895. Captain T. V. Garde explored in 1893 the interior of the inland ice between 61° and 62° N. near its southern termination, and he reached a height of 7080 ft. about 60 m. from the margin.[19]



Coasts.—The coasts of Greenland are for the most part deeply indented with fjords, being intensely glaciated. The coast-line of Melville Bay (the northern part of the west coast) is to some degree an exception, though the fjords may here be somewhat filled with glaciers, and, for another example, it may be noted that Peary observed a marked contrast on the north coast. Eastward as far as Cape Morris Jesup there are precipitous headlands and islands, as elsewhere, with deep water close inshore. East of the same cape there is an abrupt change; the coast is unbroken, the mountains recede inland, and there is shoal-water for a considerable distance from the coast. Numerous islands lie off the coasts where they are indented; but these are in no case large, excepting those off the north coast, and that of Disco off the west, which is crossed by the parallel of 70° N. This island, which is separated by Waigat Strait from the Nugsuak peninsula, is lofty, and has an area of 3005 sq. m. Steenstrup

in 1898 discovered in it the warmest spring known in Greenland, having a temperature of 66° F.

The unusual glaciation of the east coast is evidently owing to the north polar current carrying the ice masses from the north polar basin south-westward along the land, and giving it an entirely arctic climate down to Cape Farewell. In some parts the interior ice-covering extends down to the outer coast, while in other parts its margin is situated more inland, and the ice-bare coast-land is deeply intersected by fjords extending far into the interior, where they are blocked by enormous glaciers or "ice-currents" from the interior ice-covering which discharge masses of icebergs into them. The east coast of Greenland is in this respect highly interesting. All coasts in the world which are much intersected by deep fjords have, with very few exceptions, a western exposure, *e.g.* Norway, Scotland, British Columbia and Alaska, Patagonia and Chile, and even Spitsbergen and Novaya Zemlya, whose west coasts are far more indented than their east ones. Greenland forms the most prominent exception, its eastern coast being quite as much indented as its western. The reason is to be found in its geographical position, a cold ice-covered polar current running south along the land, while not far outside there is an open warmer sea, a circumstance which, while producing a cold climate, must also give rise to much precipitation, the land being thus exposed to the alternate erosion of a rough atmosphere and large glaciers. On the east coast of Baffin Land and Labrador there are similar conditions. The result is that the east coast of Greenland has the largest system of typical fjords known on the earth's surface. Scoresby Fjord has a length of about 180 m. from the outer coast to the point where it is blocked by the glaciers, and with its numerous branches covers an enormous area. Franz Josef Fjord, with its branch King Oscar Fjord, communicating with Davy's Sound, forms a system of fjords on a similar scale. These fjords are very deep; the greatest depth found by Ryder in Scoresby Sound was 300 fathoms, but there are certainly still greater depths; like the Norwegian fjords they have, however, probably all of them, a threshold or sill, with shallow water, near their mouths. A few soundings made outside this coast seem to indicate that the fjords continue as deep submarine valleys far out into the sea. On the west coast there are also many great fjords. One of the best known from earlier days is the great Godthaab Fjord (or Baals Revier) north of 64° N. Along the east coast there are many high mountains, exceeding 6000 and 7000 ft. in height. One of the highest peaks hitherto measured is at Tiningnertok, on the Lindenov Fjord, in 60° 35′ N., which is 7340 ft. high. At the bottom of Mogens Heinesen Fjord, 62° 30′ N., the peaks are 6300 ft., and in the region of Umanak, 63° N., they even exceed 6600 ft. At Umivik, where Nansen began his journey across the inland ice, the highest peak projecting through the ice-covering was Gamel's Nunatak, 6440 ft., in 64° 34′ N. In the region of Angmagssalik, which is very mountainous, the mountains rise to 6500 ft., the most prominent peak being Ingolf's Fjeld, in 66° 20′ N., about 6000 ft., which is seen from far out at sea, and forms an excellent landmark. This is probably the Blaaserk (*i.e.* Blue Sark or blue shirt) of the old Norsemen, their first landmark on their way from Iceland to the Öster Bygd, the present Julianehaab district, on the south-west coast of Greenland. A little farther north the coast is much lower, rising only to heights of 2000 ft., and just north of 67° 10′ N. only to 500 ft. or less.[20] The highest mountains near the inner branches of Scoresby Fjord are about 7000 ft. The Petermann Spitze, near the shore of Franz Josef Fjord, measured by Payer and found to be 11,000 ft., has hitherto been considered to be the highest mountain in Greenland, but according to Nathorst it "is probably only two-thirds as high as Payer supposed," perhaps between 8000 and 9000 ft.

Along the west coast of Greenland the mountains are generally not quite so high, but even here peaks of 5000 and 6000 ft. are not uncommon. As a whole the coasts are unusually mountainous, and Greenland forms in this respect an interesting exception, as there is no other known land of such a size so filled along its coasts on all sides with high mountains and deep fjords and valleys.

The Inland Ice.—The whole interior of Greenland is completely covered by the so-called inland ice, an enormous glacier forming a regular shield-shaped expanse of snow and glacier ice, and burying all valleys and mountains far below its surface. Its area is about 715,400 sq. m., and it is by far the greatest glacier of the northern hemisphere. Only occasionally there emerge lofty rocks, isolated but not completely covered by the ice-cap; such rocks are known as *nunataks* (an Eskimo word). The inland ice rises in the interior to a level of 9000, and in places perhaps 10,000 ft. or more, and descends gradually by extremely gentle slopes towards the coasts or the bottom of the fjords on all sides, discharging a great part of its yearly drainage or surplus of precipitation in the form of icebergs in the fjords, the so-called ice-fjords, which are numerous both on the west and on the east coast. These icebergs float away, and are gradually melted in the sea, the temperature of which is thus lowered by cold stored up in the interior of Greenland. The last remains of these icebergs are met with in the Atlantic south of Newfoundland. The surface of the inland ice forms in a transverse section from the west to the east coast an extremely regular curve, almost approaching an arc of a wide circle, which along Nansen's route has its highest ridge somewhat nearer the east than

the west coast. The same also seems to be the case farther south. The curve shows, however, slight irregularities in the shape of undulations. The angle of the slope decreases gradually from the margin of the inland ice, where it may be 1° or more, towards the interior, where it is 0°. In the interior the surface of the inland ice is composed of dry snow which never melts, and is constantly packed and worked smooth by the winds. It extends as a completely even plain of snow, with long, almost imperceptible, undulations or waves, at a height of 7000 to 10,000 ft., obliterating the features of the underlying land, the mountains and valleys of which are completely interred. Over the deepest valleys of the land in the interior this ice-cap must be at least 6000 or 7000 ft. thick or more. Approaching the coasts from the interior, the snow of the surface gradually changes its structure. At first it becomes more coarse-grained, like the *Firn Schnee* of the Alps, and is moist by melting during the summer. Nearer the coast, where the melting on the surface is more considerable, the wet snow freezes hard during the winter and is more or less transformed into ice, on the surface of which rivers and lakes are formed, the water of which, however, soon finds its way through crevasses and holes in the ice down to its under surface, and reaches the sea as a sub-glacial river. Near its margin the surface of the inland ice is broken up by numerous large crevasses, formed by the outward motion of the glacier covering the underlying land. The steep ice-walls at the margin of the inland ice show, especially where the motion of the ice is slow, a distinct striation, which indicates the strata of annual precipitation with the intervening thin seams of dust (Nordenskiöld's kryokonite). This is partly dust blown on to the surface of the ice from the ice-bare coast-land and partly the dust of the atmosphere brought down by the falling snow and accumulated on the surface of the glacier's covering by the melting during the summer. In the rapidly moving glaciers of the ice-fjords this striation is not distinctly visible, being evidently obliterated by the strong motion of the ice masses.

The ice-cap of Greenland must to some extent be considered as a viscous mass, which, by the vertical pressure in its interior, is pressed outwards and slowly flows towards the coasts, just as a mass of pitch placed on a table and left to itself will in the course of time flow outwards towards all sides. The motion of the outwards-creeping inland ice will naturally be more independent of the configurations of the underlying land in the interior, where its thickness is so enormous, than near the margin where it is thinner. Here the ice converges into the valleys and moves with increasing velocity in the form of glaciers into the fjords, where they break off as icebergs. The drainage of the interior of Greenland is thus partly given off in the solid form of icebergs, partly by the melting of the snow and ice on the surface of the ice-cap, especially near its western margin, and to some slight extent also by the melting produced on its under side by the interior heat of the earth. After Professor Amund Helland had, in July 1875, discovered the amazingly great velocity, up to 64¾ ft. in twenty-four hours, with which the glaciers of Greenland move into the sea, the margin of the inland ice and its glaciers was studied by several expeditions. K. J. V. Steenstrup during several years, Captain Hammer in 1879-1880, Captain Ryder in 1886-1887, Dr Drygalski in 1891-1893,[21] and several American expeditions in later years, all examined the question closely. The highest known velocities of glaciers were measured by Ryder in the Upernivik glacier (in 73° N.), where, between the 13th and 14th of August of 1886, he found a velocity of 125 ft. in twenty-four hours, and an average velocity during several days of 101 ft. (Danish).[22] It was, however, ascertained that there is a great difference between the velocities of the glaciers in winter and in summer. For instance, Ryder found that the Upernivik glacier had an average velocity of only 33 ft. in April 1887. There seem to be periodical oscillations in the extension of the glaciers and the inland ice similar to those that have been observed on the glaciers of the Alps and elsewhere. But these interesting phenomena have not hitherto been subject to systematic observation, and our knowledge of them is therefore uncertain. Numerous glacial marks, however, such as polished striated rocks, moraines, erratic blocks, &c., prove that the whole of Greenland, even the small islands and skerries outside the coast, has once been covered by the inland ice.

Numerous raised beaches and terraces, containing shells of marine mollusca, &c., occur along the whole coast of Greenland, and indicate that the whole of this large island has been raised, or the sea has sunk, in post-glacial times, after the inland ice covered its now ice-bare outskirts. In the north along the shores of Smith Sound these traces of the gradual upheaval of the land, or sinking of the sea, are very marked; but they are also very distinct in the south, although not found so high above sea-level, which seems to show that the upheaval has been greater in the north. In Uvkusigsat Fjord (72° 20′ N.) the highest terrace is 480 ft. above the sea.[23] On Manitsok (65° 30′ N.) the highest raised beach was 360 ft. above the sea.[24] In the Isortok Fjord (67° 11′ N.) the highest raised beach is 380 ft. above sea-level.[25] In the Ameralik Fjord (64° 14′ N.) the highest marine terrace is about 340 ft. above sea-level, and at Ilivertalik (63° 14′ N.), north of Fiskernaes, the highest terrace is about 325 ft. above the sea. At Kakarsuak, near the Björnesund (62° 50′ N.), a terrace is found at 615 ft. above the sea, but it is doubtful whether this is of marine origin.[26] In the Julianehaab district, between 60° and 61° N., the highest marine terraces are found at about 160 ft. above the sea.[27] The highest marine terrace observed in Scoresby Fjord, on the east coast, was 240 ft. above sea-

level.[28] There is a common belief that during quite recent times the west and south-west coast, within the Danish possessions, has been sinking. Although there are many indications which may make this probable, none of them can be said to be quite decisive.[29]

[*Geology.*—So far as made out, the structure of explored Greenland is as follows:

1. *Laurentian gneiss* forms the greatest mass of the exposed rocks of the country bare of ice. They are found on both sides of Smith Sound, rising to heights of 2000 ft., and underlie the Miocene and Cretaceous rocks of Disco Island, Noursoak Peninsula and the Oolites of Pendulum Island in East Greenland. Ancient schists occur on the east coast south of Angmagssalik, and basalts and schists are found in Scoresby Fjord. It is possible that some of these rocks are also of Huronian age, but it is doubtful whether the rocks so designated by the geologists of the "Alert" and "Discovery" expedition are really the rocks so known in Canada, or are a continuous portion of the fundamental or oldest gneiss of the north-west of Scotland and the western isles.

2. *Silurian.*—Upper Silurian, having a strong relation to the Wenlock group of Britain, but with an American facies, and Lower Silurian, with a succession much the same as in British North America, are found on the shores of Smith Sound, and Nathorst has discovered them in King Oscar Fjord, but not as yet so far south as the Danish possessions.

3. *Devonian* rocks are believed to occur in Igaliko and Tunnudiorbik Fjords, in S.W. Greenland, but as they are unfossiliferous sandstone, rapidly disintegrating, this cannot be known. It is, however, likely that this formation occurs in Greenland, for in Dana Bay, Captain Feilden found a species of *Spirifera* and *Productus mesolobus* or *costatus*, though it is possible that these fossils represent the "Ursa stage" (Heer) of the Lower Carboniferous. A few Devonian forms have also been recorded from the Parry Archipelago, and Nathorst has shown the existence of Old Red Sandstone facies of Devonian in Traill Island, Geographical Society Island, Ymer Island and Gauss Peninsula.

4. *Carboniferous.*—In erratic blocks of sandstone, found on the Disco shore of the Waigat have been detected a *Sigillaria* and a species of either *Pecopteris* or *Gleichenia*, perhaps of this age; and probably much of the extreme northern coast of Ellesmere Land, and therefore, in all likelihood, the opposite Greenland shore, contains a clearly developed Carboniferous Limestone fauna, identical with that so widely distributed over the North American continent, and referable also to British and Spitsbergen species. Of the Coal Measures above these, if they occur, we know nothing at present. Capt. Feilden notes as suggestive that, though the explorers have not met with this formation on the northern shores of Greenland, yet it was observed that a continuation of the direction of the known strike of the limestones of Feilden peninsula, carried over the polar area, passes through the neighbourhood of Spitsbergen, where the formation occurs, and contains certain species identical with those of the Grinnell Land rocks of this horizon. The facies of the fossils is, according to Mr Etheridge, North American and Canadian, though many of the species are British. The corals are few in number, but the *Molluscoida* (*Polyzoa*) are more numerous in species and individuals. No Secondary rocks have been discovered in the extreme northern parts of West Greenland, but they are present on the east and west coasts in more southerly latitudes than Smith Sound.

5. *Jurassic.*—These do not occur on the west coast, but on the east coast the German expedition discovered marls and sandstones on Kuhn Island, resembling those of the Russian Jurassic, characterized by the presence of the genus *Aucella*, *Olcostephanus Payeri*, *O. striolaris*, *Belemnites Panderianus*, *B. volgensis*, *B. absolutus*, and a *Cyprina* near to *C. syssolae*. On the south coast of the same island are coarse-grained, brownish micaceous and light-coloured calcareous sandstone and marls, containing fossils, which render it probable that they are of the same age as the coal-bearing Jurassic rocks of Brora (Scotland) and the Middle Dogger of Yorkshire. There is also coal on Kuhn Island.

The Danish expeditions of 1899-1900 have added considerably to our knowledge of the Jurassic rocks of East Greenland. Rhaetic-Lias plants have been described by Dr Hartz from Cape Stewart and Vardeklöft. Dr Madsen has recognized fossils that correspond with those from the Inferior oolite, Cornbrash and Callovian of England. Upper Kimmeridge and Portlandian beds also occur.

6. *Cretaceous.*—Beds of this age, consisting of sandstones and coal, are found on the northern coast of Disco Island and the southern side of the Noursoak Peninsula, the beds in the former locality, "the Kome strata" of Nordenskiöld, being the oldest. They reach 1000 ft. in thickness, occupying undulating hollows in the underlying gneiss, and dip towards the Noursoak Peninsula at 20°, when the overlying Atanakerdluk strata come in. Both these series contain numerous plant remains, evergreen oaks, magnolias, aralias, &c., and seams of lignite (coal), which is burnt; but in neither occur the marine beds of the United States. Still, the presence of dicotyledonous leaves, such as *Magnolia alternans*, in the Atanakerdluk strata, proves their close alliance with the Dakota series of the United States. The underlying Kome beds are not present in the American series. They are characterized by fine cycads

(*Zamites arcticus* and *Glossozamites Heheneggeri*), which also occur in the Urgonian strata of Wernsdorff.

7. *Miocene.*—This formation, one of the most widely spread in polar lands, though the most local in Greenland, is also the best known feature in its geology. It is limited to Disco Island, and perhaps to a small part of the Noursoak Peninsula, and the neighbouring country, and consists of numerous thin beds of sandstone, shale and coal—the sideritic shale containing immense quantities of leaves, stems, fruit, &c., as well as some insects, and the coal pieces of retinite. The study of these plant and insect remains shows that forests containing a vegetation very similar to that of California and the southern United States, in some instances even the species of trees being all but identical, flourished in 70° N. during geological periods comparatively recent. These beds, as well as the Cretaceous series, from which they are as yet only imperfectly distinguished, are associated with sheets of basalt, which penetrate them in great dikes, and in some places, owing to the wearing away of the softer sedimentary rocks, stand out in long walls running across the beds. These Miocene strata have not been found farther north on the Greenland shore than the region mentioned; but in Lady Franklin Bay, on the Grinnell Land side of Smith Sound, they again appear, so that the chances are they will be found on the opposite coast, though doubtless the great disintegration Greenland has undergone and is undergoing has destroyed many of the softer beds of fossiliferous rocks. On the east coast, more particularly in Hochstetter Foreland, the Miocene beds again appear, and we may add that there are traces of them even on the west coast, between Sonntag Bay and Foulke Fjord, at the entrance to Smith Sound. It thus appears that since early Tertiary times there has been a great change in the climate of Greenland.

Nathorst has suggested that the whole of Greenland is a “horst,” in the subordinate folds of which, as well as in the deeper “graben,” the younger rocks are preserved, often with a covering of Tertiary or later lava flows.[30]—J. A. H.]

Minerals.—Native iron was found by Nordenskiöld at Ovifak, on Disco Island, in 1870, and brought to Sweden (1871) as meteorites. The heaviest nodule weighed over 20 tons. Similar native iron has later been found by K. J. V. Steenstrup in several places on the west coast enclosed as smaller or larger nodules in the basalt. This iron has very often beautiful Widmannstätten figures like those of iron meteorites, but it is obviously of telluric origin.[31] In 1895 Peary found native iron at Cape York; since John Ross’s voyage in 1818 it has been known to exist there, and from it the Eskimo got iron for their weapons. In 1897 Peary brought the largest nodule to New York; it was estimated to weigh nearly 100 tons. This iron is considered by several of the first authorities on the subject to be of meteoric origin,[32] but no evidence hitherto given seems to prove decisively that it cannot be telluric. That the nodules found were lying on gneissic rock, with no basaltic rocks in the neighbourhood, does not prove that the iron may not originate from basalt, for the nodules may have been transported by the glaciers, like other erratic blocks, and will stand erosion much longer than the basalt, which may long ago have disappeared. This iron seems, however, in several respects to be unlike the celebrated large nodules of iron found by Nordenskiöld at Ovifak, but appears to resemble much more closely the softer kind of iron nodules found by Steenstrup in the basalt;[33] it stands exposure to the air equally well, and has similar Widmannstätten figures very sharp, as is to be expected in such a large mass. It contains, however, more nickel and also phosphorus. A few other minerals may be noticed, and some have been worked to a small extent—graphite is abundant, particularly near Upernivik; cryolite is found almost exclusively at Ivigtut; copper has been observed at several places, but only in nodules and laminae of limited extent; and coal of poor quality is found in the districts about Disco Bay and Umanak Fjord. Steatite or soapstone has long been used by the natives for the manufacture of lamps and vessels.

Climate.—The climate is very uncertain, the weather changing suddenly from bright sunshine (when mosquitoes often swarm) to dense fog or heavy falls of snow and icy winds. At Julianehaab in the extreme south-west the winter is not much colder than that of Norway and Sweden in the same locality; but its mean temperature for the whole year probably approximates to that on the Norwegian coast 600 m. farther north. The climate of the interior has been found to be of a continental character, with large ranges of temperature, and with an almost permanent anti-cyclonic region over the interior of the inland ice, from which the prevailing winds radiate towards the coasts. On the 64th parallel the mean annual temperature at an elevation of 6560 ft. is supposed to be −13° F., or reduced to sea-level 5° F. The mean annual temperature in the interior farther north is supposed to be −10° F. reduced to sea-level. The mean temperature of the warmest month, July, in the interior should be, reduced to sea-level, on the 64th parallel 32° F., and that of the coldest month, January, about −22° F., while in North Greenland it is probably −40° reduced to sea-level. Here we may probably find the lowest temperatures of the northern hemisphere. The interior of Greenland contains both summer and winter a pole of cold, situated in the opposite longitude to that of Siberia, with which it is well able to compete in extreme severity. On Nansen’s expedition temperatures of about −49° F. were experienced during the nights in

the beginning of September, and the minimum during the winter may probably sink to −90° F. in the interior of the inland ice. These low temperatures are evidently caused by the radiation of heat from the snow-surface in the rarefied air in the interior. The daily range of temperature is therefore very considerable, sometimes amounting to 40°. Such a range is elsewhere found only in deserts, but the surface of the inland ice may be considered to be an elevated desert of snow.[34] The climate of the east coast is on the whole considerably more arctic than that of the west coast on corresponding latitudes; the land is much more completely snow-covered, and the snow-line goes considerably lower. The probability also is that there is more precipitation, and that the mean temperatures are lower.[35] The well-known strangely warm and dry *föhn*-winds of Greenland occur both on the west and the east coast; they are more local than was formerly believed, and are formed by cyclonic winds passing either over mountains or down the outer slope of the inland ice.[36] Mirage and similar phenomena and the aurora are common.

Fauna and Flora.—It was long a common belief that the fauna and flora of Greenland were essentially European, a circumstance which would make it probable that Greenland has been separated by sea from America during a longer period of time than from Europe. The correctness of this hypothesis may, however, be doubted. The land mammals of Greenland are decidedly more American than European; the musk-ox, the banded lemming (*Cuniculus torquatus*), the white polar wolf, of which there seems to have been a new invasion recently round the northern part of the country to the east coast, the Eskimo and the dog—probably also the reindeer—have all come from America, while the other land mammals, the polar bear, the polar fox, the Arctic hare, the stoat (*Mustela erminea*), are perfectly circumpolar forms. The species of seals and whales are, if anything, more American than European, and so to some extent are the fishes. The bladder-nose seal (*Cystophora cristata*), for instance, may be said to be a Greenland-American species, while a Scandinavian species, such as the grey seal (*Halichoerus grypus*), appears to be very rare both in Greenland and America. Of the sixty-one species of birds breeding in Greenland, eight are European-Asiatic, four are American, and the rest circumpolar or North Atlantic and North Pacific in their distribution.[37] About 310 species of vascular plants are found, of which about forty species are American, forty-four European-Asiatic, fifteen endemic, and the rest common both to America and Europe or Asia. We thus see that the American and the European-Asiatic elements of the flora are nearly equivalent; and if the flora of Arctic North America were better known, the number of plants common to America might be still more enlarged.[38]

In the south, a few goats, sheep, oxen and pigs have been introduced. The whaling industry was formerly prolific off the west coast but decayed when the right whale nearly disappeared. The white whale fishery of the Eskimo, however, continued, and sealing is important; walruses are also caught and sometimes narwhal. There are also important fisheries for cod, caplin, halibut, red fish (*Sebastes*) and *nepisak* (*Cyclopterus lumpus*); a shark (*Somniosus microcephalus*) is taken for the oil from its liver; and sea-trout are found in the streams and small lakes of the south. On land reindeer were formerly hunted, to their practical extinction in the south, but in the districts of Godthaab, Sukkertoppen and Holstensborg there are still many reindeer. The eider-duck, guillemot and other sea-birds are in some parts valuable for food in winter, and so is the ptarmigan. Eggs of sea-birds are collected and eider-down. Valuable fur is obtained from the white and blue fox, the skin of the eider-duck and the polar bear.

At Tasiusak (73° 22′ N.), the most northern civilized settlement in the world, gardening has been attempted without success, but several plants do well in forcing frames. At Umanak (70° 40′ N.) is the most northern garden in the world. Broccoli and radishes grow well, turnips (but not every year), lettuce and chervil succeed sometimes, but parsley cannot be reared. At Jacobshavn (69° 12′ N.), only some 15 m. from the inland ice, gardening succeeds very well; broccoli and lettuce grow willingly; the spinach produces large leaves; chervil, pepper-grass, leeks, parsley and turnips grow very well; the radishes are sown and gathered twice during the summer (June to August). In the south, in the Julianehaab district, even flowering plants, such as aster, nemophilia and mignonette, are cultivated, and broccoli, spinach, sorrel, chervil, parsley, rhubarb, turnips, lettuce, radishes grow well. Potatoes give fair results when they are taken good care of, carrots grow to a thickness of 1½ in., while cabbage does poorly. Strawberries and cucumbers have been ripened in a forcing frame. In the “Kongespeil” (King’s mirror) of the 13th century it is stated that the old Norsemen tried in vain to raise barley.

The wild vegetation in the height of summer is, in favourable situations, profuse in individual plants, though scanty in species. The plants are of the usual arctic type, and identical with or allied to those found in Lapland or on the summits of the highest British hills. Forest there is none in all the country. In the north, where the lichen-covered or ice-shaven rocks do not protrude, the ground is covered with a carpet of mosses, creeping dwarf willows, crow-berries and similar plants, while the flowers most common are the andromeda, the yellow poppy, pedicularis, pyrola, &c. besides the flowering mosses; but in South

Greenland there is something in the shape of bush, the dwarf birches even rising a few feet in very sheltered places, the willows may grow higher than a man, and the vegetation is less arctic and more abundant.

Government and Trade.—The trade of Greenland is a monopoly of the Danish crown, dating from 1774, and is administered in Copenhagen by a government board (*Kongelige Grönlandske Handel*) and in the country by various government officials. In order to meet the double purposes of government and trade the west coast, up to nearly 74° N., is divided into two inspectorates, the southern extending to 67° 40′ N., the northern comprising the rest of the country; the respective seats of government being at Godthaab and Godhavn. These inspectorates are ruled by two superior officials or governors responsible to the director of the board in Copenhagen. Each of the inspectorates is divided into districts, each district having, in addition to the chief settlement or *coloni*, several outlying posts and Eskimo hunting stations, each presided over by an *udligger*, who is responsible to the *coloni-bestyrer*, or superintendent of the district. These trading settlements, which dot the coast for a distance of 1000 m., are about sixty in number. From the Eskimo hunting and fishing stations blubber is the chief article received, and is forwarded in casks to the *coloni*, where it is boiled into oil, and prepared for being despatched to Copenhagen by means of the government ships which arrive and leave between May and November. For the rest of the year navigation is stopped, though the winter months form the busy seal-killing season. The principle upon which the government acts is to give the natives low prices for their produce, but to sell them European articles of necessity at prime cost, and other stores, such as bread, at prices which will scarcely pay for the purchase and freight, while no merchandise is charged, on an average, more than 20% over the cost price in Denmark. In addition the Greenlanders are allowed to order goods from private dealers on paying freight for them at the rate of 2½d. per 10 lb, or 1s. 6d. per cub. ft. The prices to be paid for European and native articles are fixed every year, the prices current in Danish and Eskimo being printed and distributed by the government. Out of the payment five-sixths are given to the sellers, and one-sixth devoted to the Greenlanders' public fund, spent in "public works," in charity, and on other unforeseen contingencies. The object of the monopoly is solely for the good of the Greenlanders—to prevent spirits being sold to them, and the vice, disease and misery which usually attend the collision between natives and civilization of the trader's type being introduced into the primitive arctic community. The inspectors, in addition to being trade superintendents, are magistrates, but serious crime is very rare. Though the officials are all-powerful, local councils or *parsissaet* were organized in 1857 in every district. To these parish parliaments delegates are sent from every station. These *parsissoks*, elected at the rate of about one representative to 120 voters, wear a cap with a badge (a bear rampant), and aid the European members of the council in distributing the surplus profit apportioned to each district, and generally in advising as to the welfare of that part of Greenland under their partial control. The municipal council has the disposal of 20% of the annual profits made on produce purchased within the confines of each district. It holds two sessions every year, and the discussions are entirely in the Eskimo language. In addition to their functions as guardians of the poor, the parish members have to investigate crimes and punish misdemeanours, settle litigations and divide inheritances. They can impose fines for small offences not worth sending before the inspector, and, in cases of high misdemeanour, have the power of inflicting corporal punishment.

A Danish *coloni* in Greenland might seem to many not to be a cheerful place at best; though in the long summer days they would certainly find some of those on the southern fjords comparatively pleasant. The fact is, however, that most people who ever lived some time in Greenland always long to go back. There are generally in a *coloni* three or four Danish houses, built of wood and pitched over, in addition to storehouses and a blubber-boiling establishment. The Danish residents may include, besides a *coloni-bestyrer* and his assistant, a *missionair* or clergyman, at a few places also a doctor, and perhaps a carpenter and a schoolmaster. In addition there are generally from twenty to several hundred Eskimo, who live in huts built of stone and turf, each entered by a short tunnel. Lately their houses in the *colonis* have also to some extent been built of imported wood. Following the west coast northward, the trading centres are these: in the south inspectorate, Julianehaab, near which are remains of the early Norse settlements of Eric the Red and his companions (the *Öster-Bygd*); Frederikshaab, in which district are the cryolite mines of Ivigtut; Godthaab, the principal settlement of all, in the neighbourhood of which are also early Norse remains (the *Vester-Bygd*); Sukkertoppen, a most picturesque locality; and Holstenborg. In the north inspectorate the centres are: Egedesminde, on an islet at the mouth of Disco Bay; Christianshaab, one of the pleasantest settlements in the north, and Jacobshavn, on the inner shores of the same bay; Godhavn (or Lievely) on the south coast of Disco Island, formerly an important seat of the whaling industry; Ritenbenk, Umanak, and, most northerly of all,

Upernivik. On the east coast there is but one coloni, Angmagssalik, in 65º 30′ N., only established in 1894. For ecclesiastical purposes Danish Greenland is reckoned in the province of the bishop of Zeeland. The Danish mission in Greenland has a yearly grant of £2000 from the trading revenue of the colony, besides a contribution of £880 from the state. The Moravian mission, which had worked in Greenland for a century and a half, retired from the country in 1900. The trade of Greenland has on the whole much decreased in modern times, and trading and missions cost the Danish state a comparatively large sum (about £11,000 every year), although this is partly covered by the income from the royalty of the cryolite mines at Ivigtut. There is, however, a yearly deficiency of more than £6000. The decline in the value of the trade, which was formerly very profitable, has to a great extent been brought about by the fall in the price of seal-oil. It might be expected that there should be a decrease in the Greenland seal fisheries, caused by the European and American sealers catching larger quantities every year, especially along the coasts of Newfoundland and Labrador, and so actually diminishing the number of the animals in the Greenland seas. The statistics of South Greenland, however, do not seem to demonstrate any such decrease. The average number of seals killed annually is about 33,000.[39] The annual value of imports, consisting of manufactured goods, foodstuffs, &c., may be taken somewhat to exceed £40,000. The chief articles of export (together with those that have lapsed) have been already indicated; but they may be summarized as including seal-oil, seal, fox, bird and bear skins, fish products and eiderdown, with some quantity of worked skins. Walrus tusks and walrus hides, which in the days of the old Norse settlements were the chief articles of export, are now of little importance.

Population.—The area of the entire Danish colony is estimated at 45,000 sq. m., and its population in 1901 was 11,893. The Europeans number about 300. The Eskimo population of Danish Greenland (west coast) seems to have decreased since the middle of the 18th century. Hans Egede estimated the population then at 30,000, but this is probably a large over-estimate. The decrease may chiefly have been due to infectious diseases, especially a very severe epidemic of smallpox. During the last half of the 19th century there was on the whole a slight increase of the native population. The population fluctuates a good deal, owing, to some extent, to an immigration of natives from the east to the west coast. The population of the east coast seems on the whole to be decreasing in number, several hundreds chiefly living at Angmagssalik. In the north part of the east coast, in the region of Scoresby Fjord and Franz Josef Fjord, numerous ruins of Eskimo settlements are found, and in 1823 Clavering met Eskimo there, but now they have either completely died out or have wandered south. A little tribe of Eskimo living in the region of Cape York near Smith Sound—the so-called “Arctic Highlanders” or Smith Sound Eskimo—number about 240.

History.—In the beginning of the 10th century the Norwegian Gunnbjörn, son of Ulf Kráka, is reported to have found some islands to the west of Iceland, and he may have seen, without landing upon it, the southern part of the east coast of Greenland. In 982 the Norwegian Eric the Red sailed from Iceland to find the land which Gunnbjörn had seen, and he spent three years on its south-western coasts exploring the country. On his return to Iceland in 985 he called the land Greenland in order to make people more willing to go there, and reported so favourably on its possibilities that he had no difficulty in obtaining followers. In 986 he started again from Iceland with 25 ships, but only 14 of them reached Greenland, where a colony was founded on the south-west coast, in the present Julianehaab district. Eric built his house at Brattalid, near the inner end oí the fjord Tunugdliarfik, just north of the present Julianehaab. Other settlers followed and in a few years two colonies had been formed, one called Österbygd in the present district of Julianehaab comprising later about 190 farms, and another called Vesterbygd farther north on the west coast in the present district of Godthaab, comprising later about 90 farms. Numerous ruins in the various fjords of these two districts indicate now where these colonies were. Wooden coffins, with skeletons wrapped in coarse hairy cloth, and both pagan and Christian tombstones with runic inscriptions have been found. On a voyage from Norway to Greenland Leif Ericsson (son of Eric the Red) discovered America in the year 1000, and a few years later Torfinn Karlsefne sailed with three ships and about 150 men, from Greenland to Nova Scotia to form a colony, but returned three years later (see VINLAND).

When the Norsemen came to Greenland they found various remains indicating, as the old sagas say, that there had been people of a similar kind as those they met with in Vinland, in America, whom they called *Skraeling* (the meaning of the word is uncertain, it means possibly weak people); but the sagas do not report that they actually met the natives then. But somewhat later they have probably met with the Eskimo farther north on the west coast in the neighbourhood of Disco Bay, where the Norsemen went to catch seals, walrus, &c. The Norse colonists penetrated on these fishing expeditions at least to 73º N., where a small

runic stone from the 14th century has been found. On a voyage in 1267 they penetrated even still farther north into the Melville Bay.

Christianity was introduced by Leif Ericsson at the instance of Olaf Trygvasson, king of Norway, in 1000 and following years. In the beginning of the 12th century Greenland got its own bishop, who resided at Garolar, near the present Eskimo station Igoliko, on an isthmus between two fjords, Igaliksfjord (the old Einarsfjord) and Tunugdliarfik (the old Eriksfjord), inside the present colony Julianehaab. The Norse colonies had twelve churches, one monastery and one nunnery in the Österbygd, and four churches in the Vesterbygd. Greenland, like Iceland, had a republican organization up to the years 1247 to 1261, when the Greenlanders were induced to swear allegiance to the king of Norway. Greenland belonged to the Norwegian crown till 1814, when, at the dissolution of the union between Denmark and Norway, neither it nor Iceland and the Faeroes were mentioned, and they, therefore, were kept by the Danish king and thus came to Denmark. The settlements were called respectively *Öster Bygd* (or eastern settlement) and *Vester* (western) *Bygd*, both being now known to be on the south and west coast (in the districts of Julianehaab and Godthaab respectively), though for long the view was persistently held that the first was on the east coast, and numerous expeditions have been sent in search of these “lost colonies” and their imaginary survivors. These settlements at the height of their prosperity are estimated to have had 10,000 inhabitants, which, however, is an over-estimate, the number having probably been nearer one-half or one-third of that number. The last bishop appointed to Greenland died in 1540, but long before that date those appointed had never reached their sees; the last bishop who resided in Greenland died there in 1377. After the middle of the 14th century very little is heard of the settlements, and their communication with the motherland, Norway, evidently gradually ceased. This may have been due in great part to the fact that the shipping and trade of Greenland became a monopoly of the king of Norway, who kept only one ship sailing at long intervals (of years) to Greenland; at the same time the shipping and trade of Norway came more and more in the hands of the Hanseatic League, which took no interest in Greenland. The last ship that is known to have visited the Norse colony in Greenland returned to Norway in 1410. With no support from home the settlements seem to have decayed rapidly. It has been supposed that they were destroyed by attacks of the Eskimo, who about this period seem to have become more numerous and to have extended southwards along the coast from the north. This seems a less feasible explanation; it is more probable that the Norse settlers intermarried with the Eskimo and were gradually absorbed. About the end of the 15th or the beginning of the 16th century it would appear that all Norse colonization had practically disappeared. When in 1585 John Davis visited it there was no sign of any people save the Eskimo, among whose traditions are a few directly relating to the old Norsemen, and several traces of Norse influence.[40] For more than two hundred years Greenland seems to have been neglected, almost forgotten. It was visited by whalers, chiefly Dutch, but nothing in the form of permanent European settlements was established until the year 1721, when the first missionary, the Norwegian clergyman Hans Egede, landed, and established a settlement near Godthaab. Amid many hardships and discouragements he persevered; and at the present day the native race is civilized and Christianized. Many of the colonists of the 18th century were convicts and other offenders; and in 1750 the trade became a monopoly in the hands of a private company. In 1733-1734 there was a dreadful epidemic of smallpox, which destroyed a great number of the people. In 1774 the trade ceased to be profitable as a private monopoly, and to prevent it being abandoned the government took it over. Julianehaab was founded in the following year. In 1807-1814, owing to the war, communication was cut off with Norway and Denmark; but subsequently the colony prospered in a languid fashion.

Authorities.—As to the discovery of Greenland by the Norsemen and its early history see Konrad Maurer’s excellent paper, “Geschichte der Entdeckung Ostgrönlands” in the report of *Die zweite deutsche Nordpolarfahrt 1869-1870* (Leipzig, 1874), vol. i.; G. Storm, *Studies on the “Vineland” Voyages* (Copenhagen, 1889); *Extraits des Mémoires de la Société Royale des Antiquaires du Nord* (1888); K. J. V. Steenstrup, “Om Österbygden,” *Meddelelser om Grönland*, part ix. (1882), pp. 1-51; Finnur Jônsson, “Grönlands gamle Topografi efter Kilderne” in *Meddelelser om Grönland*, part xx. (1899), pp. 265-329; Joseph Fischer, *The Discoveries of the Norsemen in America*, translated from German by B. H. Soulsby (London, 1903). As to the general literature on Greenland, a number of the more important modern works have been noticed in footnotes. The often-quoted *Meddelelser om Grönland* is of especial value; it is published in parts (Copenhagen) since 1879, and is chiefly written in Danish, but each part has a summary in French. In part xiii. there is a most valuable list of literature about Greenland up to 1880. See also *Geographical Journal*, passim.

Amongst other important books on Greenland may be mentioned: Hans Egede, *Description of Greenland* (London, 1745); Crantz, *History of Greenland* (2 vols., London, 1820); *Grönlands*

historiske Mindesmerker (3 vols., Copenhagen, 1838-1845); H. Rink, *Danish Greenland* (London, 1877); H. Rink, *Tales of the Eskimo* (London, 1875); (see also same, "Eskimo Tribes" in *Meddelelser om Grönland*, part xi.); Johnstrup, *Giesecke's Mineralogiske Reise i Grönland* (Copenhagen, 1878).

(F. N.)

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1 Inglefield, *Summer Search for Franklin* (London, 1853).

2 *Second Grinnell Expedition* (2 vols., Philadelphia, 1856).

3 Davis, Polaris (*Hall's*) *North Polar Expedition* (Washington, 1876). See also Bessels, *Die amerikanische Nordpol-Expedition* (Leipzig, 1879).

4 *Journal of a Voyage to the Northern Whale Fishery* (1823).

5 *Die zweite deutsche Nordpolarfahrt* (1873-1875).

6 *Reise til Östkysten af Grönland* (1832; trans. by G. Gordon Macdougall, 1837).

7 *Meddelelser om Grönland*, parts ix. and x. (Copenhagen, 1888).

8 *The First Crossing of Greenland*, vol. i. (London, 1890), H. Mohn and F. Nansen; "Wissenschaftliche Ergebnisse von Dr F. Nansen Durchquerung von Grönland" (1888). Ergänzungsheft No. 105 zu *Petermanns Mitteilungen* (Gotha, 1892).

9 A. F. Nordenskiöld, *Den andra Dicksonska Expeditionen til Grönland* (Stockholm, 1885).

10 *Meddelelser om Grönland*, pts. xvii.-xix. (Copenhagen, 1895-1896).

11 *Geografisk Tidskrift*, xv. 53-71 (Copenhagen, 1899).

12 *Ibid.* vii. 76-79 (Copenhagen, 1884).

13 *The Geographical Journal*, xiv. 534 (1899); xvii. 48 (1901); *Två Somrar i Norra Ishafvet* (Stockholm, 1901).

14 *Meddelelser om Grönland*, parts xxvi.-xxvii.

15 Nares, *Voyage to the Polar Sea* (2 vols. London, 1877). See also Blue Book, journals, &c., (Nares) Expedition, 1875-1876 (London, 1877).

16 A. W. Greely, *Report on the Proceedings of the United States Expedition to Lady Franklin Bay, Grinnell Land*, vols. i. and ii. (Washington, 1885); *Three Years of Arctic Service* (2 vols. London, 1886).

17 R. E. Peary, *Northward over the "Great Ice"* (2 vols. New York, 1898); E. Astrup, *Blandt Nordpolen's Naboer* (Christiania, 1895).

18 *Meddelelser om Grönland*, part i. (Copenhagen, 1879).

19 *Ibid.* part xvi. (Copenhagen, 1896).

20 See C. Kruuse in *Geografisk Tidskrift*, xv. 64 (Copenhagen, 1899). See also F. Nansen, "Die Ostküste Grönlands," Ergänzungsheft No. 105 zu *Petermanns Mitteilungen* (Gotha, 1892), p. 55 and pl. iv., sketch No. 11.

21 E. v. Drygalski, *Grönland-Expedition der Gesellschaft für Erdkunde zu Berlin, 1891-1893* (2 vols., Berlin, 1897).

22 *Meddelelser om Grönland*, part viii. pp. 203-270 (Copenhagen, 1889).

23 *Ibid.* part iv. p. 230 (Copenhagen, 1883); see also part xiv. pp. 317 et seq., 323.

24 *Ibid.* part xiv. p. 323 (Copenhagen, 1898).

25 *Ibid.* part ii. pp. 181-188 (Copenhagen, 1881).

26 *Ibid.* part i. pp. 99-101 (Copenhagen, 1879).

27 *Ibid.* part ii. p. 39 (Copenhagen, 1881); part xvi. pp. 150-154 (1896).

28 *Ibid.*, part xix. p. 175 (1896).

29 *Ibid.* part i. p. 34; part ii. p. 40; part xiv. pp. 343-347; part iv. p. 237; part viii. p. 26.

30 See A. G. Nathorst, "Bidrag till nordöstra Grönlands geologi," with map *Geologiska Foreningens i Stockholm Förhandlingar*, No. 257, Bd. 23, Heft 4, 1901; O. Heer, *Flora fossilis Arctica* (7 vols., 1868-1883), and especially *Meddelelser om Grönland* for numerous papers on the geology and palaeontology.

31 *Medd. om Grönl.*, part iv. pp. 115-131 (Copenhagen, 1883).

32 See Peary, *Northward over the "Great Ice,"* ii. 604 et seq. (New York, 1898).

33 See *loc. cit.* pp. 127-128.

34 H. Mohn, “The Climate of the Interior of Greenland,” *The Scott. Geogr. Magazine*, vol. ix. (Edinburgh, 1893), pp. 142-145, 199; H. Mohn and F. Nansen, “Wissenschaftliche Ergebnisse,” &c. Ergänzungsheft No. 105 *zu Petermanns Mitteilungen* (1892), p. 51.

35 On the climate of the east coast of Greenland see V. Willaume-Jantzen, *Meddelelser om Grönland*, part ix. (1889), pp. 285-310, part xvii. (1895), pp. 171-180.

36 See A. Paulsen, *Meteorolog. Zeitschrift* (1889), p. 241; F. Nansen, *The First Crossing of Greenland* (London, 1890), vol. ii. pp. 496-497; H. Mohn and F. Nansen, “Wissenschaftliche Ergebnisse,” &c. Ergänzungsheft No. 105 *zu Petermanns Mitteilungen* (1892), p. 51.

37 H. Winge, “Grönlands Fugle,” *Meddelelser om Grönland*, part xxi. pp. 62-63 (Copenhagen, 1899).

38 See J. Lange, “Conspectus florae Groenlandicae,” *Meddelelser om Grönland*, part iii. (Copenhagen, 1880 and 1887); E. Warming, “Om Grönlands Vegetation,” *Meddelelser om Grönland*, part xii. (Copenhagen, 1888); and in *Botanische Jahrbücher*, vol. x. (1888-1889). See also A. Blytt, *Englers Jahrbücher*, ii. (1882), pp. 1-50; A. G. Nathorst, *Ötversigt af K. Vetenskap. Akad. Forhandl.* (Stockholm, 1884); “Kritische Bemerkungen über die Geschichte der Vegetation Grönlands,” *Botanische Jahrbücher*, vol. xiv. (1891).

39 Owing to representations of the Swedish government in 1874 as to the killing of seals at breeding time on the east coast of Greenland, and the consequent loss of young seals left to die of starvation, the Seal Fisheries Act 1875 was passed in England to provide for the establishment of a close time for seal fishery in the seas in question. This act empowered the crown, by order in council, to put its provisions in force, when any foreign state, whose ships or subjects were engaged in the seal fishery in the area mentioned in the schedule thereto, had made, or was about to make, similar provisions with respect to its ships and subjects. An order in council under the act, declaring the season to begin on the 3rd of April in each year, was issued February 8, 1876. Rescinded February 15, 1876, it was re-enacted on November 28, 1876, and is still operative.

40 Cf. F. Nansen, *Eskimo Life* (London, 1893).

GREENLAW (a “grassy hill”), a town of Berwickshire, Scotland. Pop. (1901) 611. It is situated on the Blackadder, 62¼ m. S.E. of Edinburgh by the North British railway company’s branch line from Reston Junction to St Boswells. The town was built towards the end of the 17th century, to take the place of an older one, which stood about a mile to the S.E. It was the county town from 1696 to 1853, when for several years it shared this dignity with Duns, which, however, is now the sole capital. The chief manufactures are woollens and agricultural implements. About 3 m. to the S. the ruin of Hume Castle, founded in the 13th century, occupies a commanding site. Captured by the English in 1547, in spite of Lady Home’s gallant defence, it was retaken two years afterwards, only to fall again in 1569. After its surrender to Cromwell in 1650 it gradually decayed. Towards the close of the 18th century the 3rd earl of Marchmont had the walls rebuilt out of the old stones, and the castle, though a mere shell of the original structure, is now a picturesque ruin.

GREENLEAF, SIMON (1783-1853), American jurist, was born at Newburyport, Massachusetts, on the 5th of December 1783. When a child he was taken by his father to Maine, where he studied law, and in 1806 began to practise at Standish. He soon removed to Gray, where he practised for twelve years, and in 1818 removed to Portland. He was reporter of the supreme court of Maine from 1820 to 1832, and published nine volumes of *Reports of Cases in the Supreme Court of Maine* (1822-1835). In 1833 he became Royall professor, and in 1846 succeeded Judge Joseph Story as Dane professor of law in Harvard University; in 1848 he retired from his active duties, and became professor emeritus. After being for many years president of the Massachusetts Bible Society, he died at Cambridge, Mass., on the 6th of October 1853. Greenleaf’s principal work is a *Treatise on the Law of Evidence* (3 vols., 1842-1853). He also published *A Full Collection of Cases Overruled, Denied, Doubted, or Limited in their Application, taken from American and English Reports* (1821), and *Examination of the Testimony of the Four Evangelists by the Rules of Evidence administered in the Courts of Justice, with an account of the Trial of Jesus* (1846; London, 1847). He

revised for the American courts William Cruise's *Digest of Laws respecting Real Property* (3 vols., 1849-1850).

GREEN MONKEY, a west African representative of the typical group of the guenon monkeys technically known as *Cercopithecus callitrichus*, taking its name from the olive-greenish hue of the fur of the back, which forms a marked contrast to the white whiskers and belly.

GREENOCK, a municipal and police burgh and seaport of Renfrewshire, Scotland, on the southern shore of the Firth of Clyde, 23 m. W. by N. of Glasgow by the Caledonian and the Glasgow & South-Western railways, 21 m. by the river and firth. Pop. (1901) 68,142. The town has a water frontage of nearly 4 m. and rises gradually to the hills behind the town in which are situated, about 3 m. distant, Loch Thom and Loch Gryfe, from both of which is derived the water supply for domestic use, and for driving several mills and factories. The streets are laid out on the comparatively level tract behind the firth, the older thoroughfares and buildings lying in the centre. The west end contains numerous handsome villas and a fine esplanade, 1½ m. long, running from Prince's Pier to Fort Matilda, which is supplied with submarine mines for the defence of the river. The capacious bay, formerly known as the Bay of St Lawrence from a religious house long since demolished, is protected by a sandbank that ends here, and is hence known as the Tail of the Bank. The fairway between this bank, which begins to the west of Dumbarton, and the southern shore constitutes the safest anchorage in the upper firth. There is a continuous line of electric tramways, connecting with Port Glasgow on the east and Gourock on the west, a total distance of 7½ m. The annual rainfall amounts to 64 in. and Greenock thus has the reputation of being the wettest town in Scotland.

Many of the public buildings are fine structures. The municipal buildings, an ornate example of Italian Renaissance, with a tower 244 ft. high, were opened in 1887. The custom house on the old steamboat quay, in classic style with a Doric portico, dates from 1818. The county buildings (1867) have a tower and spire 112 ft. high. The Watt Institution, founded in 1837 by a son of the famous engineer, James Watt, contains the public library (established in 1783), the Watt scientific library (presented in 1816 by Watt himself), and the marble statue of James Watt by Sir Francis Chantrey. Adjoining it are the museum and lecture hall, the gift of James McLean, opened in 1876. Other buildings are the sheriff court house, and the Spence Library, founded by the widow of William Spence the mathematician. In addition to numerous board schools there are the Greenock academy for secondary education, the technical college (1900), the school of art, and a school of navigation and engineering. The charitable institutions include the infirmary; the cholera hospital; the eye infirmary; the fever reception house; Sir Gabriel Wood's mariners' asylum, an Elizabethan building erected in 1851 for the accommodation of aged merchant seamen; and the Smithson poorhouse and lunatic asylum, built beyond the southern boundary in 1879. Near Albert Harbour stands the old west now the north parish church (a Gothic edifice dating from 1591) containing some stained-glass windows by William Morris; in its kirkyard Burns's "Highland Mary" was buried (1786). The west parish church in Nicholson Street (1839) is in the Italian Renaissance style and has a campanile. The middle parish church (1759) in Cathcart Square is in the Classic style with a fine spire. Besides burial grounds near the infirmary and attached to a few of the older churches, a beautiful cemetery, 90 acres in extent, has been laid out in the south-western district. The parks and open spaces include Wellington Park, Well Park in the heart of the town (these were the gift of Sir Michael Shaw-Stewart), Whin Hill, Lyle Road—a broad drive winding over the heights towards Gourock, constructed as a "relief work" in the severe winter of 1879-1880.

Greenock is under the jurisdiction of a town council with provost and bailies. It is a parliamentary burgh, represented by one member. The corporation owns the supplies of water (the equipment of works and reservoirs is remarkably complete), gas, electric light and power, and the tramways (leased to a company). The staple industries are shipbuilding

(established in 1760) and sugar refining (1765). Greenock-built vessels have always been esteemed, and many Cunard, P. & O. and Allan liners have been constructed in the yards. The town has been one of the chief centres of the sugar industry. Other important industries include the making of boilers, steam-engines, locomotives, anchors, chain-cables, sailcloth, ropes, paper, woollen and worsted goods, besides general engineering, an aluminium factory, a flax-spinning mill, distilleries and an oil-refinery. The seal and whale fisheries, once vigorously prosecuted, are extinct, but the fishing-fleets for the home waters and the Newfoundland grounds are considerable. Till 1772 the town leased the first harbour (finished in 1710) from Sir John Shaw, the superior, but acquired it in that and the following year, and a graving dock was opened in 1786. Since then additions and improvements have been periodically in progress, and there are now several tidal harbours—among them Victoria harbour, Albert harbour, the west harbour, the east harbour, the northern tidal harbour, the western tidal harbour, the great harbour and James Watt dock (completed in 1886 at a cost of £650,000 with an area of 2000 ft. by 400 ft. with a depth at low water of 32 ft.), Garvel graving dock and other dry docks. The quayage exceeds 100 acres in area and the quay walls are over 3 m. in length. Both the Caledonian and the Glasgow & South-Western railways (in Prince's Pier the latter company possesses a landing-stage nearly 1400 ft. long) have access to the quays. From first to last the outlay on the harbour has exceeded £1,500,000.

In the earlier part of the 17th century Greenock was a fishing village, consisting of one row of thatched cottages. A century later there were only six slated houses in the place. In 1635 it was erected by Charles I. into a burgh of barony under a charter granted to John Shaw, the government being administered by a baron-bailie, or magistrate, appointed by the superior. Its commercial prosperity received an enormous impetus from the Treaty of Union (1707), under which trade with America and the West Indies rapidly developed. The American War of Independence suspended progress for a brief interval, but revival set in in 1783, and within the following seven years shipping trebled in amount. Meanwhile Sir John Shaw—to whom and to whose descendants, the Shaw-Stewarts, the town has always been indebted—by charter (dated 1741 and 1751) had empowered the householders to elect a council of nine members, which proved to be the most liberal constitution of any Scots burgh prior to the Reform Act of 1832, when Greenock was raised to the status of a parliamentary burgh with the right to return one member to parliament. Greenock was the birthplace of James Watt, William Spence (1777-1815) and Dr John Caird (1820-1898), principal of Glasgow University, who died in the town and was buried in Greenock cemetery. John Galt, the novelist, was educated in Greenock, where he also served some time in the custom house as a clerk. Rob Roy is said to have raided the town in 1715.

GREENOCKITE, a rare mineral composed of cadmium sulphide, CdS, occurring as small, brilliant, honey-yellow crystals or as a canary-yellow powder. Crystals are hexagonal with hemimorphic development, being differently terminated at the two ends. The faces of the hexagonal prism and of the numerous hexagonal pyramids are deeply striated horizontally. The crystals are translucent to transparent, and have an adamantine to resinous lustre; hardness 3-3½; specific gravity 4.9. Crystals have been found only in Scotland, at one or two places in the neighbourhood of Glasgow, where they occur singly on prehnite in the amygdaloidal cavities of basaltic igneous rocks—a rather unusual mode of occurrence for a metallic sulphide. The first, and largest crystal (about ½ in. across) was found, about the year 1810, in the dolerite quarry at Bowling in Dumbartonshire, but this was thought to be blende. A larger number of crystals, but of smaller size, were found in 1840 during the cutting of the Bishopton tunnel on the Glasgow & Greenock railway; they were detected by Lord Greenock, afterwards the 2nd earl of Cathcart, after whom the mineral was named. A third locality is the Boyleston quarry near Barrhead. At all other localities—Przibram in Bohemia, Laurion in Greece, Joplin in Missouri, &c.—the mineral is represented only as a powder dusted over the surface of zinc minerals, especially blende and calamine, which contain a small amount of cadmium replacing zinc.

Isomorphous with greenockite is the hexagonal zinc sulphide (ZnS) known as wurtzite. Both minerals have been prepared artificially, and are not uncommon as furnace products. Previous to the recent discovery in Sardinia of cadmium oxide as small octahedral crystals, greenockite was the only known mineral containing cadmium as an essential constituent.

(L. J. S.)

GREENORE, a seaport and watering-place of county Louth, Ireland, beautifully situated at the north of Carlingford Lough on its western shore. It was brought to importance by the action of the London & North-Western railway company of England, which owns the pier and railways joining the Great Northern system at Dundalk (12½ m.) and Newry (14 m.). A regular service of passenger steamers controlled by the company runs to Holyhead, Wales, 80 m. S.E. A steam ferry crosses the Lough to Greencastle, for Kilkeel, and the southern watering-places of county Down. The company also owns the hotel, and laid out the golf links. In the vicinity a good example of raised beach, some 10 ft. above present sea-level, is to be seen.

GREENOUGH, GEORGE BELLAS (1778-1855), English geologist, was born in London on the 18th of January 1778. He was educated at Eton, and afterwards (1795) entered Pembroke College, Oxford, but never graduated. In 1798 he proceeded to Göttingen to prosecute legal studies, but having attended the lectures of Blumenbach he was attracted to the study of natural history, and, coming into the possession of a fortune, he abandoned law and devoted his attention to science. He studied mineralogy at Freiburg under Werner, travelled in various parts of Europe and the British Isles, and worked at chemistry at the Royal Institution. A visit to Ireland aroused deep interest in political questions, and he was in 1807 elected member of parliament for the borough of Gatton, continuing to hold his seat until 1812. Meanwhile his interest in geology increased, he was elected F.R.S. in 1807, and he was the chief founder with others of the Geological Society of London in 1807. He was the first chairman of that Society, and in 1811, when it was more regularly constituted, he was the first president: and in this capacity he served on two subsequent occasions, and did much to promote the advancement of geology. In 1819 he published *A Critical Examination of the First Principles of Geology*, a work which was useful mainly in refuting erroneous theories. In the same year was published his famous *Geological Map of England and Wales*, in six sheets; of which a second edition was issued in 1839. This map was to a large extent based on the original map of William Smith; but much new information was embodied. In 1843 he commenced to prepare a geological map of India, which was published in 1854. He died at Naples on the 2nd of April 1855.

GREENOUGH, HORATIO (1805-1852), American sculptor, son of a merchant, was born at Boston, on the 6th of September 1805. At the age of sixteen he entered Harvard, but he devoted his principal attention to art, and in the autumn of 1825 he went to Rome, where he studied under Thorwaldsen. After a short visit in 1826 to Boston, where he executed busts of John Quincy Adams and other people of distinction, he returned to Italy and took up his residence at Florence. Here one of his first commissions was from James Fenimore Cooper for a group of Chanting Cherubs; and he was chosen by the American government to execute the colossal statue of Washington for the national capital. It was unveiled in 1843, and was really a fine piece of work for its day; but in modern times it has been sharply criticized as unworthy and incongruous. Shortly afterwards he received a second government commission for a colossal group, the “Rescue,” intended to represent the conflict between the Anglo-Saxon and Indian races. In 1851 he returned to Washington to superintend its erection, and in the autumn of 1852 he was attacked by brain fever, of which he died in Somerville near Boston on the 18th of December. Among other works of Greenough may be mentioned a bust of Lafayette, the Medora and the Venus Victrix in the gallery of the Boston Athenaeum. Greenough was a man of wide culture, and wrote well both in prose and verse.

See H. T. Tuckerman, *Memoir of Horatio Greenough* (New York, 1853).

GREENOUGH, JAMES BRADSTREET (1833-1901), American classical scholar, was born in Portland, Maine, on the 4th of May 1833. He graduated at Harvard in 1856, studied one year at the Harvard Law School, was admitted to the Michigan bar, and practised in Marshall, Michigan, until 1865, when he was appointed tutor in Latin at Harvard. In 1873 he became assistant professor, and in 1883 professor of Latin, a post which he resigned hardly six weeks before his death at Cambridge, Massachusetts, on the 11th of October 1901. Following the lead of Goodwin's *Moods and Tenses* (1860), he set himself to study Latin historical syntax, and in 1870 published *Analysis of the Latin Subjunctive*, a brief treatise, privately printed, of much originality and value, and in many ways coinciding with Berthold Delbrück's *Gebrauch des Conjunctivs und Optativs in Sanskrit und Griechischen* (1871), which, however, quite overshadowed the Analysis. In 1872 appeared *A Latin Grammar for Schools and Colleges, founded on Comparative Grammar*, by Joseph A. Allen and James B. Greenough, a work of great critical carefulness. His theory of *cum*-constructions is that adopted and developed by William Gardner Hale. In 1872-1880 Greenough offered the first courses in Sanskrit and comparative philology given at Harvard. His fine abilities for advanced scholarship were used outside the classroom in editing the Allen and Greenough Latin Series of text-books, although he occasionally contributed to *Harvard Studies in Classical Philology* (founded in 1889 and endowed at his instance by his own class) papers on Latin syntax, prosody and etymology—a subject on which he planned a long work—on Roman archaeology and on Greek religion at the time of the New Comedy. He assisted largely in the founding of Radcliffe College. An able English scholar and an excellent etymologist, he collaborated with Professor George L. Kittredge on *Words and their Ways in English Speech* (1901), one of the best books on the subject in the language. He wrote clever light verse, including *The Blackbirds*, a comedietta, first published in *The Atlantic Monthly* (vol. xxxix. 1877); *The Rose and the Ring* (1880), a pantomime adapted from Thackeray; *The Queen of Hearts* (1885), a dramatic fantasia; and *Old King Cole* (1889), an operetta.

See the sketch by George L. Kittredge in *Harvard Studies in Classical Philology*, vol. xiv. (1903). pp. 1-17 (also printed in *Harvard Graduates' Magazine*, vol. x., Dec. 1901, pp. 196-201).

GREEN RIBBON CLUB, one of the earliest of the loosely combined associations which met from time to time in London taverns or coffee-houses for political purposes in the 17th century. It had its meeting-place at the King's Head tavern at Chancery Lane End, and was therefore known as the "King's Head Club." It seems to have been founded about the year 1675 as a resort for members of the political party hostile to the court, and as these associates were in the habit of wearing in their hats a bow, or "bob," of green ribbon, as a distinguishing badge useful for the purpose of mutual recognition in street brawls, the name of the club became changed, about 1679, to the Green Ribbon Club. The frequenters of the club were the extreme faction of the country party, the men who supported Titus Oates, and who were concerned in the Rye House Plot and Monmouth's rebellion. Roger North tells us that "they admitted all strangers that were confidingly introduced, for it was a main end of their institutions to make proselytes, especially of the raw estated youth newly come to town." According to Dryden (*Absalom and Achitophel*) drinking was the chief attraction, and the members talked and organized sedition over their cups. Thomas Dangerfield supplied the court with a list of forty-eight members of the Green Ribbon Club in 1679; and although Dangerfield's numerous perjuries make his unsupported evidence worthless, it receives confirmation as regards several names from a list given to James II. by Nathan Wade in 1885 (*Harleian MSS.* 6845), while a number of more eminent personages are mentioned in *The Cabal*, a satire published in 1680, as also frequenting the club. From these sources it would appear that the duke of Monmouth himself, and statesmen like Halifax, Shaftesbury, Buckingham, Macclesfield, Cavendish, Bedford, Grey of Warke, Herbert of Cherbury, were among those who fraternized at the King's Head Tavern with third-rate writers such as Scroop, Mulgrave and Shadwell, with remnants of the Cromwellian régime like Falconbridge, Henry Ireton and Claypole, with such profligates as Lord Howard of Escrik and Sir Henry Blount, and with scoundrels of the type of Dangerfield and Oates. An allusion to Dangerfield, notorious among his other crimes and treacheries for a seditious paper found in a meal-tub, is found in connexion with the club in *The Loyal Subjects' Litany*, one of the innumerable satires of the period, in which occur the lines:

“From the dark-lanthorn Plot, and the Green Ribbon Club
From brewing sedition in a sanctified Tub,
Libera nos, Domine.”

The club was the headquarters of the Whig opposition to the court, and its members were active promoters of conspiracy and sedition. The president was either Lord Shaftesbury or Sir Robert Peyton, M.P. for Middlesex, who afterwards turned informer. The Green Ribbon Club served both as a debating society and an intelligence department for the Whig faction. Questions under discussion in parliament were here threshed out by the members over their tobacco and ale; the latest news from Westminster or the city was retailed in the tavern, “for some or others were continually coming and going,” says Roger North, “to import or export news and stories.” Slander of the court or the Tories was invented in the club and sedulously spread over the town, and measures were there concerted for pushing on the Exclusion Bill, or for promoting the pretensions of the duke of Monmouth. The popular credulity as to Catholic outrages in the days of the Popish Plot was stimulated by the scandalmongers of the club, whose members went about in silk armour, supposed to be bullet proof, “in which any man dressed up was as safe as a house,” says North, “for it was impossible to strike him for laughing”; while in their pockets, “for street and crowd-work,” they carried the weapon of offence invented by Stephen College and known as the “Protestant Flail.”

The genius of Shaftesbury found in the Green Ribbon Club the means of constructing the first systematized political organization in England. North relates that “every post conveyed the news and tales legitimated there, as also the malign constructions of all the good actions of the government, especially to places where elections were depending, to shape men’s characters into fit qualifications to be chosen or rejected.” In the general election of January and February 1679 the Whig interest throughout the country was managed and controlled by a committee sitting at the club in Chancery Lane. The club’s organizing activity was also notably effective in the agitation of the Petitioners in 1679. This celebrated movement was engineered from the Green Ribbon Club with all the skill and energy of a modern caucus. The petitions were prepared in London and sent down to every part of the country, where paid canvassers took them from house to house collecting signatures with an air of authority that made refusal difficult. The great “pope-burning” processions in 1680 and 1681, on the anniversary of Queen Elizabeth’s accession, were also organized by the club. They ended by the lighting of a huge bon-fire in front of the club windows; and as they proved an effective means of inflaming the religious passions of the populace, it was at the Green Ribbon Club that the *mobile vulgus* first received the nickname of “the mob.” The activity of the club was, however, short-lived. The failure to carry the Exclusion Bill, one of the favourite projects of the faction, was a blow to its influence, which declined rapidly after the flight of Shaftesbury, the confiscation of the city of London’s charter, and the discovery of the Rye House Plot, in which many of its members were implicated. In 1685 John Ayloffe, who was found to have been “a clubber at the King’s Head Tavern and a green-ribon man,” was executed in front of the premises on the spot where the “pope-burning” bon-fires had been kindled; and although the tavern was still in existence in the time of Queen Anne, the Green Ribbon Club which made it famous did not survive the accession of James II. The precise situation of the King’s Head Tavern, described by North as “over against the Inner Temple Gate,” was at the corner of Fleet Street and Chancery Lane, on the east side of the latter thoroughfare.

See Sir George Sitwell, *The First Whig* (Scarborough, 1894), containing an illustration of the Green Ribbon Club and a pope-burning procession; Roger North, *Examen* (London, 1740); Anchitell Grey, *Debates of the House of Commons*, 1667-1684, vol. viii. (10 vols., London, 1769); Sir John Bramston, *Autobiography* (Camden Soc., London, 1845).

(R. J. M.)

GREENSAND, in geology, the name that has been applied to no fewer than three distinct members of the Cretaceous System, viz. the Upper Greensand (see Gault), the Lower Greensand and the so-called Cambridge Greensand, a local phase of the base of the Chalk (*q.v.*). The term was introduced by the early English geologists for certain sandy rocks which frequently exhibited a greenish colour on account of the presence of minute grains of the green mineral glauconite. Until the fossils of these rocks came to be carefully studied there was much confusion between what is now known as the Upper Greensand (Selbornian) and the Lower Greensand. Here we shall confine our attention to the latter.

The Lower Greensand was first examined in detail by W. H. Fitton (*Q.J.G.S.* iii., 1847), who, in 1845, had proposed the name “Vectine” for the formation. The name was revived under the form “Vectian” in 1885 by A. J. Jukes-Browne, because, although sands and sandstones prevail, the green colour has often changed by oxidation of the iron to various shades of red and brown, and other lithological types, clays and limestones represent this horizon in certain areas. The Lower Greensand is typically developed in the Wealden district, in the Isle of Wight, in Dorsetshire about Swanage, and it appears again beneath the northern outcrop of the Chalk in Berkshire, Oxfordshire and Bedfordshire, and thence it is traceable through Norfolk and Lincolnshire into east Yorkshire. It rests conformably upon the Wealden formation in the south of England, but it is clearly separable from the beds beneath by the occurrence of marine fossils, and by the fact that there is a marked overlap of the Lower Greensand on the Weald in Wiltshire, and derived pebbles are found in the basal beds. The whole series is 800 ft. thick at Atherfield in the Isle of Wight, but it thins rapidly westward. It is usually clearly marked off from the overlying Gault.

In the Wealden area the Lower Greensand has been subdivided as follows, although the several members are not everywhere recognizable:—

	Isle of Wight.
Folkestone Beds (70-100 ft.)	Carstone and Sand rock series.
Sandgate Beds (75-100 ft.)	Ferruginous Sands (Shanklin sands).
Hythe Beds (80-300 ft.)	Ferruginous Sands (Walpen sands).
Atherfield Clay (20-90 ft.)	Atherfield Clay.

The Atherfield Clay is usually a sandy clay, fossiliferous. The basal portion, 5-6 ft., is known as the “Perna bed” from the abundance of *Perna Mulleti*; other fossils are *Hoplites Deshayesii*, *Exogyra sinuata*, *Ancyloceras Mathesonianum*. The Hythe beds are interstratified thin limestones and sandstones; the former are bluish-grey in colour, compact and hard, with a certain amount of quartz and glauconite. The limestone is known locally as “rag”; the Kentish Rag has been largely employed as a building stone and roadstone; it frequently contains layers of chert (known as Sevenoaks stone near that town). The sandy portions are very variable; the stone is often clayey and calcareous and rarely hard enough to make a good building stone; locally it is called “hassock” (or Calkstone). The two stones are well exposed in the Iguanodon Quarry near Maidstone (so called from the discovery of the bones of that reptile). Southwest of Dorking sandstone and grit become more prevalent, and it is known there as “Bargate stone,” much used around Godalming. Pulborough stone is another local sandstone of the Hythe beds. Fuller’s earth occurs in parts of this formation in Surrey. The Sandgate beds, mainly dark, argillaceous sand and clay, are well developed in east Kent, and about Midhurst, Pulborough and Petworth. At Nutfield the celebrated fuller’s earth deposits occur on this horizon; it is also found near Maidstone, at Bletchingley and Red Hill. The Folkestone beds are light-coloured, rather coarse sands, enclosing layers of siliceous limestone (Folkestone stone) and chert; a phosphatic bed is found near the top. These beds are well seen in the cliffs at Folkestone and near Reigate. At Ightham there is a fine, hard, white sandstone along with a green, quartzitic variety (Ightham stone). In Sussex the limestone and chert are usually lacking, but a ferruginous grit, “carstone,” occurs in lenticular masses and layers, which is used for road metal at Pulborough, Fittleworth, &c.

The Lower Greensand usually forms picturesque, healthy country, as about Leith Hill, Hindhead, Midhurst, Petworth, at Woburn, or at Shanklin and Sandown in the Isle of Wight. Outside the southern area the Lower Greensand is represented by the Faringdon sponge-bearing beds in Berkshire, the Sandy and Potton beds in Bedfordshire, the Shotover iron sands of Oxfordshire, the sands and fuller’s earth of Woburn, the Leighton Buzzard sands, the brick clays of Snettisham, and perhaps the Sandringham sands of Norfolk, and the carstone of that county and Lincolnshire. The upper ironstone, limestone and clay of the Lincolnshire Tealby beds appear to belong to this horizon along with the upper part of the Speeton beds of Yorkshire. The sands of the Lower Greensand are largely employed for the manufacture of glass, for which purpose they are dug at Aylesford, Godstone, near Reigate, Hartshill, near Aylesbury and other places; the ferruginous sand is worked as an iron ore at Seend.

This formation is continuous across the channel into France, where it is well developed in Boulonnais. According to the continental classification the Atherfield Clay is equivalent to the Urgonian or Barremian; the Sandgate and Hythe beds belong to the Aptian (*q.v.*); while the upper part of the Folkestone beds would fall within the lower Albian (*q.v.*).

See the *Memoirs of the Geological Survey*, “Geology of the Weald” (1875), “Geology of the Isle of Wight” (2nd ed., 1889), “Geology of the Isle of Purbeck” (1898); and the *Record of*

Excursions, Geologists' Association (London, 1891).

(J. A. H.)

GREENSBORO, a city and the county-seat of Guilford county, North Carolina, U.S.A., about 80 m. N.W. of Raleigh. Pop. (1890) 3317, (1900) 10,035, of whom 4086 were negroes; (1910 census), 15,895. Greensboro is served by several lines of the Southern railway. It is situated in the Piedmont region of the state and has an excellent climate. The city is the seat of the State Normal and Industrial College (1892) for girls; of the Greensboro Female College (Methodist Episcopal, South; chartered in 1838 and opened in 1846), of which the Rev. Charles F. Deems was president in 1850-1854, and which, owing to the burning of its buildings, was suspended from 1863 to 1874; and of two institutions for negroes—a State Agricultural and Mechanical College, and Bennett College (Methodist Episcopal, co-educational, 1873). Another school for negroes, Immanuel Lutheran College (Evangelical Lutheran, co-educational), was opened at Concord, N.C., in 1903, was removed to Greensboro in 1905, and in 1907 was established at Lutherville, E. of Greensboro. About 6 m. W. of Greensboro is Guilford College (co-educational; Friends), founded as "New Garden Boarding School" in 1837 and rechartered under its present name in 1888. Greensboro has a Carnegie library, St Leo hospital and a large auditorium. It is the shipping-point for an agricultural, lumbering and trucking region, among whose products Indian corn, tobacco and cotton are especially important; is an important insurance centre; has a large wholesale trade; and has various manufactures, including cotton goods[1] (especially blue denim), tobacco and cigars, lumber, furniture, sash, doors and blinds, machinery, foundry products and terra-cotta. The value of the factory products increased from $925,411 in 1900 to $1,828,837 in 1905, or 97.6%. The municipality owns and operates the water-works. Greensboro was named in honour of General Nathanael Greene, who on the 15th of March 1781 fought with Cornwallis the battle of Guilford Court House, about 6 m. N.W. of the city, where there is now a Battle-Ground Park of 100 acres (including Lake Wilfong); this park contains a Revolutionary museum, and twenty-nine monuments, including a Colonial Column, an arch (1906) in memory of Brig.-General Francis Nash (1720-1777), of North Carolina, who died in October 1777 of wounds received at Germantown, and Davidson Arch (1905), in honour of William Lee Davidson (1746-1781), a brigadier-general of North Carolina troops, who was killed at Catawba and in whose honour Davidson College, at Davidson, N.C., was named. Greensboro was founded and became the county-seat in 1808, was organized as a town in 1829, and was first chartered as a city in 1870.

1 One of the first cotton mills in the South and probably the first in this state was established at Greensboro in 1832. It closed about 20 years afterwards, and in 1889 new mills were built. Three very large mills were built in the decade after 1895, and three mill villages, Proximity, Revolution and White Oak, named from these three mills, lie immediately N. of the city; in 1908 their population was estimated at 8000. The owners of these mills maintain schools for the children of operatives and carry on "welfare work" in these villages.

GREENSBURG, a borough and the county-seat of Westmoreland county, Pennsylvania, U.S.A., 31 m. E.S.E. of Pittsburg. Pop. (1890) 4202; (1900) 6508 (484 foreign-born); (1910) 5420. It is served by two lines of the Pennsylvania railway. It is an important coal centre, and manufactures engines, iron and brass goods, flour, lumber and bricks. In addition to its public school system, it has several private schools, including St Mary's Academy and St Joseph's Academy, both Roman Catholic. About 3 m. N.E. of what is now Greensburg stood the village of Hanna's Town, settled about 1770 and almost completely destroyed by the Indians on the 13th of July 1782; here what is said to have been the first court held west of the Alleghanies opened on the 6th of April 1773, and the county courts continued to be held here until 1787. Greensburg was settled in 1784-1785, immediately after the opening of the state road, not far from the trail followed by General John Forbes on his march to Fort Duquesne in 1758; it was made the county-seat in 1787, and was incorporated in 1799. In 1905 the boroughs of Ludwick (pop. in 1900, 901), East Greensburg (1050), and South-east

Greensburg (620) were merged with Greensburg.

See John N. Boucher's *History of Westmoreland County, Pa.* (3 vols., New York, 1906).

GREENSHANK, one of the largest of the birds commonly known as sandpipers, the *Totanus glottis* of most ornithological writers. Some exercise of the imagination is however needed to see in the dingy olive-coloured legs of this species a justification of the English name by which it goes, and the application of that name, which seems to be due to Pennant, was probably by way of distinguishing it from two allied but perfectly distinct species of *Totanus* (*T. calidris* and *T. fuscus*) having red legs and usually called redshanks. The greenshank is a native of the northern parts of the Old World, but in winter it wanders far to the south, and occurs regularly at the Cape of Good Hope, in India and thence throughout the Indo-Malay Archipelago to Australia. It has also been recorded from North America, but its appearance there must be considered accidental. Almost as bulky as a woodcock, it is of a much more slender build, and its long legs and neck give it a graceful appearance, which is enhanced by the activity of its actions. Disturbed from the moor or marsh, where it has its nest, it rises swiftly into the air, conspicuous by its white back and rump, and uttering shrill cries flies round the intruder. It will perch on the topmost bough of a tree, if a tree be near, to watch his proceedings, and the cock exhibits all the astounding gesticulations in which the males of so many other *Limicolae* indulge during the breeding-season—with certain variations, however, that are peculiarly its own. It breeds in no small numbers in the Hebrides, and parts of the Scottish Highlands from Argyllshire to Sutherland, as well as in the more elevated or more northern districts of Norway, Sweden and Finland, and probably also thence to Kamchatka. In North America it is represented by two species, *Totanus semipalmatus* and *T. melanoleucus*, there called willets, telltales or tattlers, which in general habits resemble the greenshank of the Old World.

(A. N.)

GREENVILLE, a city and the county-seat of Washington county, Mississippi, U.S.A., on the E. bank of the Mississippi river, about 75 m. N. of Vicksburg. Pop. (1890) 6658; (1900) 7642 (4987 negroes); (1910) 9610. Greenville is served by the Southern and the Yazoo & Mississippi Valley railways, and by various passenger and freight steamboat lines on the Mississippi river. It is situated in the centre of the Yazoo Delta, a rich cotton-producing region, and its industries are almost exclusively connected with that staple. There are large warehouses, compresses and gins, extensive cotton-seed oil works and sawmills. Old Greenville, about 1 m. S. of the present site, was the county seat of Jefferson county until 1825 (when Fayette succeeded it), and later became the county-seat of Washington county. Much of the old town caved into the river, and during the Civil War it was burned by the Federal forces soon after the capture of Memphis. The present site was then adopted. The town of Greenville was incorporated in 1870; in 1886 it was chartered as a city.

GREENVILLE, a city and the county-seat of Darke county, Ohio, U.S.A., on Greenville Creek, 36 m. N.W. of Dayton. Pop. (1900) 5501; (1910) 6237. It is served by the Pittsburg, Cincinnati, Chicago & St Louis and the Cincinnati Northern railways, and by interurban electric railways. It is situated about 1050 ft. above sea-level and is the trade centre of a large and fertile agricultural district, producing cereals and tobacco. It manufactures lumber, foundry products, canned goods and creamery products and has grain elevators and tobacco warehouses. In the city is a Carnegie library, and 3 m. distant there is a county Children's Home and Infirmary. The municipality owns and operates its water-works. Greenville occupies the site of an Indian village and of Fort Greenville (built by General Anthony Wayne

in 1793 and burned in 1796). Here, on the 3rd of August 1795, General Wayne, the year after his victory over the Indians at Fallen Timbers, concluded with them the treaty of Greenville, the Indians agreeing to a cessation of hostilities and ceding to the United States a considerable portion of Ohio and a number of small tracts in Indiana, Illinois and Michigan (including the sites of Sandusky, Toledo, Defiance, Fort Wayne, Detroit, Mackinac, Peoria and Chicago), and the United States agreeing to pay to the Indians $20,000 worth of goods immediately and an annuity of goods, valued at $9500, for ever. The tribes concerned were the Wyandots, the Delawares, the Shawnees, the Ottawas, the Chippewas, the Pottawatomies, the Miamis, the Weeas, the Kickapoos, the Piankashas, the Kaskaskias and the Eel-river tribe. Tecumseh lived at Greenville from 1805 to 1809, and a second Indian treaty was negotiated there in July 1814 by General W. H. Harrison and Lewis Cass, by which the Wyandots, the Delawares, the Shawnees, the (Ohio) Senecas and the Miamis agreed to aid the United States in the war with Great Britain. The first permanent white settlement of Greenville was established in 1808 and the town was laid out in the same year. It was made the county-seat of the newly erected county in 1809, was incorporated as a town in 1838 and chartered as a city in 1887.

GREENVILLE, a city and the county-seat of Greenville county, South Carolina, U.S.A., on the Reedy river, about 140 m. N.W. of Columbia, in the N.W. part of the state. Pop. (1890) 8607; (1900) 11,860, of whom 5414 were negroes; (1910, census) 15,741. It is served by the Southern, the Greenville & Knoxville and the Charleston & Western Carolina railways. It lies 976 ft. above sea-level, near the foot of the Blue Ridge Mountains, its climate and scenery attracting summer visitors. It is in an extensive cotton-growing and cotton-manufacturing district. Greenville’s chief interest is in cotton, but it has various other manufactures, including carriages, wagons, iron and fertilizers. The total value of the factory products of the city in 1905 was $1,676,774, an increase of 73.5% since 1900. The city is the seat of Furman University, Chicora College for girls (1893; Presbyterian), and Greenville Female College (1854; Baptist), which in 1907-1908 had 379 students, and which, besides the usual departments, has a conservatory of music, a school of art, a school of expression and physical culture and a kindergarten normal training school. Furman University (Baptist; opened in 1852) grew out of the “Furman Academy and Theological Institution,” opened at Edgefield, S.C., in 1827, and named in honour of Richard Furman (1755-1825), a well-known Baptist clergyman of South Carolina, whose son, James C. Furman (1809-1891), was long president of the University. In 1907-1908 the university had a faculty of 15 and 250 students, of whom 101 were in the Furman Fitting School. Greenville was laid out in 1797, was originally known as Pleasantburg and was first chartered as a city in 1868.

GREENVILLE, a city and the county-seat of Hunt county, Texas, U.S.A., near the headwaters of the Sabine river, 48 m. N.E. of Dallas. Pop. (1900) 6860, of whom 114 were foreign-born and 1751 were negroes; (1910) 8850. It is served by the Missouri, Kansas & Texas, the St Louis South-Western and the Texas Midland railways. It is an important cotton market, has gins and compresses, a large cotton seed oil refinery, and other manufactories, and is a trade centre for a rich agricultural district. The city owns and operates its electric-lighting plant. It is the seat of Burleson College (Baptist), founded in 1893, and 1 m. from the city limits, in the village of Peniel (pop. 1908, about 500), a community of “Holiness” people, are the Texas Holiness University (1898), a Holiness orphan asylum and a Holiness press. Greenville was settled in 1844, and was chartered as a city in 1875. In 1907 the Texas legislature granted to the city a new charter establishing a commission government similar to that of Galveston.

GREENWICH, a township of Fairfield county, Connecticut, U.S.A., on Long Island Sound, in the extreme S.W. part of the state, about 28 m. N.E. of New York City. It contains a borough of the same name and the villages of Cos Cob, Riverside and Sound Beach, all served by the New York, New Haven & Hartford Railway; the township has steamboat and electric railway connexions with New York City. Pop. of the township (1900) 12,172, of whom 3271 were foreign-born; (1910) 16,463; of the borough (1910) 3886. Greenwich is a summer resort, principally for New Yorkers. Among the residents have been Edwin Thomas Booth, John Henry Twachtman, the landscape painter, and Henry Osborne Havemeyer (1847-1907), founder of the American Sugar Company. There are several fine churches in the township; of one in Sound Beach the Rev. William H. H. Murray (1840-1904), called “Adirondack Murray,” from his *Camp Life in the Adirondack Mountains* (1868), was once pastor. In the borough are a public library, Greenwich Academy (1827; co-educational), the Brunswick School for boys (1901), with which Betts Academy of Stamford was united in 1908, and a hospital. The principal manufactures are belting, woollens, tinners’ hardware, iron and gasolene motors. Oysters are shipped from Greenwich. The first settlers came from the New Haven Colony in 1640; but the Dutch, on account of the exploration of Long Island Sound by Adrian Blok in 1614, laid claim to Greenwich, and as New Haven did nothing to assist the settlers, they consented to union with New Netherland in 1642. Greenwich then became a Dutch manor. By a treaty of 1650, which fixed the boundary between New Netherland and the New Haven Colony, the Dutch relinquished their claim to Greenwich, but the inhabitants of the town refused to submit to the New Haven Colony until October 1656. Six years later Greenwich was one of the first towns of the New Haven Colony to submit to Connecticut. The township suffered severely during the War of Independence on account of the frequent quartering of American troops within its borders, the depredations of bands of lawless men after the occupation of New York by the British in 1778 and its invasion by the British in 1779 (February 25) and 1781 (December 5). There was also a strong loyalist sentiment. On the old post-road in Greenwich is the inn, built about 1729, at which Israel Putnam was surprised in February 1779 by a force under General Tryon; according to tradition he escaped by riding down a flight of steep stone steps. The inn was purchased in 1901 by the Daughters of the American Revolution, who restored it and made it a Putnam Memorial. The township government of Greenwich was instituted in the colonial period. The borough of Greenwich was incorporated in 1858.

See D. M. Mead, *History of the Town of Greenwich* (New York, 1857).

GREENWICH, a south-eastern metropolitan borough of London, England, bounded N. by the river Thames, E. by Woolwich, S. by Lewisham and W. by Deptford. Pop. (1901) 95,770. Area, 3851.7 acres. It has a river-frontage of 4½ m., the Thames making two deep bends, enclosing the Isle of Dogs on the north and a similar peninsula on the Greenwich side. Greenwich is connected with Poplar on the north shore by the Greenwich tunnel (1902), for foot-passengers, to the Isle of Dogs (Cubitt Town), and by the Blackwall Tunnel (1897) for street traffic, crossing to a point between the East and West India Docks (see Poplar). The main thoroughfares from W. to E. are Woolwich and Shooter’s Hill Roads, the second representing the old high road through Kent, the Roman Watling Street. Greenwich is first noticed in the reign of Ethelred, when it was a station of the Danish fleet (1011-1014).

The most noteworthy buildings are the hospital and the observatory. Greenwich Hospital, as it is still called, became in 1873 a Royal Naval College. Upon it or its site centre nearly all the historical associations of the place. The noble buildings, contrasting strangely with the wharves adjacent and opposite to it, make a striking picture, standing on the low river-bank with a background formed by the wooded elevation of Greenwich Park. They occupy the site of an ancient royal palace called Greenwich House, which was a favourite royal residence as early as 1300, but was granted by Henry V. to Thomas Beaufort, duke of Exeter, from whom it passed to Humphrey, duke of Gloucester, who largely improved the property and named it *Placentia*. It did not revert to the crown till his death in 1447. It was the birthplace of Henry VIII., Queen Mary and Queen Elizabeth, and here Edward VI. died. The building was enlarged by Edward IV., by Henry VIII., who made it one of his chief residences, by James I. and by Charles I., who erected the “Queen’s House” for Henrietta Maria. The tenure of land from the crown “as of the manor of East Greenwich” became at this time a recognized formula, and occurs in a succession of American colonial charters from those of Virginia in 1606, 1609 and 1612 to that of New Jersey in 1674. Along with other royal palaces Greenwich was at the

Revolution appropriated by the Protector, but it reverted to the crown on the restoration of Charles II., by whom it was pulled down, and the west wing of the present hospital was erected as part of an extensive design which was not further carried out. In its unfinished state it was assigned by the patent of William and Mary to certain of the great officers of state, as commissioners for its conversion into a hospital for seamen; and it was opened as such in 1705. The building consists of four blocks. Behind a terrace 860 ft. in length, stretching along the river side, are the buildings erected in the time of Charles II. from Inigo Jones's designs, and in that of Queen Anne from designs by Sir Christopher Wren; and behind these buildings are on the west those of King William and on the east those of Queen Mary, both from Wren's designs. In the King William range is the painted hall. Here in 1806 the remains of Nelson lay in state before their burial in St Paul's Cathedral. Its walls and ceiling were painted by Sir James Thornhill with various emblematic devices, and it is hung with portraits of the most distinguished admirals and paintings of the chief naval battles of England. In the Queen Anne range is the Royal Naval Museum, containing models, relics of Nelson and of Franklin, and other objects. In the centre of the principal quadrangle of the hospital there is a statue of George II. by Rysbrack, sculptured out of a single block of marble taken from the French by Admiral Sir George Rooke. In the upper quadrangle is a bust of Nelson by Chantrey, and there are various other memorials and relics. The oldest part of the building was in some measure rebuilt in 1811, and the present chapel was erected to replace one destroyed by fire in 1779. The endowments of the hospital were increased at various periods from bequests and forfeited estates. Formerly 2700 retired seamen were boarded within it, and 5000 or 6000 others, called out-pensioners, received stipends at various rates out of its funds; but in 1865 an act was passed empowering the Admiralty to grant liberal pensions in lieu of food and lodging to such of the inmates as were willing to quit the hospital, and in 1869 another act was passed making their leaving on these conditions compulsory. It was then devoted to the accommodation of the students of the Royal Naval College, the Infirmary being granted to the Seamen's Hospital Society. Behind the College is the Royal Hospital School, where 1000 boys, sons of petty officers and seamen, are boarded.

To the south of the hospital is Greenwich Park (185 acres), lying high, and commanding extensive views over London, the Thames and the plain of Essex. It was enclosed by Humphrey, duke of Gloucester, and laid out by Charles II., and contains a fine avenue of Spanish chestnuts planted in his time. In it is situated the Royal Observatory, built in 1675 for the advancement of navigation and nautical astronomy. From it the exact time is conveyed each day at one o'clock by electric signal to the chief towns throughout the country; British and the majority of foreign geographers reckon longitude from its meridian. A standard clock and measures are seen at the entrance. A new building was completed in 1899, the magnetic pavilion lying some 400 yds. to the east, so placed to avoid the disturbance of instruments which would be occasioned by the iron used in the principal building. South of the park lies the open common of Blackheath, mainly within the borough of Lewisham, and in the east the borough includes the greater part of Woolwich Common.

At Greenwich an annual banquet of cabinet ministers, known as the whitebait dinner, formerly took place. This ceremony arose out of a dinner held annually at Dagenham, on the Essex shore of the Thames, by the commissioners for engineering works carried out there in 1705-1720—a remarkable achievement for this period—to save the lowlands from flooding. To one of these dinners Pitt was invited, and was subsequently accompanied by some of his colleagues. Early in the 19th century the venue of the dinner, which had now become a ministerial function, was transferred to Greenwich, and though at first not always held here, was later celebrated regularly at the "Ship," an hotel of ancient foundation, closed in 1908. The banquet continued till 1868, was revived in 1874-1880, and was held for the last time in 1894.

The parish church of Greenwich, in Church Street, is dedicated to St Alphege, archbishop, who was martyred here by the Danes in 1012. In the church Wolfe, who died at Quebec (1759), and Tallis, the musician, are buried. A modern stained-glass window commemorates Wolfe.

The parliamentary borough of Greenwich returns one member. Two burgesses were returned in 1577, but it was not again represented till the same privilege was conferred on it in 1832. The borough council consists of a mayor, five aldermen and thirty councillors.

GREENWOOD, FREDERICK (1830-1909), English journalist and man of letters, was born in April 1830. He was one of three brothers—the others being James and Charles—who all gained reputation as journalists. Frederick started life in a printing house, but at an early age began to write in periodicals. In 1853 he contributed a sketch of Napoleon III. to a volume called *The Napoleon Dynasty* (2nd ed., 1855). He also wrote several novels: *The Loves of an Apothecary* (1854), *The Path of Roses* (1859) and (with his brother James) *Under a Cloud* (1860). To the second number of the *Cornhill Magazine* he contributed "An Essay without End," and this led to an introduction to Thackeray. In 1862, when Thackeray resigned the editorship of the *Cornhill*, Greenwood became joint editor with G. H. Lewes. In 1864 he was appointed sole editor, a post which he held until 1868. While at the *Cornhill* he wrote an article in which he suggested, to some extent, how Thackeray might have intended to conclude his unfinished work *Denis Duval*, and in its pages appeared *Margaret Denzil's History*, Greenwood's most ambitious work of fiction, published in volume form in 1864. At that time Greenwood had conceived the idea of an evening newspaper, which, while containing "all the news proper to an evening journal," should, for the most part, be made up "of original articles upon the many things which engage the thoughts, or employ the energies, or amuse the leisure of mankind." Public affairs, literature and art, "and all the influences which strengthen or dissipate society" were to be discussed by men whose independence and authority were equally unquestionable. Canning's *Anti-Jacobin* and the *Saturday Review* of 1864 were the joint models Greenwood had before him. The idea was taken up by Mr George Smith, and the *Pall Mall Gazette* (so named after Thackeray's imaginary paper in *Pendennis*) was launched in February 1865, with Greenwood as editor. Within a few years he had come to exercise a great influence on public affairs. His views somewhat rapidly ripened from what was described as philosophic Liberalism into Conservatism. No minister in Great Britain, Mr Gladstone declared, ever had a more able, a more zealous, a more effective supporter for his policy than Lord Beaconsfield had in Greenwood. It was on the suggestion of Greenwood that Beaconsfield purchased in 1875 the Suez Canal shares of the Khedive Ismail; the British government being ignorant, until informed by Greenwood, that the shares were for sale and likely to be bought by France. It was characteristic of Greenwood that he declined to publish the news of the purchase of the shares in the *Pall Mall* before the official announcement was made.

Early in 1880 the *Pall Mall* changed owners, and the new proprietor required it to support Liberal policy. Greenwood at once resigned his editorship, but in May a new paper, the *St James's Gazette*, was started for him by Mr Henry Hucks Gibbs (afterwards Lord Aldenham), and Greenwood proceeded to carry on in it the tradition which he had established in the *Pall Mall*. At the *St James's* Greenwood remained for over eight years, continuing to exercise a marked influence upon political affairs, notably as a pungent critic of the Gladstone administration (1880-1885) and an independent supporter of Lord Salisbury. His connexion with the paper ceased in August 1888, owing to disagreements with the new proprietor, Mr E. Steinkopff, who had bought the *St James's* at Greenwood's own suggestion. In January 1891 Greenwood brought out a weekly review which he named the *Anti-Jacobin*. It failed, however, to gain public support, the last number appearing in January 1892. In 1893 he published *The Lover's Lexicon* and in 1894 *Imagination in Dreams*. He continued to express his views on political and social questions in contributions to newspapers and magazines, writing frequently in the *Westminster Gazette*, the *Pall Mall*, *Blackwood*, the *Cornhill*, &c. Towards the end of his life his political views reverted in some respects to the Liberalism of his early days.

In the words of George Meredith "Greenwood was not only a great journalist, he had a statesman's head. The national interests were always urgent at his heart." He was remarkable for securing for his papers the services of the ablest writers of the day, and for the gift of recognizing merit in new writers, such, for instance, as Richard Jeffries and J. M. Barrie. His instinct for capacity in others was as sure as was his journalistic judgment. In 1905, on the occasion of his 75th birthday, a dinner was given in his honour by leading statesmen, journalists, and men of letters (with John Morley—who had succeeded him as editor of the *Pall Mall*—in the chair). In May 1907 he contributed to *Blackwood* an article on "The New Journalism," in which he drew a sharp contrast between the old and the new conditions under which the work of a newspaper writer is conducted. He died at Sydenham on the 14th of December 1909.

See *Honouring Frederick Greenwood*, being a report of the speeches at the dinner on the 8th of April 1905 (London, privately printed, 1905); "Birth and Infancy of the *Pall Mall Gazette*," an article contributed by Greenwood to the *Pall Mall* of the 14th of April 1897; "The Blowing of the Trumpet" in the introduction to the *St James's* (May 31, 1880); obituary notices in the *Athenaeum* (Dec. 25, 1909) and *The Times* (Dec. 17, 1909).

GREENWOOD, JOHN (d. 1593), English Puritan and Separatist (the date and place of his birth are unknown), entered as a sizar at Corpus Christi College, Cambridge, on the 18th of March 1577-1578, and commenced B.A. 1581. Whether he was directly influenced by the teaching of Robert Browne (*q.v.*), a graduate of the same college, is uncertain; in any case he held strong Puritan opinions, which ultimately led him to Separatism of the most rigid type. In 1581 he was chaplain to Lord Rich, at Rochford, Essex. At some unspecified time he had been made deacon by John Aylmer, bishop of London, and priest by Thomas Cooper, bishop of Lincoln; but ere long he renounced this ordination as "wholly unlawful." Details of the next few years are lacking; but by 1586 he was the recognized leader of the London Separatists, of whom a considerable number had been imprisoned at various times since 1567. Greenwood was arrested early in October 1586, and the following May was committed to the Fleet prison for an indefinite time, in default of bail for conformity. During his imprisonment he wrote some controversial tracts in conjunction with his fellow-prisoner Henry Barrowe (*q.v.*). He is understood to have been at liberty in the autumn of 1588; but this may have been merely "the liberty of the prison." However, he was certainly at large in September 1592, when he was elected "teacher" of the Separatist church. Meanwhile he had written (1590) "An Answer to George Gifford's pretended Defence of Read Prayers." On the 5th of December he was again arrested; and the following March was tried, together with Barrowe, and condemned to death on a charge of "devising and circulating seditious books." After two respites, one at the foot of the gallows, he was hanged on the 6th of April 1593.

AUTHORITIES.—H. M. Dexter, *Congregationalism during the last three hundred years*; *The England and Holland of the Pilgrims*; F. J. Powicke, *Henry Barrowe and the Exiled Church of Amsterdam*; B. Brook, *Lives of the Puritans*; C. H. Cooper, *Athenae Cantabrigienses*, vol. ii.

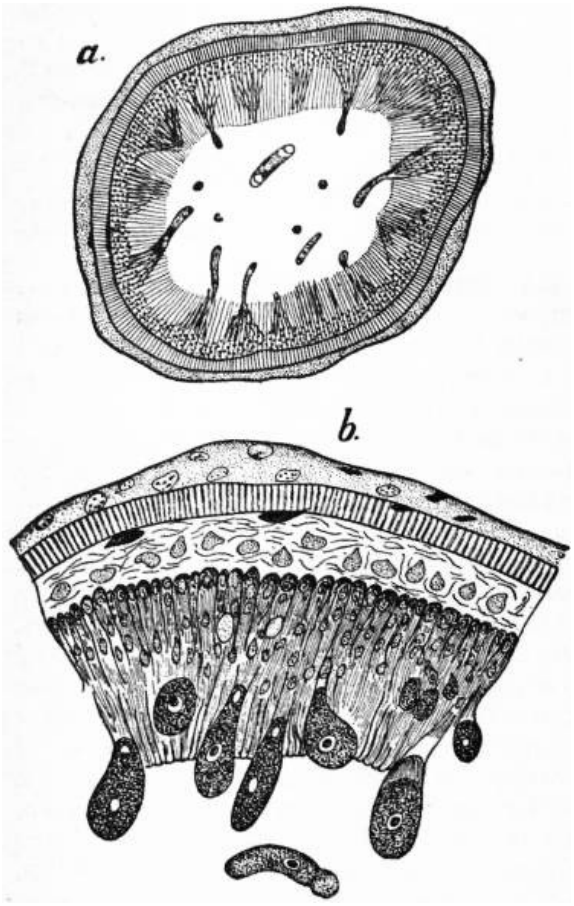
GREG, WILLIAM RATHBONE (1809-1881), English essayist, the son of a merchant, was born at Manchester in 1809. He was educated at the university of Edinburgh and for a time managed a mill of his father's at Bury, and in 1832 began business on his own account. He entered with ardour into the struggle for free trade, and obtained in 1842 the prize offered by the Anti-Corn Law League for the best essay on "Agriculture and the Corn Laws." He was too much occupied with political, economical and theological speculations to give undivided attention to his business, which he gave up in 1850 to devote himself to writing. His *Creed of Christendom* was published in 1851, and in 1852 he contributed no less than twelve articles to four leading quarterlies. Disraeli praised him; Sir George Cornewall Lewis bestowed a Commissionership of Customs upon him in 1856; and in 1864 he was made Comptroller of the Stationery Office. Besides contributions to periodicals he produced several volumes of essays on political and social philosophy. The general spirit of these is indicated by the titles of two of the best known, *The Enigmas of Life* (1872) and *Rocks Ahead* (1874). They represent a reaction from the high hopes of the author's youth, when wise legislation was assumed to be a remedy for every public ill. Greg was a man of deep moral earnestness of character and was interested in many philanthropic works. He died at Wimbledon on the 15th of November 1881. His brother, ROBERT HYDE GREG (1795-1875), was an economist and antiquary of some distinction. Another brother, SAMUEL GREG (1804-1876), became well known in Lancashire by his philanthropic efforts on behalf of the working-people. PERCY GREG (1836-1889), son of William Rathbone Greg, also wrote, like his father, on politics, but his views were violently reactionary. His *History of the United States to the Reconstruction of the Union* (1887) is a polemic rather than a history.

GREGARINES (mod. Lat. *Gregarina*, from *gregarius*, collecting in a flock or herd, *grex*) a large and abundant order of Sporozoa Ectospora, in which a very high degree of morphological specialization and cytological differentiation of the cell-body is frequently

found. On the other hand, the life-cycle is, in general, fairly simple. Other principal characters which distinguish Gregarines from allied Sporozoan parasites are as follows:—The fully-grown adult (trophozoite) is always “free” in some internal cavity, *i.e.* it is extracellular; in nearly all cases prior to sporulation two Gregarines (associates) become attached to one another, forming a couple (syzygy), and are surrounded by a common cyst; inside the cyst the body of each associate becomes segmented up into a number of sexual elements (gametes, primary sporoblasts), which then conjugate in pairs; the resulting copula (zygote, definitive sporoblast) becomes usually a spore by the secretion of spore-membranes (sporocyst), its protoplasm (sporoplasm) dividing up to form the germs (sporozoites).

Historical.

F. Redi (1684) is said to have been the first to observe a Gregarine parasite, but his claim to this honour is by no means certain. Much later (1787) Cavolini described and figured an indubitable Gregarine (probably the form now known as *Aggregata conformis*) from a Crustacean (*Pachygrapsus*), which, however, he regarded as a tapeworm. Leon Dufour, who in his researches on insect anatomy came across several species of these parasites, also considered them as allied to the worms and proposed the generic name of *Gregarina*. The unicellular nature of Gregarines was first realized by A. von Kölliker, who from 1845-1848 added considerably to our knowledge of the frequent occurrence and wide distribution of these organisms. Further progress was due to F. Stein who demonstrated about this time the relation of the “pseudo-navicellae” (spores) to the reproduction of the parasites.



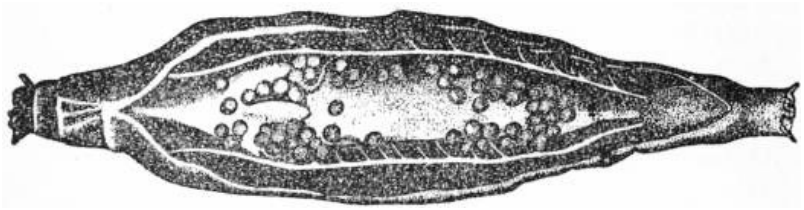
From Wasielewswi’s *Sporozoenkunde*, after Pfeiffer.

FIG. 1.—*a*, Transverse Section of Intestine of Mealworm, infected with *Gregarina* (*Clepsydrina*) *polymorpha*;[1] *b*, Part of *a* highly magnified.

Apart from the continually increasing number of known species, matters remained at about this stage for many years. It is, in fact, only since the closing years of the 19th century that the complete life-history has been fully worked out; this has now been done in many cases, thanks to the researches of M. Siedlecki, L. Cuénot, L. Léger, O. Duboscq, A. Laveran, M. Caullery, F. Mesnil and others, to whom also we owe most of our knowledge regarding the relations of the parasites to the cells of their host during their early development.

Occurrence; mode of infection.

Gregarines are essentially parasites of Invertebrates; they are not known to occur in any true Vertebrate although met with in Ascidians. By far the greatest number of hosts is furnished by the Arthropods. Many members of the various groups of worms (especially the Annelids) also harbour the parasites, and certain very interesting forms are found in Echinoderms; in the other classes, they either occur only sporadically or else are absent. Infection is invariably of the accidental (casual) type, by way of the alimentary canal, the spores being usually swallowed by the host when feeding; a novel variation of this method has been described by Woodcock (**31**) in the case of a Gregarine parasitic in Cucumaria, where the spores are sucked up through the cloaca into the respiratory trees, by the inhalant current.



From Wasielewski, after Léger.

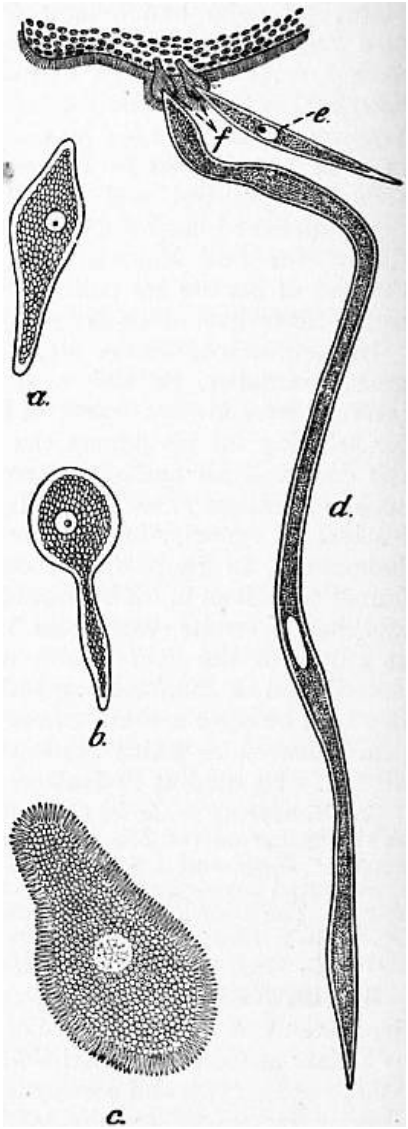
FIG. 2.—Cysts of a Coelomic Gregarine, in the body-cavity of a larva of *Tipula*.

Habitat and effects on host.

The favourite habitat is either the intestine (fig. 1) or its diverticula (*e.g.* the Malpighian tubules), or the body-cavity. In the latter case, after infection has occurred, the liberated germs at once traverse the intestinal epithelium. They may come to rest in the connective tissue of the sub-mucosa (remaining, however, extracellular), grow considerably in that situation, and ultimately fall into the body-cavity (*e.g. Diplocystis*); or they may pass straightway into the body-cavity and there come into relation with some organ or tissue (*e.g. Monocystis*) of the earthworm, which is for a time intracellular in the spermatoblasts (fig. 4, *c*). In the case of intestinal Gregarines, the behaviour of the young trophozoite with respect to the epithelial cells of its host varies greatly. The parasite may remain only attached to the host-cell, never becoming actually intracellular (*e.g. Pterocephalus*); more usually it penetrates partially into it, the extracellular portion of the Gregarine, however, giving rise subsequently to most of the adult (*e.g. Gregarina*); or lastly, in a few forms, the early development is entirely intracellular (*e.g. Lankesteria*, *Stenophora*).

From Lankester.

FIG. 3.—*Porospora gigantea f*, (E. van Ben.), from the intestine of the lobster. *a*, Nucleus.



From Lankester, after various authors.

FIG. 4.

a-c, Trophozoites of *Monocystis agilis*.

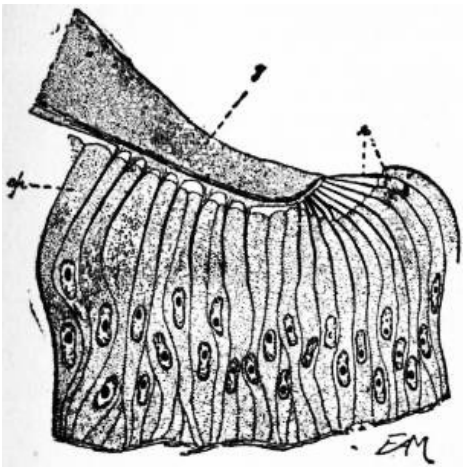
a and *b*, Young individuals showing changes of body-form.

c, Older individual, still enveloped in a coat of spermatozoa.

d, *e*, Trophozoites of *M. magna* attached to seminal funnel of *Lumbricus*.
Goblet-shaped epithelial cells, in which the extremity of the parasite is inserted.

The effects on the host are confined to the parasitized cells. These generally undergo at first marked hypertrophy and alteration in character; this condition is succeeded by one of atrophy, when the substance of the cell becomes in one way or another practically absorbed by the growing parasite (cf. also Coccidia). Since, however, the Gregarines never overrun their hosts in the way that many other Sporozoa do (because of their lack, in general, of the power of endogenous multiplication), the number of cells of any tissue attacked, even in the case of a strong infection, is only a very small percentage of the whole. In short the hosts do not, as a rule, suffer any appreciable inconvenience from the presence of the parasites.

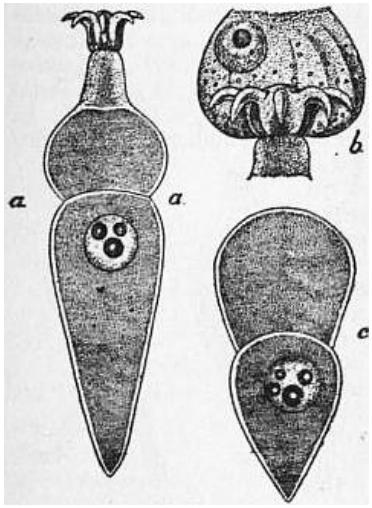
Morphology. The body of a Gregarine is always of a definite shape, usually oval or elongated; in one or two instances (*e.g. Diplodina*) it is spherical, and, on the other hand, in *Porospora* (fig. 3) it is greatly drawn out and vermiform. In many adult Gregarines, the body is divided into two distinct but unequal regions or halves, the anterior part being known as the *protomerite*, the hinder, generally the larger, as the *deutomerite*. This feature is closely associated with another important morphological character, one which is observable, however, only during the earlier stages of growth and development, namely, the presence of a definite organ, the *epimerite*, which serves for the attachment of the parasite to the host-cell (fig. 6).



After Siedlecki, from Lankester's *Treatise on Zoology*.

Fig. 5.—Part of a section through the apparatus of fixation of a *Pterocephalus*, showing root-like processes extending from the Gregarine between the epithelial cells. *g*, Head of Gregarine; *r*, Root-like processes; *ep*, Epithelial cells.

In those Gregarines (most intestinal forms) which become attached to an epithelial cell, the attachment occurs by means of a minute projection or beak (rostrum) at the anterior end of the sporozoite, which pushes its way into the cell, followed by the first part of the growing germ. This portion of the body increases in size much quicker at first than the rest (the extracellular part), more or less fills up the host-cell, and forms the well-developed epimerite or secondary attaching organella. The extracellular part of the Gregarine next grows rapidly, and a transverse septum is formed at a short distance away from (outside) the point where the body penetrates into the cell (fig. 6); this marks off the large deutomerite posteriorly (distally). Léger thinks that this partition most likely owes its origin to trophic considerations, *i.e.* to the slightly different manner in which the two halves of the young parasite (the proximal, largely intracellular part, and the distal, extracellular one) may be supposed to obtain their nutriment. In the case of the one half, the host-cell supplies the nutriment, in that of the other, the intestinal liquid; and the septum is, as it were, the expression of the conflicting limit between these two methods. Nevertheless, the present writer does not think that mechanical considerations should be altogether left out of account. The septum may also be, to some extent, an adaption for strengthening the body of the fixed parasite against lateral thrusts or strains, due to the impact of foreign bodies (food, &c.) in the intestine.



From Wasielewski, after Léger.

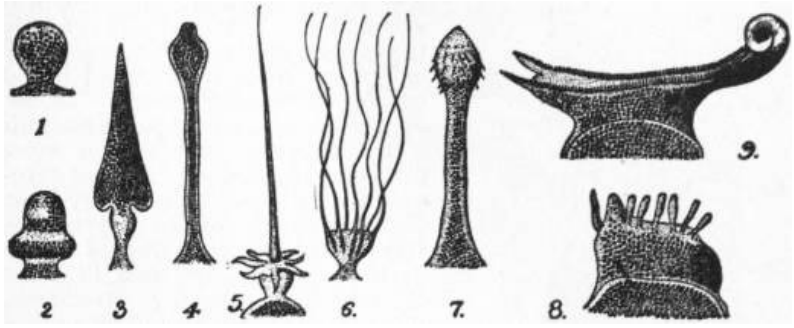
Fig. 6.—*Corycella armata*, Léger. *a*, Cephalont; *b*, Epimerite in host-cell; *c*, Sporont.

At the point where the body becomes actually intracellular, it is constricted, and this constriction marks off the epimerite (internally) from the middle portion (between this point and the septum), which is the protomerite. Further growth is restricted, practically, to the extracellular regions, and the epimerite often comes to appear ultimately as a small

appendage at the anterior end of the protomerite. A Gregarine at this stage is known as a cephalont. Later on, the parasite breaks loose from the host-cell and becomes free in the lumen, the separation taking place at the constriction between the protomerite and the epimerite; the latter is left behind in the remains of the host-cell, the former becomes the anterior part of the free trophozoite.

In other Gregarines, however, those, namely, which pass inwards, ultimately becoming "coelomic," as well as those which become entirely intracellular, no epimerite is ever developed, and, further, the body remains single or unseptate. These forms, which include, for instance, *Monocystis* (fig. 4), *Lankesteria*, *Diplocystis*, are distinguished, as *Acephalina* or *Aseptata* (*Haplocyta*, *Monocystida*), according to which character is referred to, from the others, termed *Cephalina* or *Septata* (*Polycystida*).

The two sets of terms are not, however, completely identical or interchangeable, for there are a few forms which possess an epimerite, but which lack the division into protomerite and deutomerite, and are hence known as *Pseudomonocystida*; this condition may be primitive (*Doliocystis*) or (possibly) secondary, the partition having in course of time disappeared. Again, *Stenophora* is a septate form which has become, secondarily, completely intracellular during the young stages, and, doubtless correlated with this, shows no sign of an epimerite.



From Wasielewski, after Léger.

FIG. 7.—Forms of Epimerites.

1, *Gregarina longa*.
2, *Sycia inopinata*.
3, *Pileocephalus heerii*.
4, *Stylorhynchus longicollis*.
5, *Beloides firmus*.
6, *Cometoides crinitus*.
7, *Geneiorhynchus monnieri*.
8, *Echinomera hispida*.
9, *Pterocephalus nobilis*.

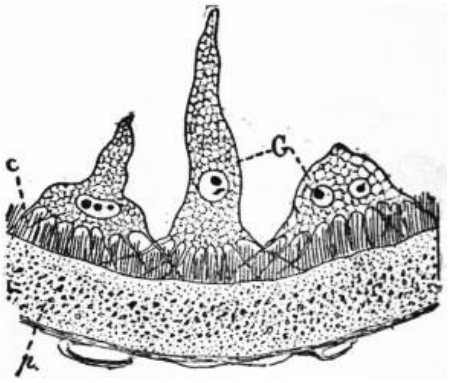
With regard to the epimerites themselves, they are of all variety of form and shape and need not be described in detail (fig. 7). In one or two cases, however, another variety of attaching organella is met with. Thus in *Pterocephalus*, only the rostrum of the sporozoite penetrates into the host-cell, and no epimerite is formed. Instead, a number of fine root-like processes are developed from near the anterior end, which pass in between the host-cells (fig. 5) and thus anchor the parasite firmly. Similarly, in the curious *Schizogregarinae*, the anterior end of the (unseptate) body forms a number of stiff, irregular processes, which perform the same function (fig. 8). It is to be noted that these processes are non-motile, and not in any way comparable to pseudopodia, to which they were formerly likened.

A very interesting and remarkable morphological peculiarity has been recently described by Léger (**18**) in the case of a new Gregarine, *Taeniocystis*. In this form the body is elongated and metamerically segmented, recalling that of a segmented worm, the adult trophozoites possessing numerous partitions or segments (each corresponding to the septum between the proto- and deuto-merite in an ordinary Polycystid), which divide up the cytoplasm into roughly equal compartments. Léger thinks only the deutomerite becomes thus segmented, the protomerite remaining small and undivided. The nucleus remains single, so that there is no question as to the unicellular or individual nature of the entire animal.

Minute structure.

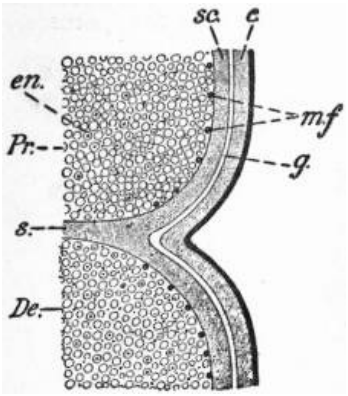
The general cytoplasm usually consists of distinct ectoplasm and endoplasm, and is limited by a membrane or cuticle (epicyte), secreted by the former. The cuticle varies considerably in thickness, being well developed in active, intestinal forms, but very thin and delicate in non-motile coelomic forms (*e.g.* *Diplodina*). In the former case it may show longitudinal striations. The cuticle

also forms the hooks or spines of many epimerites. The ectoplasm usually shows (fig. 9A) a differentiation into two layers, an outer, firmer layer, clear and hyaline, the sarcocyte, and an inner layer, the myocyte, which is formed of a network of muscle-fibrillae (mainly longitudinal and transverse, fig. 9B). The sarcocyte alone constitutes the septum, traversing the endoplasm, in septate Gregarines. The myonemes are undoubtedly the agents responsible for the active "gregarinoid" movements (of flexion and contraction) to be observed in many forms. The peculiar gliding movements were formerly thought to be produced by the extrusion of a gelatinous thread posteriorly, but Crawley (**8**) has recently ascribed them to a complicated succession of wave-like contractions of the myocyte layer. This view is supported by the fact that certain coelomic forms, like *Diplodina* and others, which either lack muscle-fibrils or else show no ectoplasmic differentiation at all, are non-motile. The endoplasm, or nutritive plasm, consists of a semi-fluid matrix in which are embedded vast numbers of grains and spherules of various kinds and of all sizes, representing an accumulation of food-material which is being stored up prior to reproduction. The largest and most abundant grains are of a substance termed para-glycogen, a carbohydrate; in addition, flattened lenticular platelets, of an albuminoid character, and highly-refringent granules often occur.



After Léger and Hagenmüller, from Lankester's *Treatise on Zoology*.

FIG. 8.—Three Individuals (G) of *Ophryocystis schneideri*, attached to wall of Malpighian tubule of *Blaps* sp.
p, Syncytial protoplasm of the tubule;
c, Cilia lining the lumen.



After Schewiakoff, from Lankester's *Treatise on Zoology*.

FIG. 9A.—Longitudinal section of a Gregarine in the region of the septum between protomerite and deutomerite.
Pr, Protomerite.
De, Deutomerite.
s, Septum.
en, Endoplasm.
sc, Sarcocyte.
c, Cuticle.
m, *f*, Myocyte fibrils (cut across).
g, Gelatinous layer.

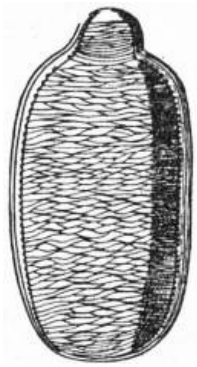


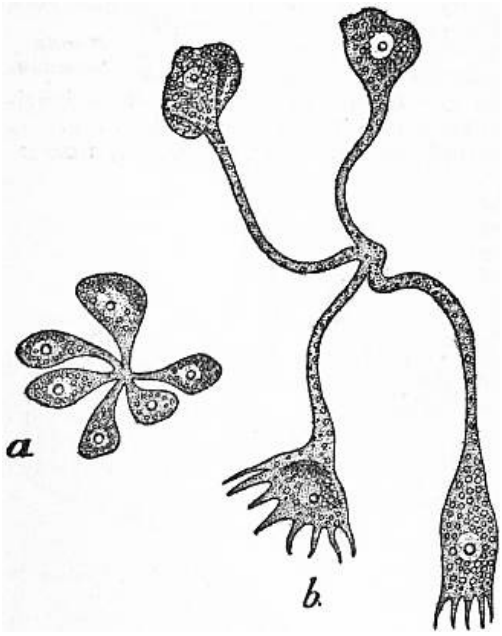
FIG. 9B.—*Gregarina munieri*, showing the network of myocyte fibrillae.

The nucleus is always lodged in the endoplasm, and, in the septate forms, in the deutomeritic half of the body. It is normally spherical and always limited by a distinct nuclear membrane, which itself often contains chromatin. The most characteristic feature of the nucleus is the deeply-staining, more or less vacuolated spherical karyosome (consisting of chromatin intimately bound up with a plastinoid basis) which is invariably present. In one or two instances (*e.g. Diplocystis schneideri*) the nucleus has more than one karyosome. All the chromatin of the nucleus is not, however, confined to the karyosome, some being in the form of grains in the nuclear sap; and in some cases at any rate (*e.g. Diplodina, Lankesteria*) there is a well-marked nuclear reticulum which is impregnated with granules and dots of chromatin.

A sexual multiplication (schizogony) is only known certainly to occur in a few

cases, one being in a Monocystid form, a species of *Gonospora*, which is for a long time intracellular (Caullery and Mesnil [**4**]), the rest among the *Schizogregarinae*, so named for this reason, in which schizogonous fission takes place regularly during the free, trophic condition. Usually, the body divides up, by a process of multiple fission (fig. 10), into a few (up to eight) daughter-individuals; but in a new genus (*Eleutheroschizon*), Brasil (**3**) finds that a great number of little merozoites are formed, and a large amount of vacuolated cytoplasm is left over unused.

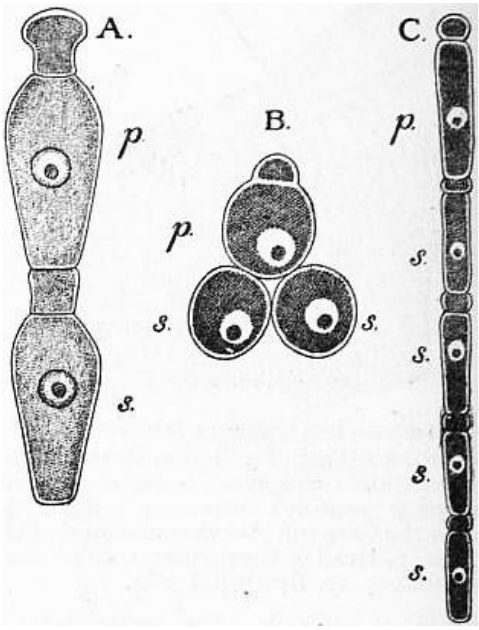
Life-history.



From Wasielewski, after A. Schneider.

FIG. 10.—Schizogony in *Ophryocystis francisci*. *a*, Rosette of small individuals, produced from a schizont which has just divided; *b*, A later stage, the daughter-individuals about to separate and assuming the characters of the adult.

In the vast majority of Gregarines, however, the life-cycle is limited to gametogony and sporogony. A very general, if not indeed universal, prelude to gametogony is the characteristic and important feature of the order, known as association, the biological significance of which has only lately been fully brought out (see H. M. Woodcock [**31**]). In normal association, two individuals which are to be regarded as of opposite sex, come into close contact with each other and remain thus attached. The manner in which the parasites join varies in different forms; the association may be end-to-end (terminal), either by like or by unlike poles, or it may be side-to-side (lateral) (fig. 12). The couple (syzygy) thus formed may proceed forthwith to encystment and sporoblast-formation (*Lankesteria, Monocystis*), or may continue in the trophic phase for some time longer (*Gregarina*). In one or two instances (*Zygocystis*), association occurs as soon as the trophozoites become adult. This leads on to the interesting phenomenon of precocious association (neogamy), found in non-motile, coelomic Gregarines (*e.g. Cystobia*, *Diplodina* and *Diplocystis*), in which the parasitism is most advanced. Woodcock (*loc. cit.*) has described and compared the different methods adopted to ensure a permanent union, and the degree of neogamy attained, in these forms. Here it must suffice to say that, in the extreme condition (seen, for instance, in *Diplodina minchinii*) the union takes place very early in the life-history, between individuals which are little more than sporozoites, and is of a most intimate character, the actual cytoplasm of the two associates joining. In such cases, there is absolutely nothing to indicate the “double” nature of the growing trophozoite, but the presence of the two nuclei which remain quite distinct.

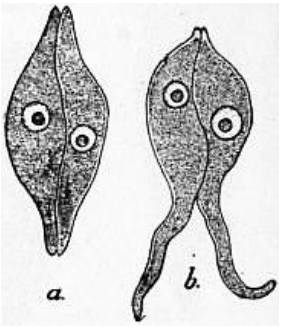


From Wasielewski, after Léger.

FIG. 11.—*Eirmocystis spp. a*, *b*, Associations of two and three Gregarines; *c*, Chain of five parasites; *p*, Primite; *s*, Satellites.

There can be little doubt that, in the great majority, if not in all Gregarines, association is necessary for subsequent sporulation to take place; *i.e.* that the cytotactic attraction imparts a developmental stimulus to both partners, which is requisite for the formation of primary sporoblasts (gametes). This association is usually permanent; but in one or two cases (perhaps *Gonospora sp.*) temporary association may suffice. While association has fundamentally a reproductive (sexual) significance, in some cases, this function may be delayed or, as it were, temporarily suspended, the cytotactic attraction serving meanwhile a subsidiary purpose in trophic life. Thus, probably, are to be explained the curious multiple associations and long chains of Gregarines (fig. 11) sometimes met with (*e.g. Eirmocystis*, *Clepsydrina*).

Encystment is nearly always double, *i.e.* of an associated couple. Solitary encystment has been described, but whether successful independent sporulation results, is uncertain; if it does, the encystment in such cases is, in all probability, only after prior (temporary) association. In the case of free parasites, a well-developed cyst is secreted by the syzygy, which rotates and gradually becomes spherical. A thick, at first gelatinous, outer cyst-membrane (*ectocyst*) is laid down, and then a thin, but firm internal one (endocyst). The cyst once formed, further development is quite independent of the host, and, in fact, often proceeds outside it. In certain coelomic Gregarines, on the other hand, which remain in very close relation with the host's tissues, little or nothing of an encystment-process on the part of the parasites is recognizable, the cyst-wall being formed by an enclosing layer of the host (*Diplodina*).



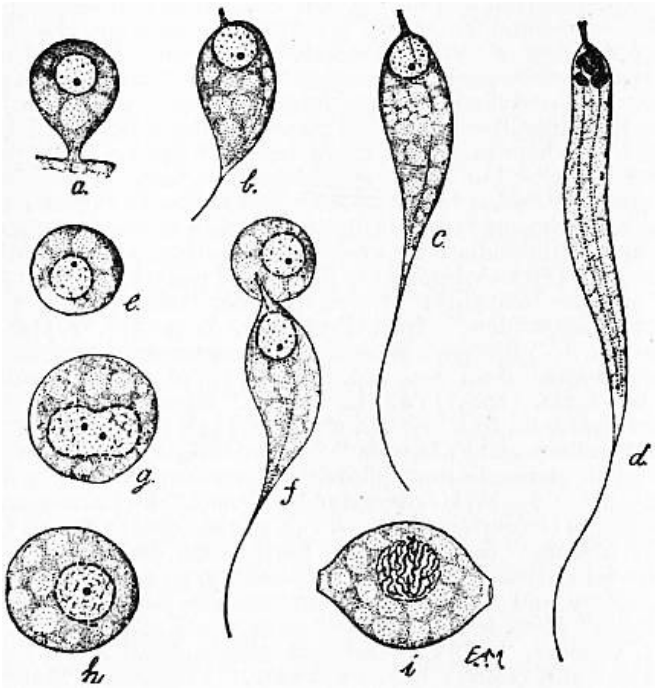
From Wasielewski, after Léger.

FIG. 12.—Associations of *Gonospora sparsa*.

The nuclear changes and multiplication which precede sporoblast-formation vary greatly in different Gregarines and can only be outlined here. In the formation of both sets of sexual elements (gametes) there is always a comprehensive nuclear purification or maturation. This elimination of a part of the nuclear material (to be distinguished as trophic or somatic, from the functional or germinal portion, which forms the sexual nuclei) may occur at widely-different periods. In some cases (*Lankesteria*, *Monocystis*), a large part of the original (sporont-) nucleus of each associate is at once got rid of, and the resulting (segmentation-) nucleus, which is highly-specialized, represents the sexual part. In other cases, again, the entire sporont-nucleus proceeds to division, and the distinction between somatic and germinal portions does not become manifest until after nuclear multiplication has continued for some little time, when certain of the daughter-nuclei become altered in character, and ultimately degenerate, the remainder giving rise to the sporoblast-nuclei (*Diplodina*, *Stylorhynchus*). Even after the actual sporoblasts (sex-cells) themselves are constituted, their nuclei may yet undergo a final maturation (*e.g. Clepsydrina ovata*); and in *Monocystis*, indeed, Brasil (**2**) finds that what is apparently a similar process is delayed until after conjugation and formation of the zygote (definitive sporoblast).

Nuclear multiplication is usually indirect, the mitosis being, as a rule, more elaborate in the earlier than in the later divisions. The attraction-spheres are generally large and conspicuous, sometimes consisting of a well-developed centrosphere, with or without centrosomic granules, at other times of very large centrosomes with a few astral rays. In those cases where the karyosome is retained, and the sporont-nucleus divides up as a whole, however, the earliest nuclear divisions are direct; the daughter-nuclei being formed either by a process of simple constriction (*e.g. Diplodina*), or by a kind of multiple fission or fragmentation (*Gregarina* and *Selenidium spp.*). Nevertheless, the later divisions, at any rate in *Diplodina*, are indirect.

By the time nuclear multiplication is well advanced or completed, the bodies of the two parent-Gregarines (associates) have usually become very irregular in shape, and produced into numerous lobes and processes. While in some forms (*e.g. Monocystis*, *Urospora*, *Stylorhynchus*) the two individuals remain fairly separate and independent of each other, in others (*Lankesteria*) they become intertwined and interlocked, often to a remarkable extent (*Diplodina*). The sexual nuclei next pass to the surface of the processes and segments, where they take up a position of uniform distribution. Around each, a small area of cytoplasm becomes segregated, the whole often projecting as a little bud or hillock from the general surface. These uninuclear protuberances are at length cut off as the sporoblasts or gametes. Frequently a large amount of the general protoplasm of each parent-individual is left over unused, constituting two cystal residua, which may subsequently fuse; in *Diplodina*, however, practically the whole cytoplasm is used up in the formation of the gametes.



After Léger, from Lankester's *Treatise on Zoology*.

FIG. 13.—Development of the Gametes and Conjugation in *Stylorhynchus longicollis*.

a, Undifferentiated gamete, attached to body of parent-individual.
b-d, Stages in development of motile male gamete.
e, Mature female gamete.
f, *g*, Stages in conjugation and nuclear union of the two elements.
h, Zygote (copula).
i, Spore, still with single nucleus and undivided sporoplasm.

The sporoblasts themselves show all gradations from a condition of marked differentiation into male and female (anisogamy), to one of complete equality (isogamy). Anisogamy is most highly developed in *Pterocephalus*. Here, the male elements (microgametes) are minute, elongated and spindle-like in shape, with a minute rostrum anteriorly and a long flagellum posteriorly, and very active; the female elements (megagametes) are much larger, oblong to ovoid, and quite passive. In *Stylorhynchus* the difference between the conjugating gametes is not quite so pronounced (fig. 13), the male elements being of about the same bulk as the females, but pyriform instead of round, and possessing a distinct flagellum; a most interesting point about this parasite is that certain highly motile and spermatozoon-like male gametes are formed (fig. 13), which are, however, quite sterile and have acquired a subsidiary function. In other cases, again, the two kinds of element exhibit either very slight differences (*Monocystis*) or none (*Urospora*, *Gonospora*), in size and appearance, the chief distinction being in the nuclei, those of the male elements being smaller and chromatically denser than those of the females.

Lastly, in *Lankesteria*, *Gregarina*, *Clepsydrina*, *Diplocystis* and *Diplodina* complete isogamy is found, there being no apparent difference whatever between the conjugating elements. Nevertheless, these forms are also to be regarded as instances of binary sexuality and not merely of exogamy; for it is practically certain that this condition of isogamy is derived from one of typical anisogamy, through a stage such as is seen in *Gonospora*, &c. And, similarly, just as in all instances where the formation of differentiated gametes has been observed, the origin of the two conjugates is from different associates (parent-sporonts), and all the elements arising from the same parent are of the same sex, so it is doubtless the case here.

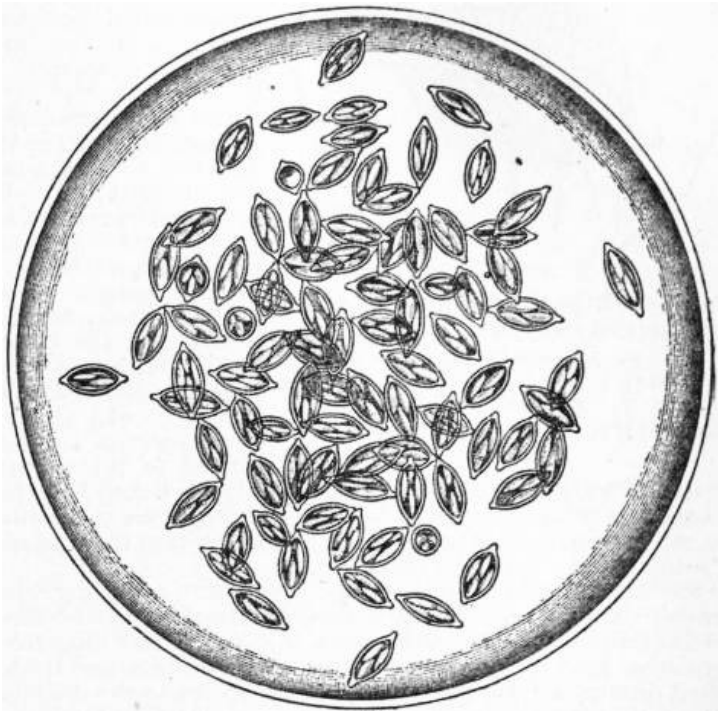


FIG. 14.—Cyst of *Monocystis agilis*, the common Gregarine of the Earthworm, showing ripe spores and absence of any residual protoplasm in the cyst. (From Lankester.)

The actual union is brought about or facilitated by the well-known phenomenon termed the *danse des sporoblastes*, which is due to various causes. In the case of highly-differentiated gametes (*Pterocephalus*), the actively motile microgametes rush about here and there, and seek out the female elements. In *Stylorhynchus*, Léger has shown that the function of the sterile male gametes is to bring about, by their vigorous movements, the *mêlée sexuelle*. In the forms where the gametes are isogamous or only slightly differentiated and (probably) not of themselves motile, other factors aid in producing the necessary commingling. Thus in *Gregarina sp.* from the mealworm, the unused somata or cystal residua become amoeboid and send out processes which drive the peripherally-situated gametes round in the cyst; in some cases where the residual soma becomes liquefied (*Urospora*) the movements of the host are considered to be sufficient; and lastly, in *Diplodina*, owing to the extent to which the intertwining process is carried, if each gamete is not actually contiguous to a suitable fellow-conjugant, a very slight movement or mutual attraction will bring two such, when liberated, into contact.

An unusual modification of the process of sporoblast-formation and conjugation, which occurs in *Ophryocystis*, must be mentioned. Here encystment of two associates takes place as usual; the sporont-nucleus of each, however, only divides twice, and one of the daughter-nuclei resulting from each division degenerates. Hence only one sporoblast-nucleus, representing a quarter of the original nuclear-material, persists in each half. Around this some of the cytoplasm condenses, the rest forming a residuum. The sporoblast or gamete thus formed is completely isogamous and normally conjugates with the like one from the other associate, when a single zygote results which becomes a spore containing eight sporozoites, in the ordinary manner. Sometimes, however, the septum between the two halves of the cyst does not break down, in which case parthenogenesis occurs, each sporoblast developing by itself into a small spore.

The two conjugating elements unite completely, cytoplasm with cytoplasm and nucleus with nucleus, to form the definitive sporoblast or zygote. The protoplasm assumes a definite outline, generally that of an ovoid or barrel, and secretes a delicate membrane, the ectospore. This subsequently becomes thickened, and often produced into rims, spines or processes, giving rise to the characteristic appearance of the Gregarine spore. Internal to the ectocyst, another, thinner membrane, the endocyst, is also laid down. These two membranes form the spore-wall (sporocyst). Meanwhile the contents of the spore have been undergoing division. By successive divisions, usually mitotic, the zygote-nucleus gives rise to eight daughter-nuclei, each of which becomes the nucleus of a sporozoite. Next, the sporoplasm becomes split longitudinally, around each nucleus, and thus eight sickle-shaped (falciform) sporozoites are formed. There is usually a certain amount of unused sporoplasm left over in the centre of the spore, constituting the sporal residuum. It is important to note that in all known Gregarines, with one exception, the number of sporozoites in the spore is eight; the exception is *Selenidium*, in many ways far from typical, where the number is half, viz. four.

Hitherto a variation from the general mode of spore-formation has been considered to occur

in certain Crustacean Gregarines, the *Aggregatidae* and the *Porosporidae*. The spores of these forms have been regarded as gymnospores (naked), lacking the enveloping membranes (sporocyst) of the ordinary spores, and the sporozoites, consequently, as developed freely in the cyst. In the case of the first-named parasites, however, what was taken for sporogony has been proved to be really schizogony, and on other grounds these forms are, in the present writer's opinion, preferably associated with the Coccidia (*q.v.*). With regard to the *Porosporidae*, also, it is quite likely that the gymnosporous cysts considered to belong to the Gregarine *Porospora* (as known in the trophic condition) have really no connexion with it, but represent the schizogonous generation of some other form, similar to *Aggregata*; in which case the true spores of *Porospora* have yet to be identified.

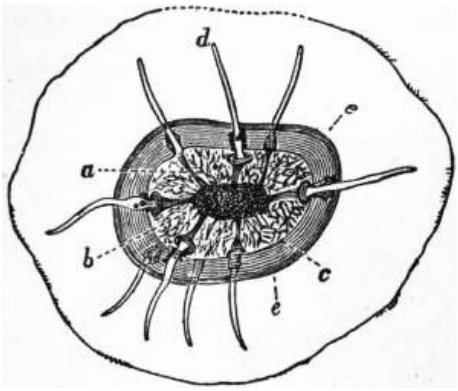


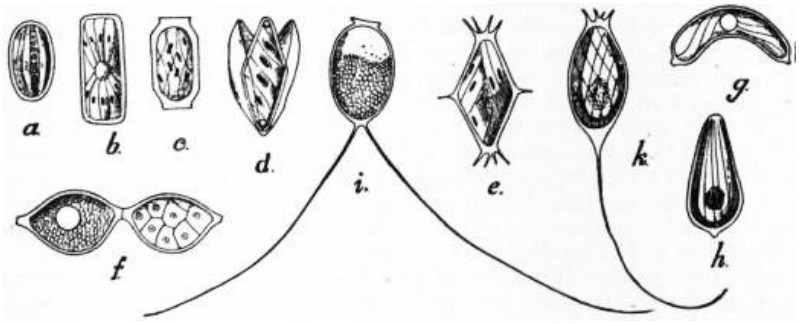
FIG. 15.—Ripe Cyst of *Gregarina blattarum*, partially emptied. (From Lankester.) *a*, Channels leading to the sporoducts; *b*, Mass of spores still left in the cyst; *c*, Endocyst; *d*, The everted sporoducts; *e*, Gelatinous ectocyst.

In the intestine of a fresh host the cysts rupture and the spores are liberated. This is usually largely brought about by the swelling of the residual protoplasm. Sometimes (*e.g. Gregarina*) long tubular outgrowths, known as sporoducts (fig. 15), are developed from the residual protoplasm, for the passage of the spores to the exterior.

Classification. The Gregarines are extremely numerous, and include several families, characterized, for the most part, by the form of the spores (fig. 16). The specialized *Schizogregarinae* are usually separated off from the rest as a distinct sub-order.

SUB-ORDER I.—*Schizogregarinae.*

Forms in which schizogonic reproduction is of general occurrence during the extra-cellular, trophic phase. Three genera, *Ophryocystis*, *Schizocystis* and *Eleutheroschizon*, different peculiarities of which have been referred to above. Mostly parasitic in the intestine or Malpighian tubules of insects. (In this type of parasite, as exemplified by *Ophryocystis*, the body was formerly wrongly considered as amoeboid, and hence this genus was placed in a special order, the *Amoebosporidia*.)



From Wasielewski, after Léger.

FIG. 16.—Spores of various Gregarines.

a, *Eirmocystis, Sphaerocystis*, &c.
b, *Echinomera, Pterocephalus*, &c.
c, *Gregarina*, &c.
d, *Beloides*.
e, *Ancyrophora*.
f, *Stylorhynchidae* (type of).
g, *Menosporidae*.
h, *Gonospora terebellae*.
i, *Ceratospora*.
k, *Urospora synaptae*.

SUB-ORDER II.—*Eugregarinae.*

Schizogony very exceptional, only occurring during the intracellular phase, if at all. Gregarines fall naturally into two tribes, described as cephalont and septate, or as acephalont and aseptate (haplocytic), respectively. In strictness, however, as already mentioned, these two sets of terms do not agree absolutely, and whichever set is adopted, the other must be taken into account in estimating the proper position of certain parasites. Here the cephalont or acephalont condition is regarded as the more primary and fundamental.

Tribe A.—*Cephalina* (practically equivalent to *Septata*).

Save exceptionally, the body possesses an epimerite, at any rate during the early stages of growth, and is typically septate. Mostly intestinal parasites of Arthropods.

The chief families, with representative genera, are as follows: *Porosporidae*, with *Porospora gigantea*, at present thought to be gymnosporous; *Gregarinidae* (*Clepsydrinidae*), with *Gregarina*, *Clepsydrina*, *Eirmocystis*, *Hyalospora*, *Cmenidospora*, *Stenophora*; *Didymophyidae*, with *Didymophyes*; *Dactylophoridae*, with *Dactylophorus*, *Pterocephalus*, *Echinomera*, *Rhopalonia*; *Actinocephalidae* with *Actinocephalus*, *Pyxinia*, *Coleorhynchus*, *Stephanophora*, *Legeria*, *Stictospora*, *Pileocephalus*, *Sciadophora*; *Acanthosporidae* with *Acanthospora*, *Corycella*, *Cometoides*; *Menosporidae* with *Menospora*, *Hoplorhynchus*; *Stylorhynchidae*, with *Stylorhynchus*, *Lophocephalus*; *Doliocystidae* with *Doliocystis*; and *Taeniocystidae*, with *Taeniocystis*. The curious genus *Selenidium* is somewhat apart.

Tribe B.—*Acephalina* (practically equivalent to *Aseptata*, *Haplocyta*).

The body never possesses an epimerite and is non-septate. Chiefly coelomic parasites of "worms," Holothurians and insects.

The *Aseptata* have not been so completely arranged in families as the *Septata*. Léger has distinguished two well-marked ones, but the remaining genera still want classifying more in detail. Fam. *Gonosporidae*, with *Gonospora*, *Diplodina*; and *Urosporidae*, with *Urosopora*, *Cystobia*, *Lithocystis*, *Ceratospora*; the genera *Monocystis*, *Diplocystis Lankesteria* and *Zygocystis* probably constitute another; *Pterospora* and, again, *Syncystis* are distinct; lastly, certain forms, *e.g. Zygosoma*, *Anchora* (*Anchorina*), are incompletely known.

There remains for mention the remarkable parasite, recently described by J. Nusbaum (**24**) under the appropriate name of *Schaudinnella henleae*, which inhabits the intestine of *Henlea leptodera*. Briefly enumerated, the principal features in the life-cycle are as follows. The young trophozoites (aseptate) are attached to the intestinal cells, but practically entirely extracellular. Association is very primitive in character and indiscriminate; it takes place indifferently between individuals which will give rise to gametes of the same or opposite sex. Often it is only temporary; at other times it is multiple, several adults becoming more or less enclosed in a gelatinous investment. Nevertheless, in no case does true encystment occur, the sex-cells being developed practically free. The female gametes are large and egg-like; the males, minute and sickle-like, but with no flagellum and apparently non-motile. While many of the zygotes ("amphionts") resulting from copulation pass out to the exterior, to infect a new host, others, possessing a more delicate investing-membrane, penetrate in between the intestinal cells, producing a further infection (auto-infection). Numerous sporozoites are formed in each zygote. It will be seen that *Schaudinnella* is a practically unique form. While, on the one hand, it recalls the Gregarines in many ways, on the other hand it differs widely from them in several characteristic features, being primitive in some respects, but highly specialized in others, so that it cannot be properly included in the order. *Schaudinnella* rather represents a primitive Ectosporan parasite, which has proceeded upon a line of its own, intermediate between the Gregarines and Coccidia.

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(H. M. Wo.)

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1 Figures 1, 2, 6, 7, 10, 11, 12 and 16 are redrawn from Wasielewski's *Sporozoenkunde*, by permission of the author and of the publisher, Gustav Fischer, Jena.

GRÉGOIRE, HENRI (1750-1831), French revolutionist and constitutional bishop of Blois, was born at Vého near Lunéville, on the 4th of December 1750, the son of a peasant. Educated at the Jesuit college at Nancy, he became curé of Emberménil and a teacher at the Jesuit school at Pont-à-Mousson. In 1783 he was crowned by the academy of Nancy for his *Éloge de la poésie*, and in 1788 by that of Metz for an *Essai sur la régénération physique et morale des Juifs*. He was elected in 1789 by the clergy of the *bailliage* of Nancy to the states-general, where he soon became conspicuous in the group of clerical and lay deputies of Jansenist or Gallican sympathies who supported the Revolution. He was among the first of the clergy to join the third estate, and contributed largely to the union of the three orders; he presided at the permanent sitting of sixty-two hours while the Bastille was being attacked by the people, and made a vehement speech against the enemies of the nation. He subsequently took a leading share in the abolition of the privileges of the nobles and the Church. Under the new civil constitution of the clergy, to which he was the first priest to take the oath (December 27, 1790), he was elected bishop by two departments. He selected that of Loire-et-Cher, taking the old title of bishop of Blois, and for ten years (1791-1801) ruled his diocese with exemplary zeal. An ardent republican, it was he who in the first session of the National Convention (September 21, 1792) proposed the motion for the abolition of the kingship, in a speech in which occurred the memorable phrase that "kings are in the moral order what monsters are in the natural." On the 15th of November he delivered a speech in which he demanded that the king should be brought to trial, and immediately afterwards was elected president of the Convention, over which he presided in his episcopal dress. During the trial of Louis XVI., being absent with other three colleagues on a mission for the union of Savoy to France, he along with them wrote a letter urging the condemnation of the king, but omitting the words *à mort*; and he endeavoured to save the life of the king by proposing in the Convention that the penalty of death should be suspended.

When on the 7th of November 1793 Gobel, bishop of Paris, was intimidated into resigning his episcopal office at the bar of the Convention, Grégoire, who was temporarily absent from the sitting, hearing what had happened, hurried to the hall, and in the face of a howling mob of deputies refused to abjure either his religion or his office. He was prepared to face the death which he expected; but his courage, a rare quality at that time, won the day, and the hubbub subsided in cries of "Let Grégoire have his way!" Throughout the Terror, in spite of attacks in the Convention, in the press, and on placards posted at the street corners, he appeared in the streets in his episcopal dress and daily read mass in his house. After Robespierre's fall he was the first to advocate the reopening of the churches (speech of December 21, 1794). He also exerted himself to get measures put in execution for restraining the vandalistic fury against the monuments of art, extended his protection to artists and men of letters, and devoted much of his attention to the reorganization of the public libraries, the

establishment of botanic gardens, and the improvement of technical education. He had taken during the Constituent Assembly a great interest in Negro emancipation, and it was on his motion that men of colour in the French colonies were admitted to the same rights as whites. On the establishment of the new constitution, Grégoire was elected to the Council of 500, and after the 18th Brumaire he became a member of the Corps Législatif, then of the Senate (1801). He took the lead in the national church councils of 1797 and 1801; but he was strenuously opposed to Napoleon's policy of reconciliation with the Holy See, and after the signature of the concordat he resigned his bishopric (October 8, 1801). He was one of the minority of five in the Senate who voted against the proclamation of the empire, and he opposed the creation of the new nobility and the divorce of Napoleon from Josephine; but notwithstanding this he was subsequently created a count of the empire and officer of the Legion of Honour. During the later years of Napoleon's reign he travelled in England and Germany, but in 1814 he had returned to France and was one of the chief instigators of the action that was taken against the empire.

To the clerical and ultra-royalist faction which was supreme in the Lower Chamber and in the circles of the court after the second Restoration, Grégoire, as a revolutionist and a schismatic bishop, was an object of double loathing. He was expelled from the Institute and forced into retirement. But even in this period of headlong reaction his influence was felt and feared. In 1814 he had published a work, *De la constitution française de l'an 1814*, in which he commented on the Charter from a Liberal point of view, and this reached its fourth edition in 1819. In this latter year he was elected to the Lower Chamber by the department of Isère. By the powers of the Quadruple Alliance this event was regarded as of the most sinister omen, and the question was even raised of a fresh armed intervention in France under the terms of the secret treaty of Aix-la-Chapelle. To prevent such a catastrophe Louis XVIII. decided on a modification of the franchise; the Dessolle ministry resigned; and the first act of Decazes, the new premier, was to carry a vote in the chamber annulling the election of Grégoire. From this time onward the ex-bishop lived in retirement, occupying himself in literary pursuits and in correspondence with most of the eminent savants of Europe; but as he had been deprived of his pension as a senator he was compelled to sell his library to obtain means of support. He died on the 20th of May 1831.

To the last Grégoire remained a devout Catholic, exactly fulfilling all his obligations as a Christian and a priest; but he refused to budge an inch from his revolutionary principles. During his last illness he confessed to his parish *curé*, a priest of Jansenist sympathies, and expressed his desire for the last sacraments of the Church. These the archbishop of Paris would only concede on condition that he would retract his oath to the civil constitution of the clergy, which he peremptorily refused to do. Thereupon, in defiance of the archbishop, the abbé Baradère gave him the *viaticum*, while the rite of extreme unction was administered by the abbé Guillon, an opponent of the civil constitution, without consulting the archbishop or the parish curé. The attitude of the archbishop roused great excitement in Paris, and the government had to take precautions to avoid a repetition of the riots which in the preceding February had led to the sacking of the church of St Germain l'Auxerrois and the archiepiscopal palace. On the day after his death Grégoire's funeral was celebrated at the church of the Abbaye-aux-Bois; the clergy of the church had absented themselves in obedience to the archbishop's orders, but mass was sung by the abbé Grieu assisted by two clergy, the catafalque being decorated with the episcopal insignia. After the hearse set out from the church the horses were unyoked, and it was dragged by students to the cemetery of Montparnasse, the cortège being followed by a sympathetic crowd of some 20,000 people.

Whatever his merits as a writer or as a philanthropist, Grégoire's name lives in history mainly by reason of his wholehearted effort to prove that Catholic Christianity is not irreconcilable with modern conceptions of political liberty. In this effort he was defeated, mainly because the Revolution, for lack of experience in the right use of liberty, changed into a military despotism which allied itself with the spiritual despotism of Rome; partly because, when the Revolution was overthrown, the parties of reaction sought salvation in the "union of altar and throne." Possibly Grégoire's Gallicanism was fundamentally irreconcilable with the Catholic idea of authority. At least it made their traditional religion possible for those many French Catholics who clung passionately to the benefits the Revolution had brought them; and had it prevailed, it might have spared France and the world that fatal gulf between Liberalism and Catholicism which Pius IX.'s Syllabus of 1864 sought to make impassable.

Besides several political pamphlets, Grégoire was the author of *Histoire des sectes religieuses, depuis le commencement du siècle dernier jusqu'à l'époque actuelle* (2 vols., 1810); *Essai historique sur les libertés de l'église gallicane* (1818); *De l'influence du Christianisme sur la condition des femmes* (1821); *Histoire des confesseurs des empereurs, des rois, et d'autres princes* (1824); *Histoire du mariage des prêtres en France* (1826).

Grégoireana, ou résumé général de la conduite, des actions, et des écrits de M. le comte Henri Grégoire, preceded by a biographical notice by Cousin d'Avalon, was published in 1821; and the *Mémoires ... de Grégoire*, with a biographical notice by H. Carnot, appeared in 1837 (2 vols.). See also A. Debidour, *L'Abbé Grégoire* (1881); A. Gazier, Études sur l'histoire religieuse de la Révolution Française (1883); L. Maggiolo, La Vie et les œuvres de l'abbé Grégoire (Nancy, 1884), and numerous articles in *La Révolution Française*; E. Meaume, *Étude hist. et biog. sur les Lorrains révolutionnaires* (Nancy, 1882); and A. Gazier, *Études sur l'histoire religieuse de la Révolution Française* (1887).

GREGORAS, NICEPHORUS (*c.* 1295-1360), Byzantine historian, man of learning and religious controversialist, was born at Heraclea in Pontus. At an early age he settled at Constantinople, where his reputation for learning brought him under the notice of Andronicus II., by whom he was appointed Chartophylax (keeper of the archives). In 1326 Gregoras proposed (in a still extant treatise) certain reforms in the calendar, which the emperor refused to carry out for fear of disturbances; nearly two hundred years later they were introduced by Gregory XIII. on almost the same lines. When Andronicus was dethroned (1328) by his grandson Andronicus III., Gregoras shared his downfall and retired into private life. Attacked by Barlaam, the famous monk of Calabria, he was with difficulty persuaded to come forward and meet him in a war of words, in which Barlaam was worsted. This greatly enhanced his reputation and brought him a large number of pupils. Gregoras remained loyal to the elder Andronicus to the last, but after his death he succeeded in gaining the favour of his grandson, by whom he was appointed to conduct the unsuccessful negotiations (for a union of the Greek and Latin churches) with the ambassadors of Pope John XXII. (1333). Gregoras subsequently took an important part in the Hesychast controversy, in which he violently opposed Gregorius Palamas, the chief supporter of the sect. After the doctrines of Palamas had been recognized at the synod of 1351, Gregoras, who refused to acquiesce, was practically imprisoned in a monastery for two years. Nothing is known of the end of his life. His chief work is his *Roman History*, in 37 books, of the years 1204 to 1359. It thus partly supplements and partly continues the work of George Pachymeres. Gregoras shows considerable industry, but his style is pompous and affected. Far too much space is devoted to religious matters and dogmatic quarrels. This work and that of John Cantacuzene supplement and correct each other, and should be read together. The other writings of Gregoras, which (with a few exceptions) still remain unpublished, attest his great versatility. Amongst them may be mentioned a history of the dispute with Palamas; biographies of his uncle and early instructor John, metropolitan of Heraclea, and of the martyr Codratus of Antioch; funeral orations for Theodore Metochita, and the two emperors Andronicus; commentaries on the wanderings of Odysseus and on Synesius's treatise on dreams; tracts on orthography and on words of doubtful meaning; a philosophical dialogue called *Florentius or Concerning Wisdom*; astronomical treatises on the date of Easter and the preparation of the astrolabe; and an extensive correspondence.

Editions: in Bonn *Corpus scriptorum hist. Byz.*, by L. Schopen and I. Bekker, with life and list of works by J. Boivin (1829-1855); J. P. Migne, *Patrologia graeca*, cxlviii., cxlix.; see also C. Krumbacher, *Geschichte der byzantinischen Litteratur* (1897).

GREGOROVIUS, FERDINAND (1821-1891), German historian, was born at Neidenburg on the 19th of January 1821, and studied at the university of Königsberg. After spending some years in teaching he took up his residence in Italy in 1852, remaining in that country for over twenty years. He was made a citizen of Rome, and he died at Munich on the 1st of May 1891. Gregorovius's interest in and acquaintance with Italy and Italian history is mainly responsible for his great book, *Geschichte der Stadt Rom im Mittelalter* (Stuttgart, 1859-1872, and other editions), a work of much erudition and interest, which has been translated into English by A. Hamilton (13 vols., 1894-1900), and also into Italian at the expense of the Romans (Venice, 1874-1876). It deals with the history of Rome from about A.D. 400 to the death of Pope Clement VII. in 1534, and in the words of its author it describes "how, from the time of Charles the Great to that of Charles V., the historic system of the papacy remained

inseparable from that of the Empire." The other works of Gregorovius include: *Geschichte des Kaisers Hadrian und seiner Zeit* (Königsberg, 1851), English translation by M. E. Robinson (1898); *Corsica* (Stuttgart, 1854), English translation by R. Martineau (1855); *Lucrezia Borgia* (Stuttgart, 1874), English translation by J. L. Garner (1904); *Die Grabdenkmäler der Päpste* (Leipzig, 1881), English translation by R. W. Seton-Watson (1903); *Wanderjahre in Italien* (5 vols., Leipzig, 1888-1892); *Geschichte der Stadt Athen im Mittelalter* (1889); *Kleine Schriften zur Geschichte der Kultur* (Leipzig, 1887-1892); and *Urban VIII. im Widerspruch zu Spanien und dem Kaiser* (Stuttgart, 1879). This last work was translated into Italian by the author himself (Rome, 1879). Gregorovius was also something of a poet; he wrote a drama, *Der Tod des Tiberius* (1851), and some *Gedichte* (Leipzig, 1891).

His *Römische Tagebücher* were edited by F. Althaus (Stuttgart, 1892), and were translated into English as the *Roman Journals of F. Gregorovius*, by A. Hamilton (1907).

GREGORY, ST (*c.* 213-*c.* 270), surnamed in later ecclesiastical tradition Thaumaturgus (the miracle-worker), was born of noble and wealthy pagan parents at Neocaesarea in Pontus, about A.D. 213. His original name was Theodorus. He took up the study of civil law, and, with his brother Athenodorus, was on his way to Berytus to complete his training when at Caesarea he met Origen, and became his pupil and then his convert (A.D. 233). In returning to Cappadocia some five years after his conversion, it had been his original intention to live a retired ascetic life (Eus. *H.E.* vi. 30), but, urged by Origen, and at last almost compelled by Phaedimus of Amasia, his metropolitan, neither of whom was willing to see so much learning, piety and masculine energy practically lost to the church, he, after many attempts to evade the dignity, was consecrated bishop of his native town (about 240). His episcopate, which lasted some thirty years, was characterized by great missionary zeal, and by so much success that, according to the (doubtless somewhat rhetorical) statement of Gregory of Nyssa, whereas at the outset of his labours there were only seventeen Christians in the city, there were at his death only seventeen persons in all who had not embraced Christianity. This result he achieved in spite of the Decian persecution (250-251), during which he had felt it to be his duty to absent himself from his diocese, and notwithstanding the demoralizing effects of an irruption of barbarians (Goths and Boranians) who laid waste the diocese in A.D. 253-254. Gregory, although he has not always escaped the charge of Sabellianism, now holds an undisputed place among the fathers of the church; and although the turn of his mind was practical rather than speculative, he is known to have taken an energetic part in most of the doctrinal controversies of his time. He was active at the first synod of Antioch (A.D. 264-265), which investigated and condemned the heresies of Paul of Samosata; and the rapid spread in Pontus of a Trinitarianism approaching the Nicene type is attributed in large measure to the weight of his influence. Gregory is believed to have died in the reign of Aurelian, about the year 270, though perhaps an earlier date is more probable. His festival (semiduplex) is observed by the Roman Catholic Church on the 17th of November.

For the facts of his biography we have an outline of his early years in his eulogy on Origen, and incidental notices in the writings of Eusebius, of Basil of Caesarea and Jerome. Gregory of Nyssa's untrustworthy panegyric represents him as having wrought miracles of a very startling description; but nothing related by him comes near the astounding narratives given in the *Martyrologies*, or even in the *Breviarium Romanum*, in connexion with his name.

The principal works of Gregory Thaumaturgus are the *Panegyricus in Origenem* (Εἰς Ὠριγένην πανηγυρικὸς λόγος), which he wrote when on the point of leaving the school of that great master (it contains a valuable minute description of Origen's mode of instruction), a *Metaphrasis in Ecclesiasten*, characterized by Jerome as "short but useful"; and an *Epistola canonica*, which treats of the discipline to be undergone by those Christians who under pressure of persecution had relapsed into paganism, but desired to be restored to the privileges of the Church. It gives a good picture of the conditions of the time, and shows Gregory to be a true shepherd (cf. art PENANCE). The Ἔκθεσις πίστεως (*Expositio fidei*), a short creed usually attributed to Gregory, and traditionally alleged to have been received by him immediately in vision from the apostle John himself, is probably authentic. A sort of Platonic dialogue of doubtful authenticity "on the impassivity and the passivity of God" in Syriac is in the British Museum.

Editions: Gerhard Voss (Mainz, 1604), Fronto Ducäus (Paris, 1622), Migne, Patr. Graec. x. 963.

Translations: S. D. F. Salmond in *Ante-Nicene Fathers*, vi.; *Lives*, by Pallavicini (Rome, 1644); J. L. Boye (Jena, 1709); H. R. Reynolds (*Dict. Chr. Biog.* ii.); G. Krüger, *Early Chr. Lit.* 226; Herzog-Hauck, *Realencyk.* vii. (where full bibliographies are given).

GREGORY, ST, OF NAZIANZUS (329-389), surnamed Theologus, one of the four great fathers of the Eastern Church, was born about the year A.D. 329, at or near Nazianzus, Cappadocia. His father, also named Gregory, had lately become bishop of the diocese; his mother, Nonna, exercised a powerful influence over the religious convictions of both father and son. Gregory visited successively the two Caesareas, Alexandria and Athens, as a student of grammar, mathematics, rhetoric and philosophy; at Athens he had for fellow-students Basil (*q.v.*), who afterwards became bishop of Caesarea, and Julian, afterwards emperor. Shortly after his return to his father's house at Nazianzus (about the year 360) Gregory received baptism. He resolved to give himself to the service of religion; but for some time, and indeed more or less throughout his whole life, was in a state of hesitation as to the form which that service ought to take. Strongly inclined by nature and education to a contemplative life spent among books and in the society of congenial friends, he was continually urged by outward circumstances, as well as by an inward call, to active pastoral labour. The spirit of refined intellectual monasticism, which clung to him through life and never ceased to struggle for the ascendancy, was about this time strongly encouraged by his intercourse with Basil, who induced him to share the exalted pleasures of his retirement in Pontus. To this period belongs the preparation of the Φιλοκαλία, a sort of chrestomathy compiled by the two friends from the writings of Origen. But the events which were stirring the political and ecclesiastical life of Cappadocia, and indeed of the whole Roman world, made a career of learned leisure difficult if not impossible to a man of Gregory's position and temperament. The emperor Constantius, having by intrigue and intimidation succeeded in thrusting a semi-Arian formula upon the Western bishops assembled at Ariminum in Italy, had next attempted to follow the same course with the Eastern episcopate. The aged bishop of Nazianzus having yielded to the imperial threats, a great storm arose among the monks of the diocese, which was only quelled by the influence of the younger Gregory, who shortly afterwards (about 361) was ordained to the priesthood. After a vain attempt to evade his new duties and responsibilities by flight, he appears to have continued to act as a presbyter in his father's diocese without interruption for some considerable time; and it is probable that his two *Invectives* against Julian are to be assigned to this period. Subsequently (about 372), under a pressure which he somewhat resented, he allowed himself to be nominated by Basil as bishop of Sasima, a miserable little village some 32 m. from Tyana; but he seems hardly, if at all, to have assumed the duties of this diocese, for after another interval of "flight" we find him once more (about 372-373) at Nazianzus, assisting his aged father, on whose death (374) he retired to Seleucia in Isauria for a period of some years. Meanwhile a more important field for his activities was opening up. Towards 378-379 the small and depressed remnant of the orthodox party in Constantinople sent him an urgent summons to undertake the task of resuscitating their cause, so long persecuted and borne down by the Arians of the capital. With the accession of Theodosius to the imperial throne, the prospect of success to the Nicene doctrine had dawned, if only it could find some courageous and devoted champion. The fame of Gregory as a learned and eloquent disciple of Origen, and still more of Athanasius, pointed him out as such a defender; nor could he resist the appeal made to him, although he took the step reluctantly. Once arrived in Constantinople, he laboured so zealously and well that the orthodox party speedily gathered strength; and the small apartment in which they had been accustomed to meet was soon exchanged for a vast and celebrated church which received the significant name of Anastasia, the Church of the Resurrection. Among the hearers of Gregory were to be found, not only churchmen like Jerome and Evagrius, but also heretics and pagans; and it says much for the sound wisdom and practical tact of the preacher that he set himself less to build up and defend a doctrinal position than to urge his flock to the cultivation of the loving Christian spirit which cherishes higher aims than mere heresy hunting or endless disputation. Doctrinal, nevertheless, he was, as is abundantly shown by the famous five discourses on the Trinity, which earned for him the distinctive appellation of θεολόγος. These orations are the finest exposition of the Catholic doctrine of the Trinity as conceived by the orthodox teachers of the East, and they were directed especially against the Eunomians and Macedonians. "There is perhaps no single book in Greek patristic literature to which the student who desires to gain an exact and comprehensive view of Greek theology can be more confidently referred." With the

arrival of Theodosius in 380 came the visible triumph of the orthodox cause; the metropolitan see was then conferred upon Gregory, and after the assembling of the second ecumenical council in 381 he received consecration from Meletius. In consequence, however, of a spirit of discord and envy which had manifested itself in connexion with this promotion, he soon afterwards resigned his dignity and withdrew into comparative retirement. The rest of his days were spent partly at Nazianzus in ecclesiastical affairs, and partly on his neighbouring patrimonial estate at Arianzus, where he followed his favourite literary pursuits, especially poetical composition, until his death, which occurred in 389 or 390. His festival is celebrated in the Eastern Church on the 25th and 30th of January, in the Western on the 9th of May (duplex).

His extant works consist of poems, epistles and orations. The poems, which include epigrams, elegies and an autobiographical sketch, have been frequently printed, the *editio princeps* being the Aldine (1504). Other editions are those of Tollius (1696) and Muratori (1709); a volume of *Carmina selecta* also has been edited by Dronke (1840). The tragedy entitled Χριστὸς πάσχων usually included is certainly not genuine. Gregory's poetry did not absorb his best energies; it was adopted in his later years as a recreation rather than as a serious pursuit; thus it is occasionally delicate, graphic, beautiful, but it is not sustained. Of the hymns none have passed into ecclesiastical use. The letters are entitled to a higher place in literature. They are always easy and natural; and there is nothing forced in the manner in which their acute, witty and profound sayings are introduced. Those to Basil introduce us to the story of a most romantic friendship, those to Cledonius have theological value for their bearing on the Apollinarian controversy. As an orator he was so facile, vigorous and persuasive, that men forgot his small stature and emaciated countenance. Forty-five orations are extant. Gregory was less an independent theologian than an interpreter. He was influenced by Athanasius in his Christology, by Origen in his anthropology, for, though teaching original sin and deriving human mortality from the Fall, he insists on the ability of the human will to choose the good and to co-operate in the work of salvation with the will of God. Though possessed neither of Basil's gift of government nor of Gregory of Nyssa's power of speculative thought, he worthily takes a place in that triumvirate of Cappadocians whom the Catholic Church gratefully recognizes as having been, during the critical struggles in the latter half of the 4th century, the best defenders of its faith. The *Opera omnia* were first published by Hervagius (Basel, 1550); the subsequent editions have been those of Billius (Paris, 1609, 1611; aucta ex interpretatione Morelli, 1630), of the Benedictines (begun in 1778, but interrupted by the French Revolution and not completed until 1840, Caillau being the final editor) and of Migne. The *Theological Orations* (edited by A. J. Mason) were published separately at Cambridge in 1899.

Scattered notices of the life of Gregory Nazianzen are to be found in the writings of Socrates, Sozomen, Theodoret and Rufinus, as well as in his own letters and poems. The data derived from these sources do not always harmonize with the account of Suidas. The earlier modern authorities, such as Tillemont (*Mem. Eccl.* t. ix.) and Leclerc (*Bib. Univ.* t. xviii.), were used by Gibbon. See also C. Ullmann, *Gregorius von Nazianz, der Theologe* (1825; Eng. trans. by G. F. Coxe, M.A., 1857); A. Bénoit, *St Grégoire de Nazianze; sa vie, ses œuvres, et son époque* (1877); Montaut, *Revue critique de quelques questions historiques se rapportant à St Grégoire de Nazianze* (1879); F. W. Farrar, *Lives of the Fathers*, i. 491-582, and F. Loofs in Hauck-Herzog's *Realencyk. für prot. Theologie*, vii. 138.

GREGORY, ST, OF NYSSA (*c.* 331-*c.* 396), one of the four great fathers of the Eastern Church, designated by one of the later ecumenical councils as "a father of fathers," was a younger brother of Basil (the Great), bishop of Caesarea, and was born (probably) at Neocaesarea about A.D. 331. For his education he was chiefly indebted to his elder brother. At a comparatively early age he entered the church, and held for some time the office of anagnost or reader; subsequently he manifested a desire to devote himself to the secular life as a rhetorician, an impulse which was checked by the earnest remonstrances of Gregory of Nazianzus. Finally, in 371 or 372 he was ordained by his brother Basil to the bishopric of Nyssa, a small town in Cappadocia. Here he is usually said (but on inadequate data) to have adopted the opinion then gaining ground in favour of the celibacy of the clergy, and to have separated from his wife Theosebia, who became a deaconess in the church. His strict orthodoxy on the subject of the Trinity and the Incarnation, together with his vigorous eloquence, combined to make him peculiarly obnoxious to the Arian faction, which was at that time in the ascendant through the protection of the emperor Valens; and in 375, the

synod of Ancyra, convened by Demetrius the Arian governor of Pontus, condemned him for alleged irregularities in his election and in the administration of the finances of his diocese. In 376 he was deprived of his see, and Valens sent him into exile, whence he did not return till the publication of the edict of Gratian in 378. Shortly afterwards he took part in the proceedings of the synod which met at Antioch in Caria, principally in connexion with the Meletian schism. At the great ecumenical council held at Constantinople in 381, he was a conspicuous champion of the orthodox faith; according to Nicephorus, indeed, the additions made to the Nicene creed were entirely due to his suggestion, but this statement is of doubtful authority. That his eloquence was highly appreciated is shown by the facts that he pronounced the discourse at the consecration of Gregory of Nazianzus, and that he was chosen to deliver the funeral oration on the death of Meletius the first president of the council. In the following year, moreover (382), he was commissioned by the council to inspect and set in order the churches of Arabia, in connexion with which mission he also visited Jerusalem. The impressions he gathered from this journey may, in part at least, be gathered from his famous letter *De euntibus Hierosolyma*, in which an opinion strongly unfavourable to pilgrimages is expressed. In 383 he was probably again in Constantinople; where in 385 he pronounced the funeral orations of the princess Pulcheria and afterwards of the empress Placilla. Once more we read of him in 394 as having been present in that metropolis at the synod held under the presidency of Nectarius to settle a controversy which had arisen among the bishops of Arabia; in the same year he assisted at the consecration of the new church of the apostles at Chalcedon, on which occasion there is reason to believe that his discourse commonly but wrongly known as that Εἰς τὴν ἑαυτοῦ χειροτονίαν was delivered. The exact date of his death is unknown; some authorities refer it to 396, others to 400. His festival is observed by the Greek Church on the 10th of January; in the Western martyrologies he is commemorated on the 9th of March.

Gregory of Nyssa was not so firm and able an administrator as his brother Basil, nor so magnificent an orator as Gregory of Nazianzus, but he excelled them both, alike as a speculative and constructive theologian, and in the wide extent of his acquirements. His teaching, though strictly trinitarian, shows considerable freedom and originality of thought; in many points his mental and spiritual affinities with Origen show themselves with advantage, as in his doctrine of ἀποκατάστασις or final restoration. There are marked pantheistic tendencies, *e.g.* the inclusion of sin as a necessary part of the cosmical process, which make him akin to the pantheistic monophysites and to some modern thinkers.

His style has been frequently praised by competent authorities for sweetness, richness and elegance. His numerous works may be classified under five heads: (1) Treatises in doctrinal and polemical theology. Of these the most important is that *Against Eunomius* in twelve books. Its doctrinal thesis (which is supported with great philosophic acumen and rhetorical power) is the divinity and consubstantiality of the Word; incidentally the character of Basil, which Eunomius had aspersed, is vindicated, and the heretic himself is held up to scorn and contempt. This is the work which, most probably in a shorter draft, was read by its author when at Constantinople before Gregory Nazianzen and Jerome in 381 (Jerome, *De vir. ill.* 128). To the same class belong the treatise *To Ablavius*, against the tritheists; *On Faith*, against the Arians; *On Common Notions*, in explanation of the terms in current employment with regard to the Trinity; *Ten Syllogisms*, against the Manichaeans; *To Theophilus*, against the Apollinarians; an *Antirrhetic* against the same; *Against Fate*, a disputation with a heathen philosopher; *De anima et resurrectione*, a dialogue with his dying sister Macrina; and the *Oratio catechetica magna*, an argument for the incarnation as the best possible form of redemption, intended to convince educated pagans and Jews. (2) Practical treatises. To this category belong the tracts *On Virginity* and *On Pilgrimages*; as also the *Canonical Epistle* upon the rules of penance. (3) Expository and homiletical works, including the *Hexaëmeron*, and several series of discourses *On the Workmanship of Man*, *On the Inscriptions of the Psalms*, *On the Sixth Psalm*, *On the first three Chapters of Ecclesiastes*, *On Canticles*, *On the Lord's Prayer* and *On the Eight Beatitudes*. (4) Biographical, consisting chiefly of funeral orations. (5) Letters.

The only complete editions of the whole works are those by Fronton le Duc (Fronto Ducäus, Paris, 1615; with additions, 1618 and 1638) and by Migne. G. H. Forbes began an excellent critical edition, but only two parts of the first volume appeared (Burntisland, 1855 and 1861) containing the *Explicatio apologetica in hexaëmeron* and the *De opificio hominis*. Of the new edition projected by F. Oehler only the first volume, containing the *Opera dogmatica*, has appeared (1865). There have been numerous editions of several single treatises, as for example of the *Oratio catechetica* (J. G. Krabinger, Munich, 1838; J. H. Crawley, Cambridge, 1903), *De precatione* and *De anima et resurrectione*.

See F. W. Farrar, *Lives of the Fathers*, ii. 56-83, the monograph by J. Rupp (*Gregors, des Bischofs von Nyssa, Leben und Meinungen*, Leipzig, 1834), and compare P. Heyns (*Disputatio*

historico-theologica de Greg. Nyss., 1835), C. W. Möller (*Gregorii Nyss. doctrinam de hominis natura et illustravit et cum Origeniana comparavit*, 1854) and J. N. Stigler, *Die Psychologie des h. Gregors von Nyssa* (Regensburg, 1857), and many smaller monographs cited in Hauck-Herzog's *Realencyk. für prot. Theol.* vii. 149.

GREGORY, ST, OF TOURS (538-594), historian of the Franks, was born in the chief city of the Arverni (the modern Clermont-Ferrand) on the 30th of November 538. His real name was Georgius Florentius, Georgius being his grandfather's name and Florentius his father's. He was called Gregory after his maternal great-grandfather, the bishop of Langres. Gregory belonged to an illustrious senatorial family, many of whose members held high office in the church and bear honoured names in the history of Christianity. He was descended, it is said, from Vettius Epagathus, who was martyred at Lyons in 177 with St Pothinus; his paternal uncle, Gallus, was bishop of Clermont; his maternal grand-uncle, Nicetius (St Nizier), occupied the see of Lyons; and he was a kinsman of Euphronius, bishop of Tours.

Gregory lost his father early, and his mother Armentaria settled in the kingdom of Burgundy on an estate belonging to her near Cavaillon, where her son often visited her. Gregory was brought up at Clermont-Ferrand by his uncle Gallus and by his successor, Avitus, and there he received his education. Among profane authors he read the first six books of the *Aeneid* and Sallust's history of the Catiline conspiracy, but his education was mainly religious. The principles of religion he learnt from the Bible, Sulpicius Severus and some lives of saints, but to patristic literature and the subtleties of theology he remained a stranger. In 563, at the age of twenty-five, he was ordained deacon. Falling seriously ill, he went to Tours to seek a cure at the tomb of St Martin. At Tours he lived with Euphronius, and so great was the young man's popularity that, on the death of Euphronius in 573, the people unanimously designated him bishop.

At that time Tours belonged to Austrasia, and King Sigebert hastened to confirm Gregory's election. After the assassination of Sigebert (575), the province was ruled by Chilperic for nine years, during which period Gregory displayed the greatest energy in protecting his town and church from the Frankish king. He had to contend with Count Leudast, the governor of Tours; despite all the king's threats, he refused to give up Chilperic's son Meroving, who had sought refuge from his father's wrath at the sanctuary of St Martin; and he defended Bishop Pretextatus against Chilperic, by whom he had been condemned for celebrating the marriage of Merovech and Queen Brunhilda. In 580 Gregory was himself accused before a council at Berny of using abusive language against Queen Fredegond, but he cleared himself of the charge by an oath and was acquitted. On the death of Chilperic, Tours remained for two years (584-585) in the hands of Guntram, but when Guntram adopted his nephew Childebert, Sigebert's son, it again became Austrasian. This change was welcome to Gregory, who often visited the court. In 586 he was at Coblenz, and on his return to Yvois (the modern Carignan) visited the stylite Wulfilaic; in 588 we hear of him at Metz and also at Chalon-sur-Saône, whither he was sent to obtain from King Guntram the ratification of the pact of Andelot; in 593 he was at Orleans, where Childebert had just succeeded his uncle Guntram. In the intervals of these journeys he governed Tours with great firmness, repressing disorders and reducing the monks and nuns to obedience. He died on the 17th of November 594.

Gregory left many writings, of which he himself gives an enumeration at the end of his *Historia Francorum*: "Decem libros Historiarum, septem Miraculorum, unum de Vita Patrum scripsi; in Psalterii tractatu librum unum commentatus sum; de Cursibus etiam ecclesiasticis unum librum condidi." The ten books of history are discussed below. The seven books of miracles are divided into the *De gloria martyrum*, the *De virtutibus sancti Juliani*, four books of *Miracula sancti Martini*, and the *De gloria confessorum*, the last dealing mainly with confessors who had dwelt in the cities of Tours and Clermont. The *Vitae patrum* consists of twenty biographies of bishops, abbots and hermits belonging to Gaul. The commentary on the Psalms is lost, the preface and the titles of the chapters alone being extant. The treatise *De cursibus ecclesiasticis*, discovered in 1853, is a liturgical manual for determining the hour of divers nocturnal offices by the position of the stars. Gregory also left a life of St Andrew, translated from the Greek, and a history of the Seven Sleepers of Ephesus, translated from Syriac.

His most important work, however, is the *Historia Francorum*, which is divided into three parts. The first four books, which were composed at one time, cover the period from the

creation of the world to the death of Sigebert in 575. The first book, which is a mere compilation from the chronicles of St Jerome and Orosius, is of no value. The second book, from 397 to 511, deals with the invasions of the Franks, and is based on the histories of Sulpicius Alexander and Renatus Profuturus Frigeridus, now lost; on the catalogues of the bishops of Clermont and Tours; on some lives of saints, *e.g.* Remigius and Maxentius, now lost; on the annals of Arles and Angers, now lost; and on legends, either collected by Gregory himself from oral tradition, or cantilenes or epics written in the Latin and Germanic languages. In the third and fourth books the earlier part is based on materials collected from men older than himself; of the later events he was himself an eye-witness. The fifth and sixth books, up to the death of Chilperic (584), deal with matters within his own experience. The first six books are often separate in the MSS., and it was these alone that were used by the chronicler Fredegarius in his abridgment of Gregory's history. To the first six books Gregory subsequently added chapters on the bishops Salonius and Sagittarius, and on his quarrels with Felix of Nantes. The authenticity of these chapters has been undeservedly attacked by Catholic writers. Books vii. to x., from 584 to 591, were written in the form of a diary; of each important event, as it occurred, he inserted an account in his book. The last six books are of great historical value.

Gregory had an intimate knowledge of contemporary events. He was frequently at court, and he found Tours an excellent place for collecting information. The shrine of St Martin attracted the sick from all quarters, and the basilica of the saint was a favourite sanctuary for political refugees. Moreover, Tours was on the high road between the north and south of France, and was a convenient stage for travellers, the ambassadors going to and from Spain frequently halting there. Gregory plied every one with questions, and in this way gathered a great mass of detailed information. He was, besides, at great pains to be an impartial writer, but was not always successful. His devotion to Austrasia made him very bitter against, and perhaps unjust to, the sovereigns of Neustria, Chilperic and Fredegond. As an orthodox Christian, he had no good word for the Arians. He excuses the crimes of kings who protected the church, such as Clovis, Clotaire I. and Guntram, but had no mercy for those who violated ecclesiastical privileges. This attitude, no doubt, explains his hatred for Chilperic. But if Gregory's historical judgments are suspect, he at least concealed nothing and invented nothing; and we can correct his judgments by his own narrative. His history is a curious compound of artlessness and shrewdness. He was ignorant of the rules of grammar, confused genders and cases, and wrote in the vernacular Latin of his time, apart from certain passages which are especially elaborated and filled with poetical and elegant expressions. But in spite of his shortcomings he is an exceedingly attractive writer, and his mastery of the art of narrative has earned for him the name of the Herodotus of the barbarians.

T. Ruinart brought out a complete edition of Gregory's works at Paris in 1699. The best modern complete edition is that of W. Arndt and B. Krusch in *Mon. Germ. hist. script. rer. Merov.* (vol. i., 1885). Of the many editions of the *Historia Francorum* may be mentioned those of Guadet and Taranne in the *Soc. de l'hist. de France* (4 vols., with French translation, 1836-1838), of Omont (the first six books; a reproduction of the Corvey MS.) and of G. Collon (the last four books; a reproduction of the Brussels MS. No. 9, 403). Gregory's hagiographic works were published by H. Bordier in the *Soc. de l'hist. de France* (4 vols., with French translation, 1857-1864). Cf. J. W. Löbell, *Gregor von Tours und seine Zeit* (2nd ed., Leipzig, 1868); G. Monod, "Études critiques sur les sources de l'histoire mérovingienne" in the *Bibl. de l'École des Hautes Études* (1872); G. Kurth, "Grégoire de Tours et les études classiques au VI^{e} siècle" in the *Revue des questions historiques* (xxiv. 586 seq., 1878); Max Bonnet, *Le Latin de Grégoire de Tours* (Paris, 1890). For details, see Ulysse Chevalier, *Biobibliographie* (2nd ed.).

(C. Pf.)

GREGORY THE ILLUMINATOR, the reputed founder of the Armenian Church. His legend is briefly as follows. His father Anak, head of the Parthian clan of Suren, was bribed about the time of his birth (*c.* 257) by the Sassanid king of Persia to assassinate the Armenian king, Chosroes, who was of the old Arsacid dynasty, and father of Tiridates or Trdat, first Christian king of Armenia. Anak was slain by his victim's soldiers; Gregory was rescued by his Christian nurse, carried to Caesarea in Cappadocia, and brought up a Christian. Grown to manhood he took service under Tiridates, now king of Armenia, in order by his own fidelity to atone for his father's treachery. Presently at a feast of Anahite Gregory refused to assist his sovereign in offering pagan sacrifice, and his parentage being now revealed, was thrown into

a deep pit at Artashat, where he languished for fourteen years, during which persecution raged in Armenia.

The scene of the legend now shifts to Rome, where Diocletian falls in love with a lovely nun named Ripsimé; she, rather than gratify his passion, flees with her abbess Gaiana and several priests to Armenia. Diocletian asks her back of Tiridates, who meanwhile has fallen in love with her himself. He too is flouted, and in his rage tortures and slays her and her companions. The traditional date of this massacre is the 5th of October, A.D. 301. Providence, incensed at such cruelty, turns Tiridates into a wild boar, and afflicts his subjects with madness; but his sister, Chosrowidukht, has a revelation to bring Gregory back out of his pit. The king consents, the saint is acclaimed, the bodies of the thirty-seven martyrs solemnly interred, and the king, after fasting five, and listening to Gregory's homilies for sixty days, is healed. This all took place at Valarshapat, where Gregory, anxious to fix a site on which to build shrines for the relics of Ripsimé and Gaiana, saw the Son of God come down in a sheen of light, the stars of heaven attending, and smite the earth with a golden hammer till the nether world resounded to his blows. Three chapels were built on the spot, and Gregory raised his cross there and elsewhere for the people to worship, just as St Nino was doing about the same time in Georgia. There followed a campaign against the idols whose temples and books were destroyed. The time had now come for Gregory, who was still a layman and father of two sons, to receive ordination; so he went to Caesarea, where Leontius ordained and consecrated him catholicos or vicar-general of Armenia. This was sometime about 290, when Leontius may have acceded, though we first hear of him as bishop in 314.

Gregory's ordination at Caesarea is historical. The vision at Valarshapat was invented later by the Armenians when they broke with the Greeks, in order to give to their church the semblance, if not of apostolic, at least of divine origin.

According to Agathangelus, Tiridates went to Rome with Gregory, Aristaces, son of Gregory, and Albianos, head of the other priestly family, to make a pact with Constantine, newly converted to the faith, and receive a pallium from Silvester. The better sources make Sardica the scene of meeting and name Eusebius (of Nicomedia) as the prelate who attended Constantine. There is no reason to doubt that some such visit was made about the year 315, when the death of Maximin Daza left Constantine supreme. Eusebius testifies (*H.E.* ix. 8) that the Armenians were ardent Christians, and ancient friends and allies of the Roman empire when Maximin attacked them about the year 308. The conversion of Tiridates was probably a matter of policy. His kingdom was honeycombed with Christianity, and he wished to draw closer to the West, where he foresaw the victory of the new faith, in order to fortify his realm against the Sassanids of Persia. Following the same policy he sent Aristaces in 325 to the council of Nice. Gregory is related to have added a clause to the creed which Aristaces brought back; he became a hermit on Mount Sebuh about the year 332, and died there.

Is the Ripsimé episode mere legend? The story of the conversion of Georgia by St Nino in the same age is so full of local colour, and coheres so closely with the story of Ripsimé and Gaiana, that it seems over-sceptical to explain the latter away as a mere doublet of the legend of Prisca and Valeria. The historians Faustus of Byzant and Lazar of Pharp in the 5th century already attest the reverence with which their memory was invested. We know from many sources the prominence assigned to women prophets in the Phrygian church. Nino's story reads like that of such a female missionary, and something similar must underlie the story of her Armenian companions.

The history of Gregory by Agathangelus is a compilation of about 450, which was rendered into Greek 550. Professor Marr has lately published an Arabic text from a MS. in Sinai which seems to contain an older tradition. A letter of Bishop George of Arabia to Jeshu, a priest of the town Anab, dated 714 (edited by Dashian, Vienna, 1891), contains an independent tradition of Gregory, and styles him a Roman by birth.

In spite of legendary accretions we can still discern the true outlines and significance of his life. He did not really illumine or convert great Armenia, for the people were in the main already converted by Syrian missionaries to the Adoptionist or Ebionite type of faith which was dominant in the far East, and was afterwards known as Nestorianism. Marcionites and Montanists had also worked in the field. Gregory persuaded Tiridates to destroy the last relics of the old paganism, and carried out in the religious sphere his sovereign's policy of detaching Great Armenia from the Sassanid realm and allying it with the Graeco-Roman empire and civilization. He set himself to Hellenize or Catholicize Armenian Christianity, and in furtherance of this aim set up a hierarchy officially dependent on the Cappadocian. He in effect turned his country into a province of the Greek see of Cappadocia. This hierarchical tie was soon snapped, but the Hellenizing influence continued to work, and bore its most abundant fruit in the 5th century. His career was thus analogous to that of St Patrick in

Ireland.

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(F. C. C.)

GREGORY (*Gregorius*), the name of sixteen popes and one anti-pope.

SAINT GREGORY, surnamed the Great (*c.* 540-604), the first pope of that name, and the last of the four doctors of the Latin Church, was born in Rome about the year 540. His father was Gordianus "the regionary," a wealthy man of senatorial rank, owner of large estates in Sicily and of a palace on the Caelian Hill in Rome; his mother was Silvia, who is commemorated as a saint on the 3rd of November. Of Gregory's early period we know few details, and almost all the dates are conjectural. He received the best education to be had at the time, and was noted for his proficiency in the arts of grammar, rhetoric and dialectic. Entering on a public career he held, about 573, the high office of prefect of the city of Rome; but about 574, feeling irresistibly attracted to the "religious" life, he resigned his post, founded six monasteries in Sicily and one in Rome, and in the last—the famous monastery of St Andrew—became himself a monk. This grateful seclusion, however, he was not permitted long to enjoy. About 578 he was ordained "seventh deacon" (or possibly archdeacon) of the Roman Church, and in the following spring Pope Pelagius II. appointed him "apocrisiarius," or resident ambassador, at the imperial court in Constantinople. Here he represented the interests of his church till about 586, when he returned to Rome and was made abbot of St Andrew's monastery. His rule, though popular, was characterized by great severity, as may be inferred from the story of the monk Justus, who was denied Christian burial because he had secreted a small sum of money. About this time Gregory completed and published his well-known exposition of the book of Job, commenced in Constantinople: he also delivered lectures on the Heptateuch, the books of Kings, the Prophets, the book of Proverbs and the Song of Songs. To this period, moreover, Bede's incident of the English slave-boys (if indeed it be accepted as historical) ought to be assigned. Passing one day through the Forum, Gregory saw some handsome slaves offered for sale, and inquired their nation. "Angles," was the reply. "Good," said the abbot, "they have the faces of angels, and should be coheirs with the angels in heaven. From what province do they come?" "From Deira." "Deira. Yea, verily, they shall be saved from God's ire (*de ira*) and called to the mercy of Christ. How is the king of that country named?" "Ælla." "Then must Allelulia be sung in Ælla's land." Gregory determined personally to undertake the conversion of Britain, and with the pope's consent actually set out upon the mission, but on the third day of his journey he was overtaken by messengers recalling him to Rome. In the year 590 Pelagius II. died of the plague that was raging in the city; whereupon the clergy and people unanimously chose Gregory as his successor. The abbot did his best to avoid the dignity, petitioned the emperor Maurice not to ratify his election, and even meditated going into hiding; but, "while he was preparing for flight and concealment, he was seized and carried off and dragged to the basilica of St Peter," and there consecrated bishop, on the 3rd of September 590.

The fourteen years of Gregory's pontificate were marked by extraordinary vigour and activity. "He never rested," writes a biographer, "he was always engaged in providing for the interests of his people, or in writing some composition worthy of the church, or in searching out the secrets of heaven by the grace of contemplation." His mode of life was simple and ascetic in the extreme. Having banished all lay attendants from his palace, he surrounded himself with clerics and monks, with whom he lived as though he were still in a monastery. To the spiritual needs of his people he ministered with pastoral zeal, frequently appointing "stations" and delivering sermons; nor was he less solicitous in providing for their physical

necessities. Deaconries (offices of alms) and guest-houses were liberally endowed, and free distributions of food were made to the poor in the convents and basilicas. The funds for these and similar purposes were supplied from the Patrimony of St Peter—the papal estates in Italy, the adjacent islands, Gaul, Dalmatia and Africa. These extensive domains were usually administered by specially appointed agents,—rectors and defensors,—who resided on the spot; but the general superintendence devolved upon the pope. In this sphere Gregory manifested rare capacity. He was one of the best of the papal landlords. During his pontificate the estates increased in value, while at the same time the real grievances of the tenants were redressed and their general position was materially improved. Gregory's principal fault as a man of business was that he was inclined to be too lavish of his revenues. It is said that he even impoverished the treasury of the Roman Church by his unlimited charities.

Within the strict bounds of his patriarchate, *i.e.* the churches of the suburbicarian provinces and the islands, it was Gregory's policy to watch with particular care over the election and discipline of the bishops. With wise toleration he was willing to recognize local deviations from Roman usage (*e.g.* in the ritual of baptism and confirmation), yet he was resolute to withstand any unauthorized usurpation of rights and privileges. The following rules he took pains to enforce: that clerics in holy orders should not cohabit with their wives or permit any women, except those allowed by the canons, to live in their houses; that clerics accused on ecclesiastical or lesser criminal charges should be tried only in the ecclesiastical courts; that clerics in holy orders who had lapsed should "utterly forfeit their orders and never again approach the ministry of the altar"; that the revenues of each church should be divided by its bishop into four equal parts, to be assigned to the bishop, the clergy, the poor and the repair of the fabric of the church.

In his relations with the churches which lay outside the strict limits of his patriarchate, in northern Italy, Spain, Gaul, Africa and Illyricum and also in the East, Gregory consistently used his influence to increase the prestige and authority of the Roman See. In his view Rome, as the see of the Prince of the Apostles, was by divine right "the head of all the churches." The decrees of councils would have no binding force "without the authority and consent of the apostolic see": appeals might be made to Rome against the decisions even of the patriarch of Constantinople: all bishops, including the patriarchs, if guilty of heresy or uncanonical proceedings, were subject to correction by the pope. "If any fault is discovered in a bishop," Gregory wrote, "I know of no one who is not subject to the apostolic see." It is true that Gregory respected the rights of metropolitans and disapproved of unnecessary interference within the sphere of their jurisdiction canonically exercised; also that in his relations with certain churches (*e.g.* those in Africa) he found it expedient to abstain from any obtrusive assertion of Roman claims. But of his general principle there can be no doubt. His sincere belief in the apostolic authority of the see of St Peter, his outspoken assertion of it, the consistency and firmness with which in practice he maintained it (*e.g.* in his controversies with the bishops of Ravenna concerning the use of the pallium, with Maximus the "usurping" bishop of Salona, and with the patriarchs of Constantinople in respect of the title "ecumenical bishops"), contributed greatly to build up the system of papal absolutism. Moreover this consolidation of spiritual authority coincided with a remarkable development of the temporal power of the papacy. In Italy Gregory occupied an almost regal position. Taking advantage of the opportunity which circumstances offered, he boldly stepped into the place which the emperors had left vacant and the Lombard kings had not the strength to seize. For the first time in history the pope appeared as a political power, a temporal prince. He appointed governors to cities, issued orders to generals, provided munitions of war, sent his ambassadors to negotiate with the Lombard king and actually dared to conclude a private peace. In this direction Gregory went farther than any of his predecessors: he laid the foundation of a political influence which endured for centuries. "Of the medieval papacy," says Milman, "the real father is Gregory the Great."

The first monk to become pope, Gregory was naturally a strong supporter of monasticism. He laid himself out to diffuse the system, and also to carry out a reform of its abuses by enforcing a strict observance of the Rule of St Benedict (of whom, it may be noted, he was the earliest biographer). Two slight innovations were introduced: the minimum age of an abbess was fixed at sixty, and the period of novitiate was prolonged from one year to two. Gregory sought to protect the monks from episcopal oppression by issuing *privilegia*, or charters in restraint of abuses, in accordance with which the jurisdiction of the bishops over the monasteries was confined to spiritual matters, all illegal aggressions being strictly prohibited. The documents are interesting as marking the beginning of a revolution which eventually emancipated the monks altogether from the control of their diocesans and brought them under the direct authority of the Holy See. Moreover Gregory strictly forbade monks to

minister in parish churches, ordaining that any monk who was promoted to such ecclesiastical cure should lose all rights in his monastery and should no longer reside there. “The duties of each office separately are so weighty that no one can rightly discharge them. It is therefore very improper that one man should be considered fit to discharge the duties of both, and that by this means the ecclesiastical order should interfere with the monastic life, and the rule of the monastic life in turn interfere with the interests of the churches.”

Once more, Gregory is remembered as a great organizer of missionary enterprise for the conversion of heathens and heretics. Most important was the two-fold mission to Britain—of St Augustine in 596, of Mellitus, Paulinus and others in 601; but Gregory also made strenuous efforts to uproot paganism in Gaul, Italy, Sicily, Sardinia and Corsica, Arianism in Spain, Donatism in Africa, Manichaeism in Sicily, the heresy of the Three Chapters in Istria and northern Italy. In respect of the methods of conversion which he advocated he was not less intolerant than his contemporaries. Towards the Jews, however, he acted with exceptional lenity, protecting them from persecution and securing them the enjoyment of their legal privileges. The so-called “simoniacal heresy,” particularly prevalent in Gaul, Illyricum and the East, be repeatedly attacked; and against the Gallican abuse of promoting laymen to bishoprics he protested with vigour.

The extent and character of Gregory’s works in connexion with the liturgy and the music of the church is a subject of dispute. If we are to credit a 9th century biographer, Gregory abbreviated and otherwise simplified the Sacramentary of Gelasius, producing a revised edition with which his own name has become associated, and which represents the groundwork of the modern Roman Missal. But though it is certain that he introduced three changes in the liturgy itself (viz. the addition of some words in the prayer *Hanc igitur*, the recitation of the Pater Noster at the end of the Canon immediately before the fraction of the bread, and the chanting of the Allelulia after the Gradual at other times besides the season of Easter) and two others in the ceremonial connected therewith (forbidding deacons to perform any musical portion of the service except the chanting of the gospel, and subdeacons to wear chasubles), neither the external nor the internal evidence appears to warrant belief that the Gregorian Sacramentary is his work. Ecclesiastical tradition further ascribes to Gregory the compilation of an Antiphonary, the revision and rearrangement of the system of church music, and the foundation of the Roman *schola cantorum*. It is highly doubtful, however, whether he had anything to do either with the Antiphonary or with the invention or revival of the *cantus planus*; it is certain that he was not the founder of the Roman singing-school, though he may have interested himself in its endowment and extension.

Finally, as Fourth Doctor of the Latin Church, Gregory claims the attention of theologians. He is the link between two epochs. The last of the great Latin Fathers and the first representative of medieval Catholicism he brings the dogmatic theology of Tertullian, Ambrose and Augustine into relation with the Scholastic speculation of later ages. “He connects the Graeco-Roman with the Romano-Germanic type of Christianity.” His teaching, indeed, is neither philosophical, systematic nor truly original. Its importance lies mainly in its simple, popular summarization of the doctrine of Augustine (whose works Gregory had studied with infinite care, but not always with insight), and in its detailed exposition of various religious conceptions which were current in the Western Church, but had not hitherto been defined with precision (*e.g.* the views on angelology and demonology, on purgatory, the Eucharistic Sacrifice, and the efficacy of relics). In his exposition of such ideas Gregory made a distinct advance upon the older theology and influenced profoundly the dogmatic development of the future. He imparted a life and impulse to prevailing tendencies, helping on the construction of the system hereafter to be completed in Scholasticism. He gave to theology a tone and emphasis which could not be disregarded. From his time to that of Anselm no teacher of equal eminence arose in the Church.

Gregory died on the 12th of March 604, and was buried the same day in the portico of the basilica of St Peter, in front of the sacristy. Translations took place in the 9th, 15th and 17th centuries, and the remains now rest beneath the altar in the chapel of Clement VIII. In respect of his character, while most historians agree that he was a really great man, some deny that he was also a great saint. The worst blot on his fair fame is his adulatory congratulation of the murderous usurper Phocas; though his correspondence with the Frankish queen Brunhilda, and the series of letters to and concerning the renegade monk Venantius also present problems which his admirers find difficult of solution. But while it may be admitted that Gregory was inclined to be unduly subservient to the great, so that at times he was willing to shut his eyes to the vices and even the crimes of persons of rank; yet it cannot fairly be denied that his character as a whole was singularly noble and unselfish. His life was entirely dominated by the religious motive. His sole desire was to promote the glory of God and of his church. At all times he strove honestly to live up to the light that was in

him. “His goal,” says Lau, “was always that which he acknowledged as the best.” Physically, Gregory was of medium height and good figure. His head was large and bald, surrounded with a fringe of dark hair. His face was well-proportioned, with brown eyes, aquiline nose, thick and red lips, high-coloured cheeks, and prominent chin sparsely covered with a tawny beard. His hands, with tapering fingers, were remarkable for their beauty.

Gregory’s Works.—The following are now universally admitted to be genuine:—*Epistolarum libri xiv.*, *Moralium libri xxxv.*, *Regulae pastoralis liber*, *Dialogorum libri iv.*, *Homiliarum in Ezechielem prophetam libri ii.*, *Homiliarum in Evangelia libri ii.* These are all printed in Migne’s *Patrologia Latina*. The *Epistolae*, however, have been published separately by P. Ewald and L. M. Hartmann in the *Monumenta Germaniae historica* (Berlin, 1887-1899), and this splendid edition has superseded all others. The question of the chronological reconstruction of the *Register* is dealt with by Ewald in his celebrated article in the *Neues Archiv der Gesellschaft für ältere deutsche Geschichtskunde*, iii. pp. 433-625; and briefly by T. Hodgkin, *Italy and her Invaders*, v. 333-343. For information about these writings of Gregory, consult especially G. J. T. Lau, *Gregor I. der Grosse*, pt. ii. chap. i. *Die Schriften Gregors* and F. Homes Dudden, *Gregory the Great* (see Index II. B.). In addition to the above-mentioned works there are printed under Gregory’s name in Migne’s *Patrologia Latina*, vol. lxxix., the following:—*Super Cantico Canticorum expositio*, *In librum primum Regum variarum expositionum libri vi.*, *In septem psalmos poenitentiales expositio* and *Concordia quorundam teslimoniorum s. scripturae*. But (with the possible exception of the first) none of these treatises are of Gregorian authorship. See the discussions in Migne, Lau and Dudden.

Authorities.—(*a*) The principal ancient authorities for the life and works of Gregory are given in their chronological order. They are: Gregory of Tours, *Historia Francorum*, x. 1; *Liber pontificalis*, “Vita Gregorii Magni”; Isidore of Seville, *De vir. illustr.* 40, and Ildefonsus of Toledo, *De vir. illustr.* i.; an anonymous *Vita Gregorii* (of English authorship) belonging to the monastery of St Gall, discovered by Ewald and published by F. A. Gasquet, *A Life of Pope St Gregory the Great* (1904); Bede, *Historia ecclesiastica*, ii. c. 1; Paul the Deacon, *Vita Gregorii Magni* (770-780); John the Deacon, *Vita Gregorii* (872-882). (*b*) Recent Literature: J. Barmby, *Gregory the Great* (1892); T. Bonsmann, *Gregor I. der Grosse, ein Lebensbild* (1890); F. Homes Dudden, *Gregory the Great: his place in History and Thought* (2 vols., 1905); G. J. T. Lau, *Gregor I. der Grosse nach seinem Leben und seiner Lehre geschildert* (1845); C. Wolfsgruber, *Gregor der Grosse* (1897). See also F. Gregorovius, *Rome in the Middle Ages* (Eng. trans.) ii. 16-103; T. Hodgkin, *Italy and her Invaders*, v. cc. 7-10; H. K. Mann, *The Lives of the Popes*, i. 1-250; F. W. Kellett, *Pope Gregory the Great and his Relations with Gaul*; L. Pingaud, *La Politique de Saint Grégoire le Grand*; W. Wisbaum, *Die wichtigsten Richtungen und Ziele der Tätigkeit des Papstes Gregors des Grossen*; W. Hohaus, *Die Bedeutung Gregors des Grossen als liturgischer Schriftsteller*; E. G. P. Wyatt, *St Gregory and the Gregorian Music*; and the bibliographies of Gregory in Chevalier, *Répertoire des sources historiques du moyen âge*, and A. Potthast, *Bibliotheca historica medii aevi*.

(F. H. D.)

Gregory II., pope from 715 to 731, succeeded Constantine I., whom he accompanied from Constantinople in 710. Gregory did all in his power to promote the spread of Christianity in Germany, and gave special encouragement to the mission of St Boniface, whom he consecrated bishop in 722. He was a staunch adherent of the East Roman empire, which still exercised sovereignty over Rome, Ravenna and some other parts of Italy, and he impeded as far as possible the progress of the Lombards. About 726, however, he became involved in a conflict with the emperor Leo the Isaurian on account of the excessive taxation of the Italians, and, later, on the question of image worship, which had been proscribed by the government of Constantinople. Leo endeavoured to rid himself of the pope by violence, but Gregory, supported by the people of Rome and also by the Lombards, succeeded in eluding the emperor’s attacks, and died peacefully on the 11th of February 731.

Gregory III., pope from 731 to 741. He condemned the iconoclasts at a council convened at Rome in November 731, and, like his predecessor Gregory II., stimulated the missionary labours of St Boniface, on whom he conferred the pallium. Towards the Lombards he took up an imprudent attitude, in support of which he in vain invoked the aid of the Frankish prince Charles Martel.

Gregory IV., pope from 827 to 844, was chosen to succeed Valentinus in December 827, on which occasion he recognized the supremacy of the Frankish emperor in the most unequivocal manner. His name is chiefly associated with the quarrels between Lothair and Louis the Pious, in which he espoused the cause of the former, for whom, in the Campus Mendacii (*Lügenfeld*, field of lies), as it is usually called (833), he secured by his treachery a temporary advantage. The institution of the feast of All Saints is usually attributed to this pope. He died on the 25th of January 844, and was succeeded by Sergius II.

Gregory V. (Bruno), pope from 996 to 999, a great-grandson of the emperor Otto the Great, succeeded John XV. when only twenty-four years of age, and until the council of Pavia (997) had a rival in the person of the anti-pope John XVI., whom the people of Rome, in revolt against the will of the youthful emperor Otto III., had chosen after having expelled Gregory. The most memorable acts of his pontificate were those arising out of the contumacy of the French king, Robert, who was ultimately brought to submission by the rigorous infliction of a sentence of excommunication. Gregory died suddenly, and not without suspicion of foul play, on the 18th of February 999. His successor was Silvester II.

Gregory VI., pope from 1045 to 1046. As Johannes Gratianus he had earned a high reputation for learning and probity, and in 1045 he bought the Roman pontificate from his godson Benedict IX. At a council held by the emperor Henry III. at Sutri in 1046, he was accused of simony and deposed. He was banished into Germany, where he died in 1047. He was accompanied into exile by his young protégé Hildebrand (afterwards pope as Gregory VII.), and was succeeded by Clement II.

(L. D.*)

Gregory VII., pope from 1073 to 1085. Hildebrand (the future pope) would seem to have been born in Tuscany—perhaps Raovacum—early in the third decade of the 11th century. The son of a plain citizen, Bunicus or Bonizo, he came to Rome at an early age for his education; an uncle of his being abbot of the convent of St Mary on the Aventine. His instructors appear to have included the archpriest Johannes Gratianus, who, by disbursing a considerable sum to Benedict IX., smoothed his way to the papal throne and actually ascended it as Gregory VI. But when the emperor Henry III., on his expedition to Rome (1046), terminated the scandalous *impasse* in which three popes laid claim to the chair of Peter by deposing all three, Gregory VI. was banished to Germany, and Hildebrand found himself obliged to accompany him. As he himself afterwards admitted, it was with extreme reluctance that he crossed the Alps. But his residence in Germany was of great educative value, and full of significance for his later official activity. In Cologne he was enabled to pursue his studies; he came into touch with the circles of Lorraine where interest in the elevation of the Church and her life was highest, and gained acquaintance with the political and ecclesiastical circumstances of that country which was destined to figure so largely in his career. Whether, on the death of Gregory VI. in the beginning of 1048, Hildebrand proceeded to Cluny is doubtful. His brief residence there, if it actually occurred, is to be regarded as no more than a visit; for he was never a monk of Cluny. His contemporaries indeed describe him as a monk; but his entry into the convent must be assigned to the period preceding or following his German travels and presumably took place in Rome. He returned to that city with Bishop Bruno of Toul, who was nominated pope under the title of Leo IX. (1048-1054). Under him Hildebrand found his first employment in the ecclesiastical service, becoming a sub-deacon and steward in the Roman Church. He acted, moreover, as a legate in France, where he was occupied *inter alia* with the question of Berengarius of Tours, whose views on the Lord’s Supper had excited opposition. On the death of Leo IX. he was commissioned by the Romans as their envoy to the German court, to conduct the negotiations with regard to his successor. The emperor pronounced in favour of Bishop Gebhard of Eichstädt, who, in the course of his short reign as Victor II. (1055-1057), again employed Hildebrand as his legate to France. When Stephen IX. (Frederick of Lorraine) was raised to the papacy, without previous consultation with the German court, Hildebrand and Bishop Anselm of Lucca were despatched to Germany to secure a belated recognition, and he succeeded in gaining the consent of the empress Agnes. Stephen, however, died before his return, and, by the hasty elevation of Bishop Johannes of Velletri, the Roman aristocracy made a last attempt to recover their lost influence on the appointment to the papal throne—a proceeding which was charged with peril to the Church as it implied a renewal of the disastrous patrician régime. That the crisis was surmounted was essentially the work of Hildebrand. To Benedict X., the aristocratic nominee, he opposed a rival pope in the person of Bishop Gerhard of Florence, with whom the victory rested. The reign of Nicholas II. (1059-1061) was distinguished by events which exercised a potent influence on the policy of the Curia during the next two decades—the *rapprochement* with the Normans in the south of Italy, and the alliance with the democratic and, subsequently, anti-German movement of the Patarenes in the north. It was also under his pontificate (1059) that the law was enacted which transferred the papal election to the College of Cardinals, thus withdrawing it from the nobility and populace of Rome and thrusting the German influence on one side. It would be too much to maintain that these measures were due to Hildebrand alone, but it is obvious that he was already a dominant personality on the Curia, through he still held no more exalted office than that of archdeacon, which was indeed only conferred on him in 1059. Again, when Nicholas II. died and a new schism broke out, the discomfiture of Honorius II. (Bishop Cadalus of Parma) and the success of his rival (Anselm of Lucca) must be ascribed principally, if not entirely, to

Hildebrand's opposition to the former. Under the sway of Alexander II. (1061-1073) this man loomed larger and larger in the eye of his contemporaries as the soul of the Curial policy. It must be confessed the general political conditions, especially in Germany, were at that period exceptionally favourable to the Curia, but to utilize them with the sagacity actually shown was nevertheless no slight achievement, and the position of Alexander at the end of his pontificate was a brilliant justification of the Hildebrandine statecraft.

On the death of Alexander II. (April 21, 1073), Hildebrand became pope and took the style of Gregory VII. The mode of his election was bitterly assailed by his opponents. True, many of the charges preferred are obviously the emanations of scandal and personal dislike, liable to suspicion from the very fact that they were not raised to impugn his promotion till several years had elapsed (*c.* 1076); still it is plain from his own account of the circumstances of his elevation that it was conducted in extremely irregular fashion, and that the forms prescribed by the law of 1059 were not observed. But the sequel justified his election—of which the worst that can be said is that there was no general suffrage. And this sequel again owed none of its success to chance, but was the fruit of his own exertions. In his character were united wide experience and great energy tested in difficult situations. It is proof of the popular faith in his qualifications that, although the circumstances of his election invited assault in 1073, no sort of attempt was then made to set up a rival pontiff. When, however, the opposition which took head against him had gone so far as to produce a pretender to the chair, his long and undisputed possession tended to prove the original legality of his papacy; and the appeal to irregularities at its beginning not only lost all cogency but assumed the appearance of a mere biased attack. On the 22nd of May he received sacerdotal ordination, and on the 30th of June episcopal consecration; the empress Agnes and the duchess Beatrice of Tuscany being present at the ceremony, in addition to Bishop Gregory of Vercelli, the chancellor of the German king, to whom Gregory would thus seem to have communicated the result of the election.

The focus of the ecclesiastico-political projects of Gregory VII. is to be found in his relationship with Germany. Since the death of Henry III. the strength of the monarchy in that country had been seriously impaired, and his son Henry IV. had to contend with great internal difficulties. This state of affairs was of material assistance to the pope. His advantage was still further accentuated by the fact that in 1073 Henry was but twenty-three years of age and by temperament inclined to precipitate action. Many sharp lessons were needful before he learned to bridle his impetuosity, and he lacked the support and advice of a disinterested and experienced statesman. Such being the conditions, a conflict between Gregory VII. and Henry IV. could have only one issue—the victory of the former.

In the two following years Henry was compelled by the Saxon rebellion to come to amicable terms with the pope at any cost. Consequently in May 1074 he did penance at Nuremberg in presence of the legates to expiate his continued intimacy with the members of his council banned by Gregory, took an oath of obedience, and promised his support in the work of reforming the Church. This attitude, however, which at first won him the confidence of the pope, he abandoned so soon as he gained the upper hand of the Saxons: this he achieved by his victory at Hohenburg on the Unstrut (June 9, 1075). He now attempted to reassert his rights of suzerain in upper Italy without delay. He sent Count Eberhard to Lombardy to combat the Patarenes; nominated the cleric Tedaldo to the archbishopric of Milan, thus settling a prolonged and contentious question; and finally endeavoured to establish relations with the Norman duke, Robert Guiscard. Gregory VII. answered with a rough letter, dated December 8, in which—among other charges—he reproached the German king with breach of his word and with his further countenance of the excommunicated councillors; while at the same time he sent by word of mouth a brusque message intimating that the enormous crimes which would be laid to his account rendered him liable, not only to the ban of the church, but to the deprivation of his crown. Gregory ventured on these audacious measures at a time when he himself was confronted by a reckless opponent in the person of Cencius, who on Christmas-night did not scruple to surprise him in church and carry him off as a prisoner, though on the following day he was obliged to surrender his captive. The reprimands of the pope, couched as they were in such an unprecedented form, infuriated Henry and his court, and their answer was the hastily convened national council in Worms, which met on the 24th of January 1076. In the higher ranks of the German clergy Gregory had many enemies, and a Roman cardinal, Hugo Candidus, once on intimate terms with him but now at variance, had made a hurried expedition to Germany for the occasion and appeared at Worms with the rest. All the gross scandals with regard to the pontiff that this prelate could utter were greedily received by the assembly, which committed itself to the ill-considered and disastrous resolution that Gregory had forfeited his papal dignity. In a document full of accusations the bishops renounced their allegiance. In another King Henry pronounced him deposed, and the

Romans were required to choose a new occupant for the vacant chair of St Peter. With the utmost haste two bishops were despatched to Italy in company with Count Eberhard under commission of the council, and they succeeded in procuring a similar act of deposition from the Lombard bishops in the synod of Piacenza. The communication of these decisions to the pope was undertaken by the priest Roland of Parma, and he was fortunate enough to gain an opportunity for speech in the synod, which had barely assembled in the Lateran church, and there to deliver his message announcing the dethronement of the pontiff. For the moment the members were petrified with horror, but soon such a storm of indignation was aroused that it was only due to the moderation of Gregory himself that the envoy was not cut down on the spot. On the following day the pope pronounced the sentence of excommunication against the German king with all formal solemnity, divested him of his royal dignity and absolved his subjects from the oaths they had sworn to him. This sentence purported to eject the king from the church and to strip him of his crown. Whether it would produce this effect, or whether it would remain an idle threat, depended not on the author of the verdict, but on the subjects of Henry—before all, on the German princes. We know from contemporary evidence that the excommunication of the king made a profound impression both in Germany and Italy. Thirty years before, Henry III. had deposed three popes, and thereby rendered a great and acknowledged service to the church. When Henry IV. attempted to copy this summary procedure he came to grief, for he lacked the support of the people. In Germany there was a speedy and general revulsion of sentiment in favour of Gregory, and the particularism of the princes utilized the auspicious moment for prosecuting their anti-regal policy under the cloak of respect for the papal decision. When at Whitsuntide the king proposed to discuss the measures to be taken against Gregory in a council of his nobles at Mainz, only a few made their appearance; the Saxons snatched at the golden opportunity for renewing their insurrection and the anti-royalist party grew in strength from month to month. The situation now became extremely critical for Henry. As a result of the agitation, which was zealously fostered by the papal legate Bishop Altmann of Passau, the princes met in October at Tribur to elect a new German king, and Henry, who was stationed at Oppenheim on the left bank of the Rhine, was only saved from the loss of his sceptre by the failure of the assembled princes to agree on the question of his successor. Their dissension, however, merely induced them to postpone the verdict. Henry, they declared, must make reparation to the pope and pledge himself to obedience; and they settled that, if, on the anniversary of his excommunication, he still lay under the ban, the throne should be considered vacant. At the same time they determined to invite Gregory to Augsburg, there to decide the conflict. These arrangements showed Henry the course to be pursued. It was imperative, under any circumstances and at any price, to secure his absolution from Gregory before the period named, otherwise he could scarcely foil his opponents in their intention to pursue their attack against himself and justify their measures by an appeal to his excommunication. At first he attempted to attain his ends by an embassy, but when Gregory rejected his overtures he took the celebrated step of going to Italy in person. The pope had already left Rome, and had intimated to the German princes that he would expect their escort for his journey on January 8 in Mantua. But this escort had not appeared when he received the news of the king’s arrival. Henry, who travelled through Burgundy, had been greeted with wild enthusiasm by the Lombards, but resisted the temptation to employ force against Gregory. He chose instead the unexpected and unusual, but, as events proved, the safest course, and determined to compel the pope to grant him absolution by doing penance before him at Canossa, where he had taken refuge. This occurrence was quickly embellished and inwoven by legend, and great uncertainty still prevails with regard to several important points. The reconciliation was only effected after prolonged negotiations and definite pledges on the part of the king, and it was with reluctance that Gregory at length gave way, for, if he conferred his absolution, the diet of princes in Augsburg, in which he might reasonably hope to act as arbitrator, would either be rendered purposeless, or, if it met at all, would wear an entirely different character. It was impossible, however, to deny the penitent re-entrance into the church, and the politician had in this case to be subordinated to the priest. Still the removal of the ban did not imply a genuine reconciliation, and no basis was gained for a settlement of the great questions at issue—notably that of investiture. A new conflict was indeed inevitable from the very fact that Henry IV. naturally considered the sentence of deposition repealed with that of excommunication; while Gregory on the other hand, intent on reserving his freedom of action, gave no hint on the subject at Canossa.

That the excommunication of Henry IV. was simply a pretext—not a motive—for the opposition of the rebellious German nobles is manifest. For not only did they persist in their policy after his absolution, but they took the more decided step of setting up a rival king in the person of Duke Rudolph of Swabia (Forchheim, March 1077). At the election the papal legates present observed the appearance of neutrality, and Gregory himself sought to

maintain this attitude during the following years. His task was the easier in that the two parties were of fairly equal strength, each endeavouring to gain the upper hand by the accession of the pope to their side. But his hopes and labours, with the object of receiving an appeal to act as arbitrator in the dynastic strife, were fruitless, and the result of his non-committal policy was that he forfeited in large measure the confidence of both parties. Finally he decided for Rudolph of Swabia in consequence of his victory at Flarchheim (January 27, 1080). Under pressure from the Saxons, and misinformed as to the significance of this battle, Gregory abandoned his waiting policy and again pronounced the excommunication and deposition of King Henry (March 7, 1080), unloosing at the same time all oaths sworn to him in the past or the future. But the papal censure now proved a very different thing from the papal censure four years previously. In wide circles it was felt to be an injustice, and men began to put the question—so dangerous to the prestige of the pope—whether an excommunication pronounced on frivolous grounds was entitled to respect. To make matters worse, Rudolph of Swabia died on the 16th of October of the same year. True, a new claimant—Hermann of Luxemburg—was put forward in August 1081, but his personality was ill adapted for a leader of the Gregorian party in Germany, and the power of Henry IV. was in the ascendant. The king, who had now been schooled by experience, took up the struggle thus forced upon him with great vigour. He refused to acknowledge the ban on the ground of illegality. A council had been summoned at Brixen, and on the 25th of June 1080 it pronounced Gregory deposed and nominated the archbishop Guibert of Ravenna as his successor—a policy of anti-king, anti-pope. In 1081 Henry opened the conflict against Gregory in Italy. The latter had now fallen on evil days, and he lived to see thirteen cardinals desert him, Rome surrendered by the Romans to the German king, Guibert of Ravenna enthroned as Clement III. (March 24, 1084), and Henry crowned emperor by his rival, while he himself was constrained to flee from Rome.

The relations of Gregory to the remaining European states were powerfully influenced by his German policy; for Germany, by engrossing the bulk of his powers, not infrequently compelled him to show to other rulers that moderation and forbearance which he withheld from the German king. The attitude of the Normans brought him a rude awakening. The great concessions made to them under Nicholas II. were not only powerless to stem their advance into central Italy but failed to secure even the expected protection for the papacy. When Gregory was hard pressed by Henry IV., Robert Guiscard left him to his fate, and only interfered when he himself was menaced with the German arms. Then, on the capture of Rome, he abandoned the city to the tender mercies of his warriors, and by the popular indignation evoked by his act brought about the banishment of Gregory.

In the case of several countries, Gregory attempted to establish a claim of suzerainty on the part of the see of St Peter, and to secure the recognition of its self-asserted rights of possession. On the ground of “immemorial usage” Corsica and Sardinia were assumed to belong to the Roman Church. Spain and Hungary were also claimed as her property, and an attempt was made to induce the king of Denmark to hold his realm as a fief from the pope. Philip I. of France, by his simony and the violence of his proceedings against the church, provoked a threat of summary measures; and excommunication, deposition and the interdict, appeared to be imminent in 1074. Gregory, however, refrained from translating his menaces into actions, although the attitude of the king showed no change, for he wished to avoid a dispersion of his strength in the conflict soon to break out in Germany. In England, again, William the Conqueror derived no less benefit from this state of affairs. He felt himself so safe that he interfered autocratically with the management of the church, forbade the bishops to visit Rome, filled bishoprics and abbeys, and evinced little anxiety when the pope expatiated to him on the different principles which he entertained as to the relationship of church and state, or when he prohibited him from commerce or commanded him to acknowledge himself a vassal of the apostolic chair. Gregory had no power to compel the English king to an alteration in his ecclesiastical policy, so chose to ignore what he could not approve, and even considered it advisable to assure him of his particular affection.

Gregory, in fact, established relations—if no more—with every land in Christendom; though these relations did not invariably realize the ecclesiastico-political hopes connected with them. His correspondence extended to Poland, Russia and Bohemia. He wrote in friendly terms to the Saracen king of Mauretania in north Africa, and attempted, though without success, to bring the Armenians into closer contact with Rome. The East, especially, claimed his interest. The ecclesiastical rupture between the bishops of Rome and Byzantium was a severe blow to him, and he laboured hard to restore the former amicable relationship. At that period it was impossible to suspect that the schism implied a definite separation, for prolonged schisms had existed in past centuries, but had always been surmounted in the end. Both sides, moreover, had an interest in repairing the breach between the churches. Thus,

immediately on his accession to the pontificate, Gregory sought to come into touch with the emperor Michael VII. and succeeded. When the news of the Saracenic outrages on the Christians in the East filtered to Rome, and the political embarrassments of the Byzantine emperor increased, he conceived the project of a great military expedition and exhorted the faithful to participation in the task of recovering the sepulchre of the Lord (1074). Thus the idea of a crusade to the Holy Land already floated before Gregory's vision, and his intention was to place himself at the head. But the hour for such a gigantic enterprise was not yet come, and the impending struggle with Henry IV. turned his energies into another channel.

In his treatment of ecclesiastical policy and ecclesiastical reform, Gregory did not stand alone, but on the contrary found powerful support. Since the middle of the 11th century the tendency—mainly represented by Cluny—towards a stricter morality and a more earnest attitude to life, especially on the part of the clergy, had converted the papacy; and, from Leo IX. onward, the popes had taken the lead in the movement. Even before his election, Gregory had gained the confidence of these circles, and, when he assumed the guidance of the church, they laboured for him with extreme devotion. From his letters we see how he fostered his connexion with them and stimulated their zeal, how he strove to awake the consciousness that his cause was the cause of God and that to further it was to render service to God. By this means he created a personal party, unconditionally attached to himself, and he had his confidants in every country. In Italy Bishop Anselm of Lucca, to take an example, belonged to their number. Again, the duchess Beatrice of Tuscany and her daughter the Margravine Matilda, who put her great wealth at his disposal, were of inestimable service. The empress Agnes also adhered to his cause. In upper Italy the Patarenes had worked for him in many ways, and all who stood for their objects stood for the pope. In Germany at the beginning of his reign the higher ranks of the clergy stood aloof from him and were confirmed in their attitude by some of his regulations. But Bishop Altmann of Passau, who has already been mentioned, and Archbishop Gebhard of Salzburg, were among his most zealous followers. That the convent of Hirschau in Swabia was held by Gregory was a fact of much significance, for its monks spread over the land as itinerant agitators and accomplished much for him in southern Germany. In England Archbishop Lanfranc of Canterbury probably stood closest to him; in France his champion was Bishop Hugo of Dié, who afterwards ascended the archiepiscopal chair of Lyons.

The whole life-work of Gregory VII. was based on his conviction that the church has been founded by God and entrusted with the task of embracing all mankind in a single society in which His will is the only law; that, in her capacity as a divine institution, she outtops all human structures; and that the pope, *qua* head of the church, is the vice-regent of God on earth, so that disobedience to him implies disobedience to God—or, in other words, a defection from Christianity. Elaborating an idea discoverable in St Augustine, he looked on the worldly state—a purely human creation—as an unhallowed edifice whose character is sufficiently manifest from the fact that it abolishes the equality of man, and that it is built up by violence and injustice. He developed these views in a famous series of letters to Bishop Hermann of Metz. But it is clear from the outset that we are only dealing with reflections of strictly theoretical importance; for any attempt to interpret them in terms of action would have bound the church to annihilate not merely a single definite state, but all states. Thus Gregory, as a politician desirous of achieving some result, was driven in practice to adopt a different standpoint. He acknowledged the existence of the state as a dispensation of Providence, described the coexistence of church and state as a divine ordinance, and emphasized the necessity of union between the *sacerdotium* and the *imperium*. But at no period would he have dreamed of putting the two powers on an equality; the superiority of church to state was to him a fact which admitted of no discussion and which he had never doubted. Again, this very superiority of the church implied in his eyes a superiority of the papacy, and he did not shrink from drawing the extreme conclusions from these premises. In other words, he claimed the right of excommunicating and deposing incapable monarchs, and of confirming the choice of their successors. This habit of thought needs to be appreciated in order to understand his efforts to bring individual states into feudal subjection to the chair of St Peter. It was no mere question of formality, but the first step to the realization of his ideal theocracy comprising each and every state.

Since this papal conception of the state involved the exclusion of independence and autonomy, the history of the relationship between church and state is the history of one continued struggle. In the time of Gregory it was the question of appointment to spiritual offices—the so-called *investiture*—which brought the theoretical controversy to a head. The preparatory steps had already been taken by Leo IX., and the subsequent popes had advanced still further on the path he indicated; but it was reserved for Gregory and his enactments to provoke the outbreak of the great conflict which dominated the following

decades. By the first law (1075) the right of investiture for churches was in general terms denied to the laity. In 1078 neglect of this prohibition was made punishable by excommunication, and, by a further decree of the same year, every investiture conferred by a layman was declared invalid and its acceptance pronounced liable to penalty. It was, moreover, enacted that every layman should restore, under pain of excommunication, all lands of the church, held by him as fiefs from princes or clerics; and that, henceforward, the assent of the pope, the archbishop, &c., was requisite for any investiture of ecclesiastical property. Finally in 1080 the forms regulating the canonical appointment to a bishopric were promulgated. In case of a vacancy the election was to be conducted by the people and clergy under the auspices of a bishop nominated by the pope or metropolitan; after which the consent of the pope or archbishop was to be procured; if any violation of these injunctions occurred, the election should be null and void and the right of choice pass to the pope or metropolitan. In so legislating, Gregory had two objects: in the first place, to withdraw the appointment to episcopal offices from the influence of the king; in the second, to replace that influence by his own. The intention was not to increase the power of the metropolitan: he simply desired that the nomination of bishops by the pope should be substituted for the prevalent nomination of bishops by the king. But in this course of action Gregory had a still more ambitious goal before his eyes. If he could once succeed in abolishing the lay investiture the king would, *ipso facto*, be deprived of his control over the great possessions assigned to the church by himself and his predecessors, and he could have no security that the duties and services attached to those possessions would continue to be discharged for the benefit of the Empire. The bishops in fact were to retain their position as princes of the Empire, with all the lands and rights of supremacy pertaining to them in that capacity, but the bond between them and the Empire was to be dissolved: they were to owe allegiance not to the king, but to the pope—a non-German sovereign who, in consequence of the Italian policy of the German monarchy, found himself in perpetual opposition to Germany. Thus, by his ecclesiastical legislation, Gregory attempted to shake the very foundations on which the constitution of the German empire rested, while completely ignoring the historical development of that constitution (see Investiture).

That energy which Gregory threw into the expansion of the papal authority, and which brought him into collision with the secular powers, was manifested no less in the internal government of the church. He wished to see all important matters of dispute referred to Rome; appeals were to be addressed to himself, and he arrogated the right of legislation. The fact that his laws were usually promulgated by Roman synods which he convened during Lent does not imply that these possessed an independent position; on the contrary, they were entirely dominated by his influence, and were no more than the instruments of his will. The centralization of ecclesiastical government in Rome naturally involved a curtailment of the powers of the bishops and metropolitans. Since these in part refused to submit voluntarily and attempted to assert their traditional independence, the pontificate of Gregory is crowded with struggles against the higher ranks of the prelacy. Among the methods he employed to break their power of resistance, the despatch of legates proved peculiarly effective. The regulation, again, that the metropolitans should apply at Rome in person for the pallium—pronounced essential to their qualifications for office—served to school them in humility.

This battle for the foundation of papal omnipotence within the church is connected with his championship of compulsory celibacy among the clergy and his attack on simony. Gregory VII. did not introduce the celibacy of the priesthood into the church, for even in antiquity it was enjoined by numerous laws. He was not even the first pope to renew the injunction in the 11th century, for legislation on the question begins as early as in the reign of Leo IX. But he took up the struggle with greater energy and persistence than his predecessors. In 1074 he published an encyclical, requiring all to renounce their obedience to those bishops who showed indulgence to their clergy in the matter of celibacy. In the following year he commanded the laity to accept no official ministrations from married priests and to rise against all such. He further deprived these clerics of their revenues. Wherever these enactments were proclaimed they encountered tenacious opposition, and violent scenes were not infrequent, as the custom of marriage was widely diffused throughout the contemporary priesthood. Other decrees were issued by Gregory in subsequent years, but were now couched in milder terms, since it was no part of his interest to increase the numbers of the German faction. As to the objectionable nature of simony—the transference or acquisition of a spiritual office for monetary considerations—no doubt could exist in the mind of an earnest Christian, and no theoretical justification was ever attempted. The practice, however, had attained great dimensions both among the clergy and the laity, and the sharp campaign, which had been waged since the days of Leo IX., had done little to limit its scope. The reason was that in many cases it had assumed an extremely subtle form, and detection was difficult when the simony took the character of a tax or an honorarium. The fact, again, that lay

investiture was described as simony, inevitably brought with it an element of confusion, and, in the case of a charge of simoniacal practices, enormously accentuates the difficulty of determining the actual state of affairs. The war against simony in its original form was undoubtedly necessary, but it led to highly complicated and problematic issues. Was the priest or bishop, whose ordination was due to simony, actually in the possession of the sacerdotal or episcopal power or not? If the answer was in the affirmative, it would seem possible to buy the Holy Ghost; if in the negative, then obviously all the official acts of the respective priest or bishop—which, according to the doctrine of the church, presupposed the possession of a spiritual quality—were invalid. And, since the number of simoniacal bishops was at that period extremely large, incalculable consequences resulted. The difficulty of the problem accounts for the diversity of solutions propounded. The perplexity of the situation was aggravated by the fact that, if the stricter view was adopted, it followed that the sacrament of ordination must be pronounced invalid, even in the cases where it had been unconsciously sought at the hands of a simoniac, for the dispenser was in point of fact no bishop, although he exercised the episcopal functions and his transgressions were unknown, and consequently it was impossible for him to ordain others. In the time of Gregory the conflict was still swaying to and fro, and he himself in 1078 declared consecration by a simoniac null and void.

The pontificate of Gregory VII. came to a melancholy close, for he died an exile in Salerno; the Romans and a number of his most trusted coadjutors had renounced him, and the faithful band in Germany had shrunk to scant proportions. Too much the politician, too rough in his 573
methods, too exclusively the representative of the Roman see and its interests, he had gained more enemies than friends. He was of course a master of statecraft; he had pursued political ends with consummate skill, causing them to masquerade as requirements of religion; but he forgot that incitement to civil war, the preaching of rebellion, and the release of subjects from their oaths, were methods which must infallibly lead to moral anarchy, and tend, with justice, to stifle the confidence once felt in him. The more he accustomed his contemporaries to the belief that any and every measure—so long as it opened up some prospect of success—was good in his sight, no matter how dangerous the fruits it might mature, the fainter grew their perception of the fact that he was not only a statesman but primarily the head of the Christian Church. That the frail bonds of piety and religious veneration for the chair of St Peter had given way in the struggle for power was obvious to all, when he himself lost that power and the star of his opponent was in the ascendant. He had given the rein to his splendid gifts as a ruler, and in his capacity of pope he omitted to provide an equivalent counterpoise. We are told that he was once an impressive preacher, and he could write to his faithful countesses in terms which prove that he was not wanting in religious feeling; but in the whirlpool of secular politics this phase of his character was never sufficiently developed to allow the vice-gerent of Christ to be heard instead of the hierarch in his official acts.

But to estimate the pontificate of Gregory by the disasters of its closing years would be to misconceive its significance for the history of the papacy entirely. On the contrary, his reign forms an important chapter in the history of the popedom as an institution; it contains the germs of far-reaching modifications of the church, and it gave new impulses to both theory and practice, the value of which may indeed be differently estimated, but of which the effects are indubitable. It was he who conceived and formulated the ideal of the papacy as a structure embracing all peoples and lands. He took the first step towards the codification of ecclesiastical law and the definite ratification of the claims of the apostolic chair as corner-stones in the church’s foundation. He educated the clergy and the lay world in obedience to Rome; and, finally, it was due to his efforts that the duty of the priest with regard to sexual abstinence was never afterwards a matter of doubt in the Catholic Christianity of the West.

On the 25th of May 1085 he died, unbroken by the misfortunes of his last years, and unshaken in his self-certainty. *Dilexi justitiam et odivi iniquitatem: propterea morior in exilio* —are said to have been his last words. In 1584 Gregory XIII. received him into the *Martyrologium Romanum*; in 1606 he was canonized by Paul V. The words dedicated to him in the *Breviarium Romanum*, for May 25, contain such an apotheosis of his pontificate that in the 18th and 19th centuries they were prohibited by the governments of several countries with Roman Catholic populations.

Bibliography.—A comprehensive survey of the sources and literature for the history of Gregory VII. is given by C. Mirbt, s.v. “Gregor VII.” in Herzog-Hauck, *Realencyklopädie*, 3rd ed. vol. vii. pp. 96 sqq. The main source for the reign of Gregory consists of his letters and decrees, the greater part of which are collected in the *Registrum* (ed. P. Jaffé, *Bibliotheca rerum Germanicarum*, ii., Berlin, 1865). The letters preserved in addition to this official collection are also reprinted by Jaffé under the title of *Epistolae collectae*. The *Dictatus Papae* —a list of twenty-seven short sentences on the rights of the pope,—which is given in the

Registrum, is not the work of Gregory VII., but should probably be ascribed to Cardinal Deusdedit. Further: A. Potthast, *Bibliotheca historica medii aevi*, i. (2nd ed., Berlin, 1896), pp. 541 sq., ii. 1351; P. Jaffé, *Regesta pontificum* (2nd ed., 1865), tome i. pp. 594-649, Nr. 4771-5313, tome ii. p. 751. The most important letters and decrees of Gregory VII. are reprinted by C. Mirbt, *Quellen zur Geschichte des Papsttums* (2nd ed., Tübingen, 1901), Nr. 183 sqq., pp. 100 sqq. The oldest life of Gregory is that by Paul von Bermried, reprinted, *e.g.* by Watterich, *Vitae pontificum*, i. 474-546. Among the historians the following are of especial importance: Berthold, Bernold, Lambert von Hersfeld, Bruno, Marianus Scotus, Leo of Ostia, Peter of Marte Cassino, Sigebert of Gembloux, Hugo of Flavigny, Arnulph and Landulf of Milan, Donizo—their works being reprinted in the section "Scriptores" in the *Monumenta Germaniae historica*, vols. v., vi., vii., viii., xii. The struggles which broke out under Gregory VII. and were partially continued in the subsequent decades gave rise to a pamphlet literature which is of extreme importance for their internal history. The extant materials vary greatly in extent, and display much diversity from the literary-historical point of view. Most of them are printed in the *Monumenta Germaniae*, under the title, *Libelli de lite imperatorum et pontificum saeculis XI. et XII. conscripti*, tome i. (Hanover, 1891), tome ii. (1892), tome iii. (1897). The scientific investigation of the Gregorian age has received enormous benefit from the critical editions of the sources in the *Monumenta Germaniae*, so that the old literature is for the most part antiquated. This is true even of the great monograph on this pope—A. F. Gfrörer, *Papst Gregorius VII. und sein Zeitalter* (7 vols., Schaffhausen, 1859-1861), which must be used with extreme caution. The present state of criticism is represented by the following works: G. Meyer von Knonau, *Jahrbücher des deutschen Reichs unter Heinrich IV. und Heinrich V.*, vol. i. (Leipzig, 1890), ii. (1894), iii. (1900), iv. (1903); W. Martens, *Gregor VII., sein Leben und Werken* (2 vols., Leipzig, 1904); C. Mirbt, *Die Publizistik im Zeitalter Gregors VII.* (Leipzig, 1894); A. Hauck, *Kirchengeschichte Deutschlands* (3 vols., Leipzig, 1894). The special literature on individual events during the Gregorian pontificate is so extensive that no list can be given here. On Gregory's elevation to the chair, cf. C. Mirbt, *Die Wahl Gregors VII.* (Marburg, 1892). See also A. H. Mathew, D.D., *Life and Times of Hildebrand, Pope Gregory VII.* (1910).

(C. M.)

Gregory VIII. (*Mauritius Burdinus*), antipope from 1118 to 1121, was a native of southern France, who had crossed the Pyrenees while young and had later been made archbishop of Braga. Suspended by Paschal II. in 1114 on account of a dispute with the Spanish primate and papal legate, the archbishop of Toledo, he went to Rome and regained favour to such an extent that he was employed by the pope on important legations. He opposed the extreme Hildebrandine policy, and, on the refusal of Gelasius II. to concede the emperor's claim to investiture, he was proclaimed pope at Rome by Henry V. on the 8th of March 1118. He was not universally recognized, however, and never fully enjoyed the papal office. He was excommunicated by Gelasius II. in April 1118, and by Calixtus II. at the synod of Reims (October 1119). He was driven from Rome by the latter in June 1121, and, having been surrendered by the citizens of Sutri, he was forced to accompany in ridiculous guise the triumphal procession of Calixtus through Rome. He was exiled to the convent of La Cava, where he died.

The life of Gregory VIII. by Baluzius in *Baluzii miscellanea*, vol. i, ed. by J. D. Mansi (Lucca, 1761), is an excellent vindication of an antipope. The chief sources are in *Monumenta Germaniae historica*, *Scriptores*, vols. 5 and 20, and in J. M. Watterich, *Pontif. Roman. vitae*, vol. 2. See C. Mirbt, *Die Publizistik im Zeitalter Gregors VII.* (Leipzig, 1894); J. Langen, *Geschichte der römischen Kirche von Gregor VII. bis Innocenz III.* (Bonn, 1893); Jaffé, *Regesta pontif. Roman.*, 2nd ed., (1885-1888); K. J. von Hefele, *Conciliengeschichte*, Bd. 5, 2nd ed.; F. Gregorovius, *Rome in the Middle Ages*, vol. 4, trans. by Mrs G. W. Hamilton (London, 1900-1902); P. B. Gams, *Kirchengeschichte von Spanien*, vol. 3 (Regensburg, 1876).

Gregory VIII. (*Alberto de Mora*), pope from the 21st of October to the 17th of December 1187, a native of Benevento and Praemonstratensian monk, successively abbot of St Martin at Laon, cardinal-deacon of San' Adriano al foro, cardinal-priest of San Lorenzo in Lucina, and chancellor of the Roman Church, was elected to succeed Urban III. Of amiable disposition, he hastened to make peace with Henry VI. and promised not to oppose the latter's claim to Sicily. He addressed general letters both to the bishops, reminding them of their duties to the Roman Church, especially of their required visits *ad limina*, and to the whole Christian people, urging a new crusade to recover Jerusalem. He died at Pisa while engaged in making peace between the Pisans and Genoese in order to secure the help of both cities in the crusade. His successor was Clement III.

His letters are in J. P. Migne, *Patrol. Lat.* vol. 202. Consult also J. M. Watterich, *Pontif. Roman. vitae*, vol. 2 (Leipzig, 1862), and Jaffé-Wattenbach, *Regesta pontif. Roman.* (1885-1888). See J. Langen, *Geschichte der römischen Kirche von Gregor VII. bis Innocenz III.* (Bonn, 1893); P. Nadig, *Gregors VIII. 57 tägiges Pontifikat* (Basel, 1890); P. Scheffer-

Boichorst, *Friedrichs I. letzter Streit mit der Kurie* (Berlin, 1866); F. Gregorovius, *Rome in the Middle Ages*, vol. 4, trans. by Mrs G. W. Hamilton (London, 1896).

Gregory IX. (*Ugolino Conti de Segni*), pope from the 19th of March 1227, to the 22nd of August 1241, was a nobleman of Anagni and probably a nephew of Innocent III. He studied at Paris and Bologna, and, having been successively archpriest of St Peter's, papal chaplain, cardinal-deacon of Sant' Eustachio, cardinal-bishop of Ostia, the first protector of the Franciscan order, and papal legate in Germany under Innocent III., and Honorius III., he succeeded the latter in the papacy. He had long been on friendly terms with the emperor Frederick II., but now excommunicated him (29th of September 1227) for continued neglect of his vows and refusal to undertake the crusade. When Frederick finally set out the following June without making submission to the pope, Gregory raised an insurrection against him in Germany, and forced him in 1230 to beg for absolution. The Romans, however, soon began a very bitter war against the temporal power and exiled the pope (1st of June 1231). Hardly had this contest been brought to an end favourable to the papacy (May 1235) when Gregory came into fresh conflict with Frederick II. He again excommunicated the emperor and released his subjects from their allegiance (24th of March 1239). Frederick, on his side, invaded the Papal States and prevented the assembling of a general council convoked for Easter 1241. The work of Gregory, however, was by no means limited to his relations with emperor and Romans. He systematized the Inquisition and entrusted it to the Dominicans; his rules against heretics remained in force until the time of Sixtus V. He supported Henry III. against the English barons, and protested against the Pragmatic Sanction of Louis IX. of France. He sent monks to Constantinople to negotiate with the Greeks for church unity, but without result. He canonized Saints Elizabeth of Thuringia, Dominic, Anthony of Padua and Francis of Assisi. He permitted free study of the Aristotelian writings, and issued (1234), through his chaplain, Raymond of Pennaforte, an important new compilation of decretals which he prescribed in the bull *Rex pacificus* should be the standard text-book in canon law at the universities of Bologna and Paris. Gregory was famed for his learning and eloquence, his blameless life, and his great strength of character. He died on the 22nd of August 1241, while Frederick II. was advancing against him, and was succeeded by Celestine IV.

For the life of Gregory IX., consult his Letters in *Monumenta Germaniae historica, Epistolae saeculi XIII. e regestis pontif. Roman. selectae* (Berlin, 1883); "Les Registres de Grégoire IX," ed. L. Auvray in *Bibliothèque des écoles françaises d'Athènes et de Rome* (Paris, 1890-1905); A. Potthast, *Regesta pontif. Roman.* (Berlin, 1875) and "Registri dei Cardinali Ugolino d' Ostia et Ottaviano degli Ubaldini," ed. G. Levi in *Fonti per la storia d' Italia* (1890). See J. Felten, *Papst Gregor IX.* (Freiburg i. B., 1886); J. Marx, *Die Vita Gregorii IX. quellenkritisch untersucht* (1889); P. Balan, *Storia di Gregorio IX e dei suoi tempi* (3 vols., Modena, 1872-1873); F. Gregorovius, *Rome in the Middle Ages*, vol. 5, trans. by Mrs G. W. Hamilton (London, 1900-1902); H. H. Milman, *Latin Christianity*, vol. 5 (London, 1899); R. Honig, *Rapporti tra Federico II e Gregorio IX rispetto alla spedizione in Palestina* (1896); P. T. Masetti, *I Pontefici Onorio III, Gregorio IX ed Innocenzo IV a fronte dell' Imperatore Federico II nel secolo XIII* (1884); T. Frantz, *Der grosse Kampf zwischen Kaisertum u. Papsttum zur Zeit des Hohenstaufen Friedrich II.* (Berlin, 1903); W. Norden, *Das Papsttum u. Byzanz* (Berlin, 1903). An exhaustive bibliography and an excellent article on Gregory by Carl Mirbt are to be found in Hauck's *Realencyklopädie*, 3rd edition.

Gregory X. (*Tebaldo Visconti*), pope from the 1st of September 1271, to the 10th of January 1276, was born at Piacenza in 1208, studied for the church, and became archdeacon of Liége. The eighteen cardinals who met to elect a successor to Clement IV. were divided into French and Italian factions, which wrangled over the election for nearly three years in the midst of great popular excitement, until finally, stirred by the eloquence of St Bonaventura, the Franciscan monk, they entrusted the choice to six electors, who hit on Visconti, at that time accompanying Edward of England on the crusade. He returned to Rome and was ordained priest on the 19th of March 1272, and consecrated on the 27th. He at once summoned the fourteenth general council of the Catholic Church, which met at Lyons in 1274, with an attendance of some 1600 prelates, for the purpose of considering the eastern schism, the condition of the Holy Land, and the abuses in the church. The Greeks were persuaded, thanks to St Bonaventura, to consent to a union with Rome for the time being, and Rudolph of Habsburg renounced at the council all imperial rights in the States of the Church. The most celebrated among the many reform decrees issued by Gregory was the constitution determining for the first time the form of conclave at papal elections, which in large measure has remained ever since the law of the church. Gregory was on his way to Rome to crown Rudolph and send him out on a great crusade in company with the kings of England, France, Aragon and Sicily, when he died at Arezzo on the 10th of January 1276. He was a nobleman, fond of peace and actuated by the consciousness of a great mission. He has been honoured as a saint by the inhabitants of Arezzo and Piacenza. His successor in the papacy was Innocent

The registers of Gregory X. have been published by J. Guiraud in the *Bibliothèque des écoles françaises d'Athènes et de Rome* (Paris, 1892-1898). See K. J. von Hefele, *Conciliengeschichte*, vol. 5, 2nd edition (1873-1890); H. Finke, *Konzilienstudien z. Gesch. des 13ten Jahrhunderts* (Münster, 1891); P. Piacenza, *Compendia della storia del b. Gregorio X, papa* (Piacenza, 1876); F. Gregorovius, *Rome in the Middle Ages*, vol. 5, trans. by Mrs G. W. Hamilton (London, 1900-1902); H. Otto, *Die Beziehungen Rudolfs von Habsburgs zu Papst Gregor X.* (Innsbruck, 1895); A. Zisterer, *Gregor X. u. Rudolf von Habsburg in ihren gegenseitigen Beziehungen* (Freiburg i. B., 1891); F. Walter, *Die Politik der Kurie unter Gregor X.* (Berlin, 1894); A. Potthast, *Regesta pontif. Roman.* vol. 2 (Berlin, 1875); W. Norden, *Das Papsttum und Byzanz* (Berlin, 1903); J. Loserth, "Akten über die Wahl Gregors X." in *Neues Archiv*, xxi. (1895); A. von Hirsch-Gereuth, "Die Kreuzzugspolitik Gregors X." in *Studien z. Gesch. d. Kreuzzugsidee nach den Kreuzzügen* (Munich, 1896). There is an excellent article by Carl Mirbt in Hauck's *Realencyklopädie*, 3rd edition.

Gregory XI. (*Pierre Roger de Beaufort*), pope from the 30th of December 1370 to the 27th of March 1378, born in Limousin in 1330, created cardinal-deacon of Sta Maria Nuova by his uncle, Clement VI., was the successor of Urban V. His efforts to establish peace between France and England and to aid the Eastern Christians against the Turks were fruitless, but he prevented the Visconti of Milan from making further encroachments on the States of the Church. He introduced many reforms in the various monastic orders and took vigorous measures against the heresies of the time. His energy was stimulated by the stirring words of Catherine of Siena, to whom in particular the transference of the papal see back to Italy (17th of January 1377) was almost entirely due. Whilst at Rome he issued several bulls to the archbishop of Canterbury, the king of England, and the university of Oxford, commanding an investigation of Wycliffe's doctrines. Gregory was meditating a return to Avignon when he died. He was the last of the French popes who for some seventy years had made Avignon their see, a man learned and full of zeal for the church, but irresolute and guilty of nepotism. The great schism, which was to endure fifty years, broke out soon after the election of his successor, Urban VI.

See H. J. Tomaseth, "Die Register u. Secretäre Urbans V. u. Gregors XI." in *Mitteilungen des Instituts für österreichische Geschichtsforschung* (1898); Baluzius, *Vitae pap. Avenion.* vol. I (Paris, 1693); L. Pastor, *History of the Popes*, vol. I, trans. by F. I. Antrobus (London, 1899); F. Gregorovius, *Rome in the Middle Ages*, vol. 6, trans. by Mrs G. W. Hamilton (London, 1900-1902); J. P. Kirsch, *Die Rückkehr der Päpste Urban V. u. Gregor XI. von Avignon nach Rom* (Paderborn, 1898); J. B. Christophe, *Histoire de la papauté pendant le XIV^e^ siècle*, vol. 2 (Paris, 1853). There is a good article by J. N. Brischar in the *Kirchenlexikon*, 2nd edition.

Gregory XII. (*Angelo Coriaro*, or *Correr*), pope from the 30th of November 1406, to the 4th of July 1415, was born of a noble family at Venice about 1326. Successively bishop of Castello, Latin patriarch of Constantinople, cardinal-priest of San Marco, and papal secretary, he was elected to succeed Innocent VII., after an interregnum of twenty-four days, under the express condition that, should the antipope Benedict XIII. at Avignon renounce all claim to the papacy, he also would renounce his, so that the long schism might be terminated. As pope, he concluded a treaty with his rival at Marseilles, by which a general council was to be held at Savona in September, 1408, but King Ladislaus of Naples, who opposed the plan from policy, seized Rome and brought the negotiations to nought. Gregory had promised not to create any more cardinals, and when he did so, in 1408, his former cardinals deserted him and, together with the Avignon cardinals, convoked the council of Pisa, which, despite its irregularity, proclaimed in June 1409 the deposition of both popes and the election of Alexander V. Gregory, still supported by Naples, Hungary, Bavaria, and by Rupert, king of the Romans, found protection with Ladislaus, and in a synod at Cividale del Friuli banned Benedict and Alexander as schismatical, perjured and scandalous. John XXIII., having succeeded to the claims of Alexander in 1410, concluded a treaty with Ladislaus, by which Gregory was banished from Naples on the 31st of October 1411. The pope then took refuge with Carlo Malatesta, lord of Rimini, through whom he presented his resignation to the council of Constance on the 4th of July 1415. A weak and easily-influenced old man, his resignation was the noblest act of his pontificate. The rest of his life was spent in peaceful obscurity as cardinal-bishop of Porto and legate of the mark of Ancona. He died at Recanati on the 18th of October 1417. Some writers reckon Alexander V. and John XXIII. as popes rather than as antipopes, and accordingly count Gregory's pontificate from 1406 to 1409. Roman Catholic authorities, however, incline to the other reckoning.

See L. Pastor, *History of the Popes*, vol. i., trans. by F. I. Antrobus (London, 1899); M. Creighton, *History of the Papacy*, vol. 1 (London, 1899); N. Valois, *La France et le grand*

schisme d'occident (Paris, 1896-1902); Louis Gayet, *Le Grand Schisme d'occident* (Paris, 1898); J. von Haller, *Papsttum u. Kirchenreform* (Berlin, 1903); J. Loserth, *Geschichte des späteren Mittelalters* (1903); *Theoderici de Nyem de schismate libri tres*, ed. by G. Erler (Leipzig, 1890). There is an excellent article by J. N. Brischar in the *Kirchenlexikon* 2nd ed., vol. 5.

(C. H. Ha.)

Gregory XIII. (*Ugo Buoncompagno*), pope from 1572 to 1585, was born on the 7th of January 1502, in Bologna, where he received his education, and subsequently taught, until called to Rome (1539) by Paul III., who employed him in various offices. He bore a prominent part in the council of Trent, 1562-1563. In 1564 he was made cardinal by Pius IV., and, in the following year, sent to Spain as legate. On the 13th of May 1572 he was chosen pope to succeed Pius V. His previous life had been rather worldly, and not wholly free from spot; but as pope he gave no occasion of offence. He submitted to the influence of the rigorists, and carried forward the war upon heresy, though not with the savage vehemence of his predecessor. However, he received the news of the massacre of St Bartholomew (23rd of August 1572) with joy, and publicly celebrated the event, having been led to believe, according to his apologists, that France had been miraculously delivered, and that the Huguenots had suffered justly as traitors. Having failed to rouse Spain and Venice against the Turks, Gregory attempted to form a general coalition against the Protestants. He subsidized Philip II. in his wars in the Netherlands; aided the Catholic League in France; incited attacks upon Elizabeth by way of Ireland. With the aid of the Jesuits, whose privileges he multiplied, he conducted a vigorous propaganda. He established or endowed above a score of colleges, among them the Collegium Romanum (founded by Ignatius Loyola in 1550), and the Collegium Germanicum, in Rome. Among his noteworthy achievements are the reform of the calendar on the 24th of February 1582 (see Calendar); the improved edition of the *Corpus juris canonici*, 1582; the splendid Gregorian Chapel in St Peter's; the fountains of the Piazza Navona; the Quirinal Palace; and many other public works. To meet the expenses entailed by his liberality and extravagance, Gregory resorted to confiscation, on the pretext of defective titles or long-standing arrearages. The result was disastrous to the public peace: nobles armed in their defence; old feuds revived; the country became infested with bandits; not even in Rome could order be maintained. Amid these disturbances Gregory died, on the 10th of April 1585, leaving to his successor, Sixtus V., the task of pacifying the state.

See the contemporary lives by Cicarella, continuator of Platina, *De vitis pontiff. Rom.*; Ciaconius, *Vitae et res gestae summorum pontiff. Rom.* (Rome, 1601-1602); and Ciappi, *Comp. dell' attioni e santa vita di Gregorio XIII* (Rome, 1591). See also Bompiano, *Hist. pontificatus Gregorii XIII.* (Rome, 1655); Ranke, *Popes* (Eng. trans., Austin), i. 428 seq.; v. Reumont, *Gesch. der Stadt Rom.* iii. 2, 566 seq.; and for numerous references upon Gregory's relation to the massacre of St Bartholomew, *Cambridge Mod. Hist.* iii. 771 seq.

Gregory XIV. (*Nicoló Sfondrato*), pope 1590-1591, was born in Cremona, on the 11th of February 1535, studied in Perugia, and Padua, became bishop of his native place in 1560, and took part in the council of Trent, 1562-1563. Gregory XIII. made him a cardinal, 1583, but ill-health forbade his active participation in affairs. His election to the papacy, to succeed Urban VII., on the 5th of December 1590, was due to Spanish influence. Gregory was upright and devout, but utterly ignorant of politics. During his short pontificate the States of the Church suffered dire calamities, famine, epidemic and a fresh outbreak of brigandage. Gregory was completely subservient to Philip II.; he aided the league, excommunicated Henry of Navarre, and threatened his adherents with the ban; but the effect of his intervention was only to rally the moderate Catholics to the support of Henry, and to hasten his conversion. Gregory died on the 15th of October 1591, and was succeeded by Innocent IX.

See Ciaconius, *Vitae et res gestae summorum pontiff. Rom.* (Rome, 1601-1602); Cicarella, continuator of Platina, *De vitis pontiff. Rom.* (both contemporary); Brosch, *Gesch. des Kirchenstaates* (1880). i. 300; Ranke, *Popes* (Eng. trans., Austin), ii. 228 seq.

Gregory XV. (*Alessandro Ludovisi*) was born on the 9th of January 1554, in Bologna, where he also studied and taught. He was made archbishop of his native place and cardinal by Paul V., whom he succeeded as pope on the 9th of February 1621. Despite his age and feebleness, Gregory displayed remarkable energy. He aided the emperor in the Thirty Years' War, and the king of Poland against the Turks. He endorsed the claims of Maximilian of Bavaria to the electoral dignity, and was rewarded with the gift of the Heidelberg library, which was carried off to Rome. Gregory founded the Congregation of the Propaganda, encouraged missions, fixed the order to be observed in conclaves, and canonized Ignatius Loyola, Francis Xavier, Philip Neri and Theresa de Jesus. He died on the 8th of July 1623, and was succeeded by Urban VIII.

See the contemporary life by Vitorelli, continuator of Ciaconius, *Vitae et res gestae summorum pontiff. Rom.*; Ranke's excellent account, *Popes* (Eng. trans., Austin), ii. 468 seq.; v. Reumont, *Gesch. der Stadt Rom*, iii. 2, 609 seq.; Brosch, *Gesch. des Kirchenstaates* (1880), i. 370 seq.; and the extended bibliography in Herzog-Hauck, *Realencyklopädie*, s.v. "Gregor XV."

(T. F. C.)

Gregory XVI. (*Bartolommeo Alberto Cappellari*), pope from 1831 to 1846, was born at Belluno on the 18th of September 1765, and at an early age entered the order of the Camaldoli, among whom he rapidly gained distinction for his theological and linguistic acquirements. His first appearance before a wider public was in 1799, when he published against the Italian Jansenists a controversial work entitled *Il Trionfo della Santa Sede*, which, besides passing through several editions in Italy, has been translated into several European languages. In 1800 he became a member of the Academy of the Catholic Religion, founded by Pius VII., to which he contributed a number of memoirs on theological and philosophical questions and in 1805 was made abbot of San Gregorio on the Caelian Hill. When Pius VII. was carried off from Rome in 1809, Cappellari withdrew to Murano, near Venice, and in 1814, with some other members of his order, he removed to Padua; but soon after the restoration of the pope he was recalled to Rome, where he received successive appointments as vicar-general of the Camaldoli, councillor of the Inquisition, prefect of the Propaganda, and examiner of bishops. In March 1825 he was created cardinal by Leo XII., and shortly afterwards was entrusted with an important mission to adjust a concordat regarding the interests of the Catholics of Belgium and the Protestants of Holland. On the 2nd of February 1831 he was, after sixty-four days' conclave, unexpectedly chosen to succeed Pius VIII. in the papal chair. The revolution of 1830 had just inflicted a severe blow on the ecclesiastical party in France, and almost the first act of the new government there was to seize Ancona, thus throwing all Italy, and particularly the Papal States, into an excited condition which seemed to demand strongly repressive measures. In the course of the struggle which ensued it was more than once necessary to call in the Austrian bayonets. The reactionaries in power put off their promised reforms so persistently as to anger even Metternich; nor did the replacement 576
of Bernetti by Lambruschini in 1836 mend matters; for the new cardinal secretary of state objected even to railways and illuminating gas, and was liberal chiefly in his employment of spies and of prisons. The embarrassed financial condition in which Gregory left the States of the Church makes it doubtful how far his lavish expenditure in architectural and engineering works, and his magnificent patronage of learning in the hands of Mai, Mezzofanti, Gaetano, Moroni and others, were for the real benefit of his subjects. The years of his pontificate were marked by the steady development and diffusion of those ultramontane ideas which were ultimately formulated, under the presidency of his successor Pius IX., by the council of the Vatican. He died on the 1st of June 1846.

See A. M. Bernasconi, *Acta Gregorii Papae XVI. scilicet constitutiones, bullae, litterae apostolicae, epistolae*, vols. i-4 (Rome, 1901 ff.); Cardinal Wiseman, *Recollections of the Last Four Popes* (London, 1858); Herzog-Hauck, *Realencyklopädie*, vol. vii. (Leipzig, 1899), 127 ff. (gives literature); Frederik Nielsen, *History of the Papacy in the 19th Century*, ii. (London, 1906).

(W. W. R.*)

GREGORY,[1] the name of a Scottish family, many members of which attained high eminence in various departments of science, fourteen having held professorships in mathematics or medicine. Of the most distinguished of their number a notice is given below.

I. David Gregory (1627-1720), eldest son of the Rev. John Gregory of Drumoak, Aberdeenshire, who married Janet Anderson in 1621. He was for some time connected with a mercantile house in Holland, but on succeeding to the family estate of Kinardie returned to Scotland, and occupied most of his time in scientific pursuits, freely giving his poorer neighbours the benefit of his medical skill. He is said to have been the first possessor of a barometer in the north of Scotland; and on account of his success by means of it in predicting changes in the weather, he was accused of witchcraft before the presbytery of Aberdeen, but he succeeded in convincing that body of his innocence.

II. James Gregory (1638-1675), Scottish mathematician, younger brother of the preceding, was educated at the grammar school of Aberdeen and at Marischal College of that city. At an early period he manifested a strong inclination and capacity for mathematics and kindred

sciences; and in 1663 he published his famous treatise *Optica promota*, in which he made known his great invention, the Gregorian reflecting telescope. About 1665 he went to the university of Padua, where he studied for some years, and in 1667 published *Vera circuli et hyperbolae quadratura*, in which he discussed infinite convergent series for the areas of the circle and hyperbola. In the following year he published also at Padua *Geometriae pars universalis*, in which he gave a series of rules for the rectification of curves and the mensuration of their solids of revolution. On his return to England in this year he was elected a fellow of the Royal Society; in 1669 he became professor of mathematics in the university of St Andrews; and in 1674 he was transferred to the chair of mathematics in Edinburgh. In October 1675, while showing the satellites of the planet Jupiter to some of his students through one of his telescopes, he was suddenly struck with blindness, and he died a few days afterwards.

He was also the author of *Exercitationes geometricae* (1668), and, it is alleged, of a satirical tract entitled *The Great and New Art of Weighing Vanity*, intended to ridicule certain fallacies of a contemporary writer on hydraulics, and published at Glasgow in 1672, professedly by "Patrick Mathers, archbeadle of the university of St Andrews."

III. David Gregory (1661-1708), son of David Gregory (1627-1720), was born in Aberdeen and educated partly in his native city and partly in Edinburgh, where he became professor of mathematics in 1683. From 1691 till his death he was Savilian professor of astronomy at Oxford. His principal works are *Exercitatio geometrica de dimensione figurarum* (1684), *Catoptricae et dioptricae sphaericae elementa* (1695), and *Astronomiae physicae et geometricae elementa* (1702)—the last a work highly esteemed by Sir Isaac Newton, of whose system it is an illustration and a defence. *A Treatise on Practical Geometry* which he left in manuscript was translated from the Latin and published in 1745. He was succeeded in the chair of mathematics in Edinburgh by bis brother James; another brother, Charles, was in 1707 appointed professor of mathematics in the university of St Andrews; and his eldest son, David (1696-1767), became professor of modern history at Oxford, and canon and subsequently dean of Christ Church.

IV. John Gregory (1724-1773), Scottish physician, grandson of James Gregory (1638-1675) and youngest son of Dr James Gregory (d. 1731), professor of medicine in King's College, Aberdeen, was born at Aberdeen on the 3rd of June 1724. He received his early education at the grammar school of Aberdeen and at King's College in that city, and in 1741 he attended the medical classes at Edinburgh university. In 1745 he went to Leiden to complete his medical studies, and during his stay there he received without solicitation the degree of doctor of medicine from King's College, Aberdeen. On his return from Holland he was elected professor of philosophy at King's College, but in 1749 he resigned his professorship on account of its duties interfering too much with his private practice. In 1754 he proceeded to London, where he made the acquaintance of many persons of distinction, and the same year was chosen fellow of the Royal Society. On the death in November 1755 of his brother Dr James Gregory, who had succeeded his father as professor of medicine in King's College, Aberdeen, he was appointed to that office. In 1764 he removed to Edinburgh in the hope of obtaining a more extended field of practice as a physician, and in 1766 he was appointed professor of the practice of medicine in the university of Edinburgh, to whose eminence as a medical school he largely contributed. He died of gout on the 10th of February 1773.

He is the author of *A Comparative View of the State and Faculties of Man with those of the Animal World* (1765); *Observations on the Duties, Offices and Qualifications of a Physician* (1772); *Elements of the Practice of Physic* (1772); and *A Father's Legacy to his Daughters* (1774). *His Whole Works*, with a life by Mr Tytler (afterwards Lord Woodhouselee), were published at Edinburgh in 1788.

V. James Gregory (1753-1821), Scottish physician, eldest son of the preceding, was born at Aberdeen in January 1753. He accompanied his father to Edinburgh in 1764, and after going through the usual course of literary studies at that university, he was for a short time a student at Christchurch, Oxford. It was there probably that he acquired that taste for classical learning which afterwards distinguished him. He studied medicine at Edinburgh, and, after graduating doctor of medicine in 1774, spent the greater part of the next two years in Holland, France and Italy. Shortly after his return to Scotland he was appointed in 1776 to the chair his father had formerly held, and in the following year he also entered on the duties of teacher of clinical medicine in the Royal Infirmary. On the illness of Dr William Cullen in 1790 he was appointed joint-professor of the practice of medicine, and he became the head of the Edinburgh Medical School on the death of Dr Cullen in the same year. He died on the 2nd of April 1821. As a medical practitioner Gregory was for the last ten years of his life at the head of the profession in Scotland. He was at one time president of the Edinburgh College of Physicians, but his indiscretion in publishing certain private proceedings of the college led to

his suspension on the 13th of May 1809 from all rights and privileges which pertained to the fellowship.

Besides his *Conspectus medicinae theoreticae*, published in 1788 as a text-book for his lectures on the institutes, Dr Gregory was the author of "A Theory of the Moods of Verbs," published in the *Edin. Phil. Trans.* (1787), and of *Literary and Philosophical Essays*, published in two volumes in 1792.

VI. William Gregory (1803-1858), son of James Gregory (1753-1821), was born on the 25th of December 1803. In 1837 he became professor of chemistry at the Andersonian Institution, Glasgow, in 1839 at King's College, Aberdeen, and in 1844 at Edinburgh University. He died on the 24th of April 1858. Gregory was one of the first in England to advocate the theories of Justus von Liebig, and translated several of his works. He is also the author of *Outlines of Chemistry* (1845), and an *Elementary Treatise on Chemistry* (1853).

VII. Duncan Farquharson Gregory (1813-1844), brother of the preceding, was born on the 13th of April 1813. After studying at the university of Edinburgh he in 1833 entered Trinity College, Cambridge, where he was for a time assistant professor of chemistry, but he devoted his attention chiefly to mathematics. He died on the 23rd of February 1844.

The *Cambridge Mathematical Journal* was originated, and for some time edited, by him; and he also published a *Collection of Examples of Processes in the Differential and Integral Calculus* (1841). A *Treatise on the Application of Analysis to Solid Geometry*, which he left unfinished, was completed by W. Walton, and published posthumously in 1846. His *Mathematical Writings*, edited by W. Walton, with a biographical memoir by Robert Leslie Ellis, appeared in 1865.

1 See A. G. Stewart, *The Academic Gregories*.

GREGORY, EDWARD JOHN (1850-1909), British painter, born at Southampton, began work at the age of fifteen in the engineer's drawing office of the Peninsular and Oriental Company. Afterwards he studied at South Kensington, and about 1871 entered on a successful career as an illustrator and as an admirable painter in oil and water colour. He was elected associate of the Royal Academy in 1883, academician in 1898, and president of the Royal Institute of Painters in Water Colours in 1898. His work is distinguished by remarkable technical qualities, by exceptional firmness and decision of draughtsmanship and by unusual certainty of handling. His "Marooned," a water colour, is in the National Gallery of British Art. Many of his pictures were shown at Burlington House at the winter exhibition of 1909-1910 after his death in June 1909.

GREGORY, OLINTHUS GILBERT (1774-1841), English mathematician, was born on the 29th of January 1774 at Yaxley in Huntingdonshire. Having been educated by Richard Weston, a Leicester botanist, he published in 1793 a treatise, Lessons *Astronomical and Philosophical*. Having settled at Cambridge in 1796, Gregory first acted as sub-editor on the *Cambridge Intelligencer*, and then opened a bookseller's shop. In 1802 he obtained an appointment as mathematical master at Woolwich through the influence of Charles Hutton, to whose notice he had been brought by a manuscript on the "Use of the Sliding Rule"; and when Hutton resigned in 1807 Gregory succeeded him in the professorship. Failing health obliged him to retire in 1838, and he died at Woolwich on the 2nd of February 1841.

Gregory wrote *Hints for the Use of Teachers of Elementary Mathematics* (1840, new edition 1853), and *Mathematics for Practical Men* (1825), which was revised and enlarged by Henry Law in 1848, and again by J. R. Young in 1862. His *Letters on the Evidences of Christianity* (1815) have been several times reprinted, and an abridgment was published by the Religious Tract Society in 1853. He will probably be longest remembered for his *Biography of Robert Hall*, which first appeared in the collected edition of Hall's works, was published separately in 1833, and has since passed through several editions. The minor importance of his *Memoir of John Mason Good* (1828) is due to the narrower fame of the subject. Gregory was one of the

founders of the Royal Astronomical Society. In 1802 he was appointed editor of the *Gentlemen's Diary*, and in 1818 editor of the *Ladies' Diary* and superintendent of the almanacs of the Stationers' Company.

GREIFENBERG, a town of Germany, in the Prussian province of Pomerania, on the Rega, 45 m. N.E. of Stettin on the railway to Kolberg. Pop. (1905) 7208. It has two Evangelical churches (among them that of St Mary, dating from 13th century), two ancient gateways, a powder tower and a gymnasium. The manufacture of machines, stoves and bricks are the principal industries. Greifenberg possessed municipal rights as early as 1262, and in the 14th and 15th centuries had a considerable shipping trade, but it lost much of its prosperity during the Thirty Years' War.

See Riemann, *Geschichte der Stadt Greifenberg* (1862).

GREIFENHAGEN, a town of Germany, in the Prussian province of Pomerania, on the Reglitz, 12 m. S.S.W. of Stettin by rail. Pop. (1905) 6473. Its prosperity depends chiefly on agriculture and it has a considerable trade in cattle. There are also felt manufactures and saw mills. Greifenhagen was built in 1230, and was raised to the rank of a town and fortified about 1250. In the Thirty Years' War it was taken both by the imperialists and the Swedes, and in 1675 it was captured by the Brandenburgers, into whose possession it came finally in 1679.

GREIFSWALD, a town of Germany, in the Prussian province of Pomerania, on the navigable Ryk, 3 m. from its mouth on the Baltic at the little port of Wyk, and 20 m. S.E. from Stralsund by rail. Pop. (1875) 18,022, (1905) 23,750. It has wide and regular streets, flanked by numerous gabled houses, and is surrounded by pleasant promenades on the site of its old ramparts. The three Gothic Protestant churches, the Marienkirche, the Nikolaikirche and the Jakobikirche, and the town-hall (Rathaus) are the principal edifices, and these with their lofty spires are very picturesque. There is a statue of the emperor Frederick III. and a war memorial in the town. The industries mainly consist in shipbuilding, fish-curing, and the manufacture of machinery (particularly for agriculture), and the commerce in the export of corn, wood and fish. There is a theatre, an orphanage and a municipal library. Greifswald is, however, best known to fame by reason of its university. This, founded in 1456, is well endowed and is largely frequented by students of medicine. Connected with it are a library of 150,000 volumes and 800 MSS., a chemical laboratory, a zoological museum, a gynaecological institute, an ophthalmological school, a botanical garden and at Eldena (a seaside resort on the Baltic) an agricultural school. In front of the university, which had 775 students and about 100 teachers in 1904, stands a monument commemorating its four hundredth anniversary.

Greifswald was founded about 1240 by traders from the Netherlands. In 1250 it received a town constitution and Lübeck rights from Duke Wratislaw of Pomerania. In 1270 it joined the Hanse towns, Stralsund, Rostock, Wismar and Lübeck, and took part in the wars which they carried on against the kings of Denmark and Norway. During the Thirty Years' War it was formed into a fortress by the imperialists, but they vacated it in 1631 to the Swedes, in whose possession it remained after the peace of Westphalia. In 1678 it was captured by the elector of Brandenburg, but was restored to the Swedes in the following year; in 1713 it was desolated by the Russians; in 1715 it came into the possession of Denmark; and in 1721 it was again restored to Sweden, under whose protection it remained till 1815, when, along with the whole of Swedish Pomerania, it came into the possession of Prussia.

See J. G. L. Kosegarten, *Geschichte der Universität Greifswald* (1856); C. Gesterding, *Beitrag zur Geschichte der Stadt Greifswald* (3 vols., 1827-1829); and I. Ziegler, *Geschichte der Stadt Greifswald* (Greifswald, 1897).

GREISEN (in French, *hyalomicte*), a modification of granite, consisting essentially of quartz and white mica, and distinguished from granite by the absence of felspar and biotite. In the hand specimen the rock has a silvery glittering appearance from the abundance of lamellar crystals of muscovite, but many greisens have much of the appearance of granite, except that they are paler in colour. The commonest accessory minerals are tourmaline, topaz, apatite, fluorspar and iron oxides; a little felspar more or less altered may also be present and a brown mica which is biotite or lithionite. The tourmaline in section is brown, green, blue or colourless, and often the same crystal shows many different tints. The white mica forms mostly large plates with imperfect crystalline outlines. The quartz is rich in fluid enclosures. Apatite and topaz are both colourless and of irregular form. Felspar if present may be orthoclase and oligoclase.

Greisen occurs typically in belts or veins intersecting granite. At the centre of each vein there is usually a fissure which may be open or filled with quartz. The greisen bands are from 1 in. up to 2 ft. or more in thickness. At their outer edges they pass gradually into the granite, for they contain felspar crystals more or less completely altered into aggregates of white mica and quartz. The transition between the two rocks is perfectly gradual, a fact which shows that the greisen has been produced by alteration of the granite. Vapours or fluids rising through the fissure have been the agents which effected the transmutation. They must have contained fluorine, boron and probably also lithium, for topaz, mica and tourmaline, the new minerals of the granite, contain these elements. The change is a post-volcanic or pneumatolytic one induced by the vapours set free by the granite magma when it 578
cools. Probably the rock was at a relatively high temperature at the time. A similar type of alteration, the development of white mica, quartz and tourmaline, is found sometimes in sedimentary rocks around granite masses. Greisen is closely connected with schorl rock both in its mineralogical composition and in its mode of origin. The latter is a pneumatolytic product consisting of quartz and tourmaline; it often contains white mica and thus passes by all stages into greisen. Both of these rocks carry frequently small percentages of tin oxide (cassiterite) and may be worked as ores of tin. They are common in Cornwall, Saxony, Tasmania and other districts which are centres of tin-mining. Many other greisens occur in which no tin is found. The analyses show the composition of Cornish granite and greisen. They make it clear that there has been an introduction of fluorine and boron and a diminution in the alkalies during the transformation of the granitic rock into the greisen.

	SiO_2.	Al_2O_3.	Fe_2O_3.	FeO.	CaO.	MgO.	K_2O.	Na_2O.	Fl.	B_2O_3.
Granite	70.17	15.07	.88	1.79	1.13	1.11	5.73	2.69	.15	tr.
Greisen	69.42	15.65	1.25	3.30	.63	1.02	4.06	.27	3.36	.59

(J. S. F.)

GREIZ, a town of Germany, capital of the principality of Reuss-Greiz (Reuss the Elder), in a pleasant valley on the right bank of the White Elster, near the borders of Saxony, and 66 m. by rail S. from Leipzig. Pop. (1875) 12,657; (1905) 23,114. It consists of two parts, the old town on the right bank and the new town on the left bank of the river; it is rapidly growing and is regularly laid out. The principal buildings are the palace of the prince of Reuss-Greiz, surrounded by a fine park, the old château on a rocky hill overlooking the town, the summer palace with a fine garden, the old town church dating from 1225 and possessing a beautiful tower, the town hall, the governmental buildings and statues of the emperor William I. and of Bismarck. There are classical and modern schools and a school of textile industry. The industries are considerable, and include dyeing, tanning and the manufacture of woollen, cotton, shawls, coverlets and paper. Greiz (formerly *Grewcz*) is apparently a town of Slav origin. From the 12th century it was governed by *advocati* (*Vögte*), but in 1236 it came into

the possession of Gera, and in 1550 of the younger line of the house of Plauen. It was wholly destroyed by fire in 1494, and almost totally in 1802.

See Wilke, *Greiz und seine Umgebung* (1875), and *Jahresberichte des Vereins für Greizer Geschichte* (1894, seq.)

GRENADA, the southernmost of the Windward Islands, British West Indies. It lies between 11º 58′ and 12º 15′ N. and between 61º 35′ and 61º 50′ W., being 140 m. S.W. of Barbados and 85 m. N. by W. of Trinidad. In shape oval, it is 21 m. long, 12 m. broad at its maximum and has an area of 133 sq. m. It owes much of its beauty to a well-wooded range of mountains traversing the island from N. to S. and throwing off from the centre spurs which form picturesque and fertile valleys. These mountains attain their highest elevation in Mount Catharine (2750 ft.). In the S.E. and N.W. there are stretches of low or undulating ground, devoted to fruit growing and cattle raising. The island is of volcanic origin; the only signs of upheaval are raised limestone beaches in the extreme N. Red and grey sandstones, hornblende and argillaceous schist are found in the mountains, porphyry and basaltic rocks also occur; sulphur and fuller's earth are worked. In the centre, at the height of 1740 ft. above the sea, is the chief natural curiosity of Grenada, the Grand Etang, a circular lake, 13 acres in extent, occupying the site of an ancient crater. Near it is a large sanatorium, much frequented as a health resort. In the north-east is a larger lake, Lake Antoine, also occupying a crater, but it lies almost at the sea level. The island is watered by several short rivers, mainly on the east and south; there are numerous fresh water springs, as well as hot chalybeate and sulphurous springs. The south-eastern coast is much indented with bays. The climate is good, the temperature equable and epidemic diseases are rare. In the low country the average yearly temperature is 82° F., but it is cooler in the heights. The rainfall is very heavy, amounting in some parts to as much as 200 in., a year. The rainy season lasts from May to December, but refreshing showers frequently occur during other parts of the year. The average annual rainfall at St Georges is 79.07 in., and at Grand Etang 164 in. The excellent climate and good sea-bathing have made Grenada the health resort of the neighbouring islands, especially of Trinidad. Good roads and byeways intersect it in every direction. The soil is extraordinarily fertile, the chief products being cocoa and spices, especially nutmegs. The exports, sent chiefly to Great Britain, are cocoa, spices, wool, cotton, coffee, live stock, hides, turtles, turtle shell, kola nuts, vanilla and timber. Barbados is dependent on Grenada for the majority of its firewood. Sugar is still grown, and rum and molasses are made, but the consumption of these is confined to the island.

Elementary education is chiefly in the hands of the various denominations, whose schools are assisted by government grants-in-aid. There are, however, a few secular schools conducted by the government, and government-aided secondary schools for girls and a grammar school for boys. The schools are controlled by a board of education, the members of which are nominated by the government, and small fees are charged in all schools. The governor of the Windward Islands resides in Grenada and is administrator of it. The Legislative Council consists of 14 members; 7 including the governor are *ex-officio* members and the rest are nominated by the Crown. English is universally spoken, but the negroes use a French *patois*, which, however, is gradually dying out. Only 2% of the inhabitants are white, the rest being negroes and mulattoes with a few East Indians. The capital, St George, in the south-west, is built upon a lava peninsula jutting into the sea and forming one side of its land-locked harbour. It is surrounded by an amphitheatre of hills, up the sides of which climb the red-brick houses of the town. At the extremity of the peninsula is Fort St George, with a saluting battery. The ridge connecting Fort St George with Hospital Hill is tunnelled to give access to the two parts of the town lying on either side. The population in 1901 was 5198. There are four other towns—on the west coast Gouyave, or Charlotte Town, and 4 m. N. of it Victoria; on the north coast Sauteurs; and Grenville at the head of a wide bay on the east. They are all in frequent communication with the capital by steamer. The population of the entire colony in 1901 was 63,438.

History.—Grenada was discovered in 1498 by Columbus, who named it Conception. Neither the Spanish nor the British, to whom it was granted in 1627, settled on the island. The governor of Martinique, du Parquet, purchased it in 1650, and the French were well received by the Caribs, whom they afterwards extirpated with the greatest cruelty. In 1665 Grenada passed into the hands of the French West India Company, and was administered by it until its

dissolution in 1674, when the island passed to the French Crown. Cocoa, coffee and cotton were introduced in 1714. During the wars between Great Britain and France, Grenada capitulated to the British forces in 1762, and was formally ceded next year by the Treaty of Paris. The French, under Count d'Estaing, re-captured the island in 1779, but it was restored to Great Britain by the Treaty of Versailles in 1783. A rebellion against the British rule, instigated and assisted by the French, occurred in 1795, but was quelled by Sir Ralph Abercromby in the following year. The emancipation of the slaves took place in 1837, and by 1877 it was found necessary to introduce East Indian labour. Grenada, with cocoa as its staple, has not experienced similar depression to that which overtook the sugar-growing islands of the West Indies.

See *Grenada Handbook* (London, 1905).

GRENADE (from the French word for a pomegranate, from a resemblance in shape to that fruit), a small spherical explosive vessel thrown by hand. Hand-grenades were used in war in the 16th century, but the word "grenade" was also from the first used to imply an explosive shell fired from a gun; this survives to the present day in the German *Granate*. These weapons were employed after about 1660, by special troops called "grenadiers" (*q.v.*), and in the wars of the 17th and 18th centuries they are continually met with. They became obsolete in the 19th century, but were given a new lease of life in the 20th, owing to their employment in the siege of Port Arthur in 1904, where hand-grenades of a modern type, and containing powerful modern explosives, proved very effective (see AMMUNITION, *Shell*). Hand-grenades filled with chemicals and made of glass are used as a method of fire-extinction, and similar vessels containing a liquid with a very strong smell are used to discover defects in a drain or sewer.

GRENADIER, originally a soldier whose special duty it was to throw hand-grenades. The latter were in use for a considerable time before any special organization was given to the troops who were to use them. In 1667 four men per company in the French *Régiment du Roi* were trained with grenades (siege of Lille), and in 1668-1670 grenadier companies were formed in this regiment and in about thirty others of the French line. Evelyn, in his *Diary*, tells us that on the 29th of June 1678 he saw at Hounslow "a new sort of soldiers called granadiers, who were dexterous in flinging hand-granades." As in the case of the fusiliers, the French practice was therefore quickly copied in England. Eventually each English battalion had a grenadier company (see for illustrations *Archaeological Journal*, xxiii. 222, and xlvii. 321-324). Besides their grenades and the firelock, grenadiers carried axes which, with the grenades, were employed in the assault of fortresses, as we are told in the celebrated song, "The British Grenadiers."

The grenadier companies were formed always of the most powerful men in the regiment and, when the grenade ceased to be used, they maintained their existence as the "crack" companies of their battalions, taking the right of the line on parade and wearing the distinctive grenadier headdress. This system was almost universal, and the typical infantry regiment of the 18th and early 19th century had a grenadier and a light company besides its "line" companies. In the British and other armies these *élite* companies were frequently taken from their regiments and combined in grenadier and light infantry battalions for special service, and Napoleon carried this practice still further in the French army by organizing brigades and divisions of grenadiers (and correspondingly of *voltigeurs*). Indeed the companies thus detached from the line practically never returned to it, and this was attended with serious evils, for the battalion at the outbreak of war lost perhaps a quarter of its best men, the average men only remaining with the line. This special organization of grenadiers and light companies lasted in the British army until about 1858. In the Prussian service the grenadiers became permanent and independent battalions about 1740, and the gradual adoption of the four-company battalion by Prussia and other nations tended still further to place the grenadiers by themselves and apart from the line. Thus at the present day in Germany, Russia and other countries, the title of "grenadiers" is borne by line

regiments, indistinguishable, except for details of uniform and often the *esprit de corps* inherited from the old *élite* companies, from the rest. In the British service the only grenadiers remaining are the Grenadier Guards, originally the 1st regiment of Foot Guards, which was formed in 1660 on the nucleus of a regiment of English royalists which followed the fortunes of Charles II. in exile. In Russia a whole army corps (headquarters Moscow), inclusive of its artillery units, bears the title.

The special headdress of the grenadier was a pointed cap, with peak and flaps, of embroidered cloth, or a loose fur cap of similar shape; both these were light field service caps. The fur cap has in the course of time developed into the tall “bearskin” worn by British guards and various corps of other armies; the embroidered field cap survives, transformed, however, into a heavy brass headdress, in the uniform of the 1st Prussian Foot Guards, the 1st Prussian Guard Grenadiers and the Russian Paul (Pavlovsky) Grenadier Guards.

GRENADINES, a chain of islets in the Windward Islands, West Indies. They stretch for 60 m. between St Vincent and Grenada, following a N.E. to S.W. direction, and consist of some 600 islets and rocks. Some are a few square miles in extent, others are merely rocky cones projecting from the deep. For purposes of administration they are divided between St Vincent and Grenada. Bequia, the chief island in the St Vincent group, is long and narrow, with an area 6 sq. m. Owing to a lack of water it is only slightly cultivated, but game is plentiful. Admiralty Bay, on the W. side, is a safe and commodious harbour. Carriacou, belonging to Grenada, is the largest of the group, being 7 m. long, 2 m. wide and 13 sq. m. in extent. A ridge of hills, rising to an altitude of 700 ft., traverses the centre from N.E. to S.W.; here admirable building stone is found. There are two good harbours on the west coast, Hillsborough Bay on which stands Hillsborough, the chief town, and Tyrell Bay, farther south. The island is thickly populated, the negro peasantry occupying small lots and working on the *metayer* system. Excellent oysters are found along the coast, and cotton and cattle are the chief exports. Pop. of the group, mostly on Carriacou (1901) 6497.

GRENOBLE, the ancient capital of the Dauphiné in S.E. France, and now the chief town of the Isère department, 75 m. by rail from Lyons, 38½ m. from Chambéry and 85½ m. from Gap. Pop. (1906), town, 58,641; commune, 73,022. It is one of the most beautifully situated, and also one of the most strongly fortified, cities in Europe. Built at a height of 702 ft. on both banks of the river Isère just above its junction with the Drac, the town occupies a considerable plain at the south-western end of the fertile Graisivaudan valley. To the north rise the mountains of the Grande Chartreuse, to the east the range of Belledonne, and to the south those of Taillefer and the Moucherotte, the higher summits of these ranges being partly covered with snow. From the Jardin de Ville and the quays of the banks of the Isère the summit of Mont Blanc itself is visible. The greater part of the town rises on the left bank of the Isère, which is bordered by broad quays. The older portion has the tortuous and narrow streets usual in towns that have been confined within fortifications, but in modern times these hindrances have been demolished. The newer portion of the town has wide thoroughfares and buildings of the modern French type, solid but not picturesque. The original town (of but small extent) was built on the right bank of the Isère at the southern foot of the Mont Rachais, now covered by a succession of fortresses that rise picturesquely on the slope of that hill to a very considerable height (885 ft. above the town).

Grenoble is the seat of a bishopric which was founded in the 4th century, and now comprises the department of the Isère—formerly a suffragan of Vienne it now forms part of the ecclesiastical province of Lyons. The most remarkable building in the town is the Palais de Justice, erected (late 15th century to 16th century) on the site of the old palace of the Parlement of the Dauphiné. Opposite is the most noteworthy church of the city, that of St André (13th century), formerly the chapel of the dauphins of the Viennois: in it is the 17th century monument of Bayard (1476-1524), the *chevalier sans peur et sans reproche*, which was removed hither in 1822; but it is uncertain whose bones are therein. The cathedral church of Notre Dame is a heavy building, dating in part from the 11th century. The church

of St Laurent, on the right bank of the Isère, is the oldest in the city (11th century) and has a remarkable crypt, dating from Merovingian times. The town hall is a mainly modern building, constructed on the site of the palace of the dauphins, while the prefecture is entirely modern. The town library contains a considerable collection of paintings, mainly of the modern French school, but is more remarkable for its very rich collection of MSS. (7000) and printed books (250,000 vols.) which in great part belonged till 1793 to the monastery of the Grande Chartreuse. The natural history museum houses rich collections of various kinds, which contain (*inter alia*) numerous geological specimens from the neighbouring districts of the Dauphiné and Savoy. The university, revived in modern times after a long abeyance, occupies a modern building, as does also the hospital, though founded as far back as the 15th century. There are numerous societies in the town, including the Académie Delphinale (founded in 1772), and many charitable institutions.

The staple industry of Grenoble is the manufacture of kid gloves, most of the so-called *gants Jouvin* being made here—they are named after the reviver of the art, X. Jouvin (1800-1844). There are about 80 glove factories, which employ 18,500 persons (of whom 15,000 are women), the annual output being about 800,000 dozen pairs of gloves. Among other articles produced at Grenoble are artificial cements, liqueurs, straw hats and carved furniture.

Grenoble occupies the site of Cularo, a village of the Allobroges, which only became of importance when fortified by Diocletian and Maximian at the end of the 3rd century. Its present name is a corruption of Gratianopolis, a title assumed probably in honour of Gratian (4th century), who raised it to the rank of a *civitas*. After passing under the power of the Burgundians (*c.* 440) and the Franks (532) it became part of the kingdom of Provence (879-1032). On the break-up of that kingdom a long struggle for supremacy ensued between the bishops of the city and the counts of Albon, the latter finally winning the day in the 12th century, and taking the title of Dauphins of the Viennois in the 13th century. In 1349 Grenoble was ceded with the rest of the Dauphiné to France, but retained various municipal privileges which had been granted by the dauphins to the town, originally by a charter of 1242. In 1562 it was sacked by the Protestants under the baron des Adrets, but in 1572 the firmness of its governor, Bertrand de Gordes, saved it from a repetition of the Massacre of St Bartholomew. In 1590 Lesdiguières (1543-1626) took the town in the name of Henry IV., then still a Protestant, and during his long governorship (which lasted to his death) did much for it by the construction of fortifications, quays, &c. In 1788 the attempt of the king to weaken the power of the parlement of Grenoble (which, though strictly a judicial authority, had preserved traditions of independence, since the suspension of the states-general of the Dauphiné in 1628) roused the people to arms, and the “day of the tiles” (7th of June 1788) is memorable for the defeat of the royal forces. In 1790, on the formation of the department of the Isère, Grenoble became its capital. Grenoble was the first important town to open its gates to Napoleon on his return from Elba (7th of March 1815), but a few months later (July) it was obliged to surrender to the Austrian army. Owing to its situation Grenoble was formerly much subject to floods, particularly in the case of the wild Drac. One of the worst took place in 1219, while that of 1778 was known as the *déluge de la Saint Crépin*. Among the celebrities who have been born at Grenoble are Vaucanson (1709-1782), Mably (1709-1785), Condillac (1715-1780), Beyle, best known as Stendhal, his *nom de guerre* (1783-1842), Barnave (1761-1793) and Casimir Perier (1777-1832).

See A. Prudhomme, *Histoire de Grenoble* (1888); X. Roux, *La Corporation des gantiers de Grenoble* (1887); H. Duhamel, *Grenoble considéré comme centre d’excursions* (1902); J. Marion, *Cartulaires de l’église cathédrale de Grenoble* (Paris, 1869).

(W. A. B. C.)

GRENVILLE, SIR BEVIL (1596-1643), Royalist soldier in the English Civil War (see Great Rebellion), was educated at Exeter College, Oxford. As member of Parliament, first for Cornwall, then for Launceston, Grenville supported Sir John Eliot and the opposition, and his intimacy with Eliot was life-long. In 1639, however, he appears as a royalist going to the Scottish War in the train of Charles I. The reasons of this change of front are unknown, but Grenville’s honour was above suspicion, and he must have entirely convinced himself that he was doing right. At any rate he was a very valuable recruit to the royalist cause, being “the most generally loved man in Cornwall.” At the outbreak of the Civil War he and others of the gentry not only proclaimed the king’s Commission of Array at Launceston assizes, but also persuaded the grand jury of the county to declare their opponents guilty of riot and unlawful

assembly, whereupon the *Posse comitatus* was called out to expel them. Under the command of Sir Ralph Hopton, Sir Bevil took a distinguished part in the action of Bradock Down, and at Stratton (16 May 1643), where the parliamentary earl of Stamford was completely routed by the Cornishmen, led one of the storming parties which captured Chudleigh's lines (*Clarendon*, vii. 89). A month later, the endeavour of Hopton to unite with Maurice and Hertford from Oxford brought on the battle of Lansdown, near Bath. Here Grenville was killed at the head of the Cornish infantry as it reached the top of the hill. His death was a blow from which the king's cause in the West never recovered, for he alone knew how to handle the Cornishmen. Hopton they revered and respected, but Grenville they loved as peculiarly their own commander, and after his death there is little more heard of the reckless valour which had won Stratton and Lansdown. Grenville is the type of all that was best in English royalism. He was neither rapacious, drunken nor dissolute, but his loyalty was unselfish, his life pure and his skill no less than his bravery unquestionable. A monument to him has been erected on the field of Lansdown.

See Lloyd, *Memoirs of Excellent Personages* (1668); S. R. Gardiner, *History of the English Civil War* (vol. i. *passim*).

GRENVILLE, GEORGE (1712-1770), English statesman, second son of Richard Grenville and Hester Temple, afterwards Countess Temple, was born on the 14th of October 1712. He was educated at Eton and at Christ Church, Oxford, and was called to the bar in 1735. He entered parliament in 1741 as member for Buckingham, and continued to represent that borough till his death. In parliament he was a member of the "Boy Patriot" party which opposed Sir Robert Walpole. In December 1744 he became a lord of the admiralty in the Pelham administration. He allied himself with his brother Richard and with William Pitt in forcing their feeble chief to give them promotion by rebelling against his authority and obstructing business. In June 1747 he became a lord of the treasury, and in 1754 treasurer of the navy and privy councillor. As treasurer of the navy in 1758 he introduced and carried a bill which established a less unfair system of paying the wages of the seamen than had existed before. He remained in office in 1761, when his brother Lord Temple and his brother-in-law Pitt resigned upon the question of the war with Spain, and in the administration of Lord Bute he was entrusted with the leadership of the House of Commons. In May 1762 he was appointed secretary of state, and in October first lord of the admiralty; and in April 1763 he became first lord of the treasury and chancellor of the exchequer. The most prominent measures of his administration were the prosecution of Wilkes and the passing of the American Stamp Act, which led to the first symptoms of alienation between America and the mother country. During the latter period of his term of office he was on a very unsatisfactory footing with the young king George III., who gradually came to feel a kind of horror of the interminable persistency of his conversation, and whom he endeavoured to make use of as the mere puppet of the ministry. The king made various attempts to induce Pitt to come to his rescue by forming a ministry, but without success, and at last had recourse to the marquis of Rockingham, on whose agreeing to accept office Grenville was dismissed July 1765. He never again held office, and died on the 13th of November 1770.

The nickname of "gentle shepherd" was given him because he bored the House by asking over and over again, during the debate on the Cider Bill of 1763, that somebody should tell him "where" to lay the new tax if it was not to be put on cider. Pitt whistled the air of the popular tune "Gentle Shepherd, tell me where," and the House laughed. Though few excelled him in a knowledge of the forms of the House or in mastery of administrative details, his tact in dealing with men and with affairs was so defective that there is perhaps no one who has been at the head of an English administration to whom a lower place can be assigned as a statesman.

In 1749 he married Elizabeth, daughter of Sir William Wyndham, by whom he had a large family. His son, the second Earl Temple, was created marquess, and his grandson duke, of Buckingham. Another son was William, afterwards Lord Grenville. Another, Thomas Grenville (1755-1846), who was, with one interval, a member of parliament from 1780 to 1818, and for a few months during 1806 and 1807 president of the board of control and first lord of the admiralty, is perhaps more famous as a book-collector than as a statesman; he bequeathed his large and valuable library to the British Museum.

The Grenville Papers, being the Correspondence of Richard Grenville, Earl Temple, K.G.,

and the Right Hon. George Grenville, their Friends and Contemporaries, were published at London in 1852, and afford the chief authority for his life. But see also H. Walpole's *Memoirs of the Reign of George II.* (London, 1845); Lord Stanhope's *History of England* (London, 1858); Lecky's *History of England* (1885); and E. D. Adams, *The Influence of Grenville on Pitt's Foreign Policy* (Washington, 1904).

GRENVILLE (or GREYNVILE), **SIR RICHARD** (*c.* 1541-1591), British naval commander, was born of an old Cornish family about 1541. His grandfather, Sir Richard, had been marshal of Calais in the time of Henry VIII., and his father commanded and was lost in the "Mary Rose" in 1545. At an early age Grenville is supposed to have served in Hungary under the emperor Maximilian against the Turks. In the years 1571 and 1584 he sat in parliament for Cornwall, and in 1583 and 1584 he was commissioner of the works at Dover harbour. He appears to have been a man of much pride and ambition. Of his bravery there can be no doubt. In 1585 he commanded the fleet of seven vessels by which the colonists sent out by his cousin, Sir Walter Raleigh, were carried to Roanoke Island in the present North Carolina. Grenville himself soon returned with the fleet to England, capturing a Spanish vessel on his way, but in 1586 he carried provisions to Roanoke, and finding the colony deserted, left a few men to maintain possession. He then held an important post in charge of the defences of the western counties of England. When a squadron was despatched in 1591, under Lord Thomas Howard, to intercept the homeward-bound treasure-fleet of Spain, Grenville was appointed as second in command on board the "Revenge," a ship of 500 tons which had been commanded by Drake against the Armada in 1588. At the end of August Howard with 16 ships lay at anchor to the north of Flores in the Azores. On the last day of the month he received news from a pinnace, sent by the earl of Cumberland, who was then off the Portugal coast, that a Spanish fleet of 53 vessels was then bearing up to the Azores to meet the treasure-ships. Not being in a position to fight a fleet more than three times the size of his own, Howard gave orders to weigh anchor and stand out to sea. But, either from some misunderstanding of the order, or from some idea of Grenville's that the Spanish vessels rapidly approaching were the ships for which they had been waiting, the "Revenge" was delayed and cut off from her consorts by the Spaniards. Grenville resolved to try to break through the middle of the Spanish line. His ship was becalmed under the lee of a huge galleon, and after a hand-to-hand fight lasting through fifteen hours against fifteen Spanish ships and a force of five thousand men, the "Revenge" with her hundred and fifty men was captured. Grenville himself was carried on board the Spanish flag-ship "San Pablo," and died a few days later. The incident is commemorated in Tennyson's ballad of "The Revenge."

The spelling of Sir Richard's name has led to much controversy. Four different families, each of which claim to be descended from him, spell it Granville, Grenville, Grenfell and Greenfield. The spelling usually accepted is Grenville, but his own signature, in a bold clear handwriting, among the Tanner MSS. in the Bodleian library at Oxford, is Greynvile.

GRENVILLE (or GRANVILLE), **SIR RICHARD** (1600-1658), English royalist, was the third son of Sir Bernard Grenville (1559-1636), and a grandson of the famous seaman, Sir Richard Grenville. Having served in France, Germany and the Netherlands, Grenville gained the favour of the duke of Buckingham, took part in the expeditions to Cadiz, to the island of Rhé and to La Rochelle, was knighted, and in 1628 was chosen member of parliament for Fowey. Having married Mary Fitz (1596-1671), widow of Sir Charles Howard (d. 1622) and a lady of fortune, Grenville was made a baronet in 1630; his violent temper, however, made the marriage an unhappy one, and he was ruined and imprisoned as the result of two lawsuits, one with his wife, and the other with her kinsman, the earl of Suffolk. In 1633 he escaped from prison and went to Germany, returning to England six years later to join the army which Charles I. was collecting to march against the Scots. Early in 1641, just after the outbreak of the Irish rebellion, Sir Richard led some troops to Ireland, where he won some fame and became governor of Trim; then returning to England in 1643 he was arrested at Liverpool by an officer of the parliament, but was soon released and sent to join the parliamentary army.

Having, however, secured men and money, he hurried to Charles I. at Oxford and was despatched to take part in the siege of Plymouth, quickly becoming the leader of the forces engaged in this enterprise. Compelled to raise the siege he retired into Cornwall, where he helped to resist the advancing Parliamentarians; but he quickly showed signs of insubordination, and, whilst sharing in the siege of Taunton, he was wounded and obliged to resign his command. About this time loud complaints were brought against Grenville. He had behaved, it was said, in a very arbitrary fashion; he had hanged some men and imprisoned others; he had extorted money and had used the contributions towards the cost of the war for his own ends. Many of these charges were undoubtedly true, but upon his recovery the councillors of the prince of Wales gave him a position under Lord Goring, whom, however, he refused to obey. Equally recalcitrant was his attitude towards Goring's successor, Sir Ralph Hopton, and in January 1646 he was arrested. But he was soon released; he went to France and Italy, and after visiting England in disguise passed some time in Holland. He was excepted by parliament from pardon in 1648, and after the king's execution he was with Charles II. in France and elsewhere until some unfounded accusation which he brought against Edward Hyde, afterwards earl of Clarendon, led to his removal from court. He died in 1658, and was buried at Ghent. In 1644, when Grenville deserted the parliamentary party, a proclamation was put out against him; in this there were attached to his name several offensive epithets, among them being *skellum*, a word probably derived from the German *Schelm*, a scoundrel. Hence he is often called "skellum Grenville."

Grenville wrote an account of affairs in the west of England, which was printed in T. Carte's *Original Letters* (1739). To this partisan account Clarendon drew up an answer, the bulk of which he afterwards incorporated in his *History*. In 1654 Grenville wrote his *Single defence against all aspersions of all malignant persons*. This is printed in the *Works* of George Granville, Lord Lansdowne (London, 1736), where Lansdowne's *Vindication* of his kinsman, Sir Richard, against Clarendon's charges is also found. See also Clarendon, *History of the Rebellion*, edited by W. D. Macray (Oxford, 1888); and R. Granville, *The King's General in the West* (1908).

GRENVILLE, WILLIAM WYNDHAM GRENVILLE, Baron (1759-1834), English statesman, youngest son of George Grenville, was born on the 25th of October 1759. He was educated at Eton and Christ Church, Oxford, gaining the chancellor's prize for Latin verse in 1779. In February 1782 Grenville was returned to parliament as member for the borough of Buckingham, and in the following September he became secretary to the lord lieutenant of Ireland, who at this time was his brother, Earl Temple, afterwards marquess of Buckingham. He left office in June 1783, but in the following December he became paymaster-general of the forces under his cousin, William Pitt, and in 1786 vice-president of the committee of trade. In 1787 he was sent on an important mission to the Hague and Versailles with reference to the affairs of Holland. In January 1789 he was chosen speaker of the House of Commons, but he vacated the chair in the same year on being appointed secretary of state for the home department; about the same time he resigned his other offices, but he became president of the board of control, and in November 1790 was created a peer as Baron Grenville. In the House of Lords he was very active in directing the business of the government, and in 1791 he was transferred to the foreign office, retaining his post at the board of control until 1793. He was doubtless regarded by Pitt as the man best fitted to carry out his policy with reference to France, but in the succeeding years he and his chief were frequently at variance on important questions of foreign policy. In spite of his multifarious duties at the foreign office Grenville continued to take a lively interest in domestic matters, which he showed by introducing various bills into the House of Lords. In February 1801 he resigned office with Pitt because George III. would not consent to the introduction of any measure of Roman Catholic relief, and in opposition he gradually separated himself from his former leader. When Pitt returned to power in 1804 Grenville refused to join the ministry unless his political ally, Fox, was also admitted thereto; this was impossible and he remained out of office until February 1806, when just after Pitt's death he became the nominal head of a coalition government. This ministry was very unfortunate in its conduct of foreign affairs, but it deserves to be remembered with honour on account of the act passed in 1807 for the abolition of the slave trade. Its influence, however, was weakened by the death of Fox, and in consequence of a minute drawn up by Grenville and some of his colleagues the king demanded from his ministers an assurance that in future they would not urge upon him any measures for the relief of Roman Catholics. They refused to give this assurance and in March

1807 they resigned. Grenville's attitude in this matter was somewhat aggressive; his colleagues were not unanimous in supporting him, and Sheridan, one of them, said "he had known many men knock their heads against a wall, but he had never before heard of any man who collected the bricks and built the very wall with an intention to knock out his own brains against it."

Lord Grenville never held office again, although he was requested to do so on several occasions. He continued, however, to take part in public life, being one of the chief supporters of Roman Catholic emancipation, and during the remaining years of his active political career, which ended in 1823, he generally voted with the Whigs, although in 1815 he separated himself from his colleague, Charles Grey, and supported the warlike policy of Lord Liverpool. In 1819, when the marquess of Lansdowne brought forward his motion for an inquiry into the causes of the distress and discontent in the manufacturing districts, Grenville delivered an alarmist speech advocating repressive measures. His concluding years were spent at Dropmore, Buckinghamshire, where he died on the 12th of January 1834. His wife, whom he married in 1792, was Anne (1772-1864), daughter of Thomas Pitt, 1st Baron Camelford, but he had no issue and his title became extinct. In 1809 he was elected chancellor of Oxford university.

Though Grenville's talents were not of the highest order his straightforwardness and industry, together with his knowledge of politics and the moderation of his opinions, secured for him considerable political influence. He may be enrolled among the band of English statesmen who have distinguished themselves in literature. He edited Lord Chatham's letters to his nephew, Thomas Pitt, afterwards Lord Camelford (London, 1804, and other editions); he wrote a small volume, *Nugae Metricae* (1824), being translations into Latin from English, Greek and Italian, and an *Essay on the Supposed Advantages of a Sinking Fund* (1828).

The Dropmore MSS. contain much of Grenville's correspondence, and on this the Historical Manuscripts Commission has published a report.

GRESHAM, SIR THOMAS (1519-1579), London merchant, the founder of the Royal Exchange and of Gresham College, London, was descended from an old Norfolk family; he was the only son of Sir Richard Gresham, a leading London merchant, who for some time held the office of lord mayor, and for his services as agent of Henry VIII. in negotiating loans with foreign merchants received the honour of knighthood. Though his father intended him to follow his own profession, he nevertheless sent him for some time to Caius College, Cambridge, but there is no information as to the duration of his residence. It is uncertain also whether it was before or after this that he was apprenticed to his uncle Sir John Gresham, who was also a merchant, but we have his own testimony that he served an apprenticeship of eight years. In 1543, at the age of twenty-four, he was admitted a member of the Mercers' Company, and in the same year he went to the Low Countries, where, either on his own account or on that of his father or uncle, he both carried on business as a merchant and acted in various matters as an agent for Henry VIII. In 1544 he married the widow of William Read, a London merchant, but he still continued to reside principally in the Low Countries, having his headquarters at Antwerp. When in 1551 the mismanagement of Sir William Dansell, "king's merchant" in the Low Countries, had brought the English government into great financial embarrassment, Gresham was called in to give his advice, and chosen to carry out his own proposals. Their leading feature was the adoption of various methods—highly ingenious, but quite arbitrary and unfair—for raising the value of the pound sterling on the "bourse" of Antwerp, and it was so successful that in a few years nearly all King Edward's debts were discharged. The advice of Gresham was likewise sought by the government in all their money difficulties, and he was also frequently employed in various diplomatic missions. He had no stated salary, but in reward of his services received from Edward various grants of lands, the annual value of which at that time was ultimately about £400 a year. On the accession of Mary he was for a short time in disfavour, and was displaced in his post by Alderman William Dauntsey. But Dauntsey's financial operations were not very successful and Gresham was soon reinstated; and as he professed his zealous desire to serve the queen, and manifested great adroitness both in negotiating loans and in smuggling money, arms and foreign goods, not only were his services retained throughout her reign, but besides his salary of twenty shillings *per diem* he received grants of church lands to the yearly value of £200. Under Queen Elizabeth, besides continuing in his post as financial agent of the crown,

he acted temporarily as ambassador at the court of the duchess of Parma, being knighted in 1559 previous to his departure. By the outbreak of the war in the Low Countries he was compelled to leave Antwerp on the 19th of March 1567; but, though he spent the remainder of his life in London, he continued his business as merchant and financial agent of the government in much the same way as formerly. Elizabeth also found him useful in a great variety of other ways, among which was that of acting as jailer, to Lady Mary Grey, who, as a punishment for marrying Thomas Keys the sergeant porter, remained a prisoner in his house from June 1569 to the end of 1572. In 1565 Gresham made a proposal to the court of aldermen of London to build at his own expense a bourse or exchange, on condition that they purchased for this purpose a piece of suitable ground. In this proposal he seems to have had an eye to his own interest as well as to the general good of the merchants, for by a yearly rental of £700 obtained for the shops in the upper part of the building he received a sufficient return for his trouble and expense. Gresham died suddenly, apparently of apoplexy, on the 21st of November 1579. His only son predeceased him, and his illegitimate daughter Anne he married to Sir Nathaniel Bacon, brother of the great Lord Bacon. With the exception of a number of small sums bequeathed to the support of various charities, the bulk of his property, consisting of estates in various parts of England of the annual value of more than £2300, was bequeathed to his widow and her heirs with the stipulation that after her decease his residence in Bishopsgate Street, as well as the rents arising from the Royal Exchange, should be vested in the hands of the corporation of London and the Mercers' Company, for the purpose of instituting a college in which seven professors should read lectures—one each day of the week—on astronomy, geometry, physic, law, divinity, rhetoric and music. The lectures were begun in 1597, and were delivered in the original building until 1768, when, on the ground that the trustees were losers by the gift, it was made over to the crown for a yearly rent of £500, and converted into an excise office. From that time a room in the Royal Exchange was used for the lectures until in 1843 the present building was erected at a cost of £7000.

A notice of Gresham is contained in Fuller's *Worthies* and Ward's *Gresham Professors*; but the fullest account of him, as well as of the history of the Exchange and Gresham College is that by J. M. Burgon in his *Life and Times of Sir Thomas Gresham* (2 vols., 1839). See also a *Brief Memoir of Sir Thomas Gresham* (1833); and *The Life of Sir Thomas Gresham, Founder of the Royal Exchange* (1845).

GRESHAM, WALTER QUINTON (1832-1895), American statesman and jurist, was born near Lanesville, Harrison county, Indiana, on the 17th of March 1832. He spent two years in an academy at Corydon, Indiana, and one year at the Indiana State University at Bloomington, then studied law, and in 1854 was admitted to the bar. He was active as a campaign speaker for the Republican ticket in 1856, and in 1860 was elected to the State House of Representatives as a Republican in a strong Democratic district. In the House, as chairman of the committee on military affairs, he did much to prepare the Indiana troops for service in the Federal army; in 1861 he became colonel of the 53rd Indiana Volunteer Infantry, and subsequently took part in Grant's Tennessee campaign of 1862, and in the operations against Corinth and Vicksburg, where he commanded a brigade. In August 1863 he was appointed brigadier-general of volunteers, and was placed in command of the Federal forces at Natchez. In 1864 he commanded a division of the 17th Army Corps in Sherman's Atlanta campaign, and before Atlanta, on the 20th of July, he received a wound which forced him to retire from active service, and left him lame for life. In 1865 he was brevetted major-general of volunteers. After the war he practised law at New Albany, Indiana, and in 1869 was appointed by President Grant United States District Judge for Indiana. In April 1883 he succeeded Timothy O. Howe (1816-1883) as postmaster-general in President Arthur's cabinet, taking an active part in the suppression of the Louisiana Lottery, and in September 1884 succeeded Charles J. Folger as secretary of the treasury. In the following month he resigned to accept an appointment as United States Judge for the Seventh Judicial Circuit. Gresham was a candidate for the Republican presidential nomination in 1884 and 1888, in the latter year leading for some time in the balloting. Gradually, however, he grew out of sympathy with the Republican leaders and policy, and in 1892 advocated the election of the Democratic candidate, Grover Cleveland, for the presidency. From the 7th of March 1893 until his death at Washington on the 28th of May 1895, he was secretary of state in President Cleveland's cabinet.

GRESHAM'S LAW, in economics, the name suggested in 1857 by H. D. Macleod for the principle of currency which may be briefly summarized—"bad money drives out good." Macleod gave it this name, which has been universally adopted, under the impression that the principle was first explained by Sir Thomas Gresham in 1558. In reality it had been well set forth by earlier economic writers, notably Oresme and Copernicus. Macleod states the law in these terms: the worst form of currency in circulation regulates the value of the whole currency and drives all other forms of currency out of circulation. Gresham's law applies where there is under-weight or debased coin in circulation with full-weight coin of the same metal; where there are two metals in circulation, and one is undervalued as compared with the other, and where inconvertible paper money is put into circulation side by side with a metallic currency. See further BIMETALLISM; MONEY.

GRESSET, JEAN BAPTISTE LOUIS (1709-1777), French poet and dramatist, was born at Amiens on the 29th of August 1709. His poem *Vert Vert* is his main title to fame. He spent, however, the last twenty-five years of his life in regretting the frivolity which enabled him to produce this most charming of poems. He was brought up by the Jesuits of Amiens. He was accepted as a novice at the age of sixteen, and sent to pursue his studies at the Collège Louis le Grand in Paris. After completing his course he was appointed, being then under twenty years of age, to a post as assistant master in a college at Rouen. He published *Vert Vert* at Rouen in 1734. It is a story, in itself exceedingly humorous, showing how a parrot, the delight of a convent, whose talk was all of prayers and pious ejaculations, was conveyed to another convent as a visitor to please the nuns. On the way he falls among bad companions, forgets his convent language, and shocks the sisters on arrival by profane swearing. He is sent back in disgrace, punished by solitude and plain bread, presently repents, reforms and is killed by kindness. The story, however, is nothing. The treatment of the subject, the atmosphere which surrounds it, the delicacy in which the little prattling ways of the nuns, their jealousies, their tiny trifles, are presented, takes the reader entirely by surprise. The poem stands absolutely unrivalled, even among French *contes en vers*.

Gresset found himself famous. He left Rouen, went up to Paris, where he found refuge in the same garret which had sheltered him when a boy at the Collège Louis le Grand, and there wrote his second poem, *La Chartreuse*. It was followed by the *Carême impromptu*, the *Lutrin vivant* and *Les Ombres*. Then trouble came upon him; complaints were made to the fathers of the alleged licentiousness of his verses, the real cause of complaint being the ridicule which *Vert Vert* seemed to throw upon the whole race of nuns and the anti-clerical tendency of the other poems. An example, it was urged, must be made; Gresset was expelled the order. Men of robust mind would have been glad to get rid of such a yoke. Gresset, who had never been taught to stand alone, went forth weeping. He went to Paris in 1740 and there produced *Édouard III*, a tragedy (1740) and *Sidnei* (1745), a comedy. These were followed by *Le Méchant* which still keeps the stage, and is qualified by Brunetière as the best verse comedy of the French 18th century theatre, not excepting even the *Métromanie* of Alexis Piron. Gresset was admitted to the Academy in 1748. And then, still young, he retired to Amiens, where his relapse from the discipline of the church became the subject of the deepest remorse. He died at Amiens on the 16th of June 1777.

The best edition of his poems is A. A. Rénouard's (1811). See Jules Wogue, *J. B. L. Gresset* (1894).

GRETNA GREEN, or GRAITNEY GREEN, a village in the south-east of Dumfriesshire, Scotland, about 8 m. E. of Annan, 9 m. N.N.W. of Carlisle, and ¾ m. from the river Sark, here the dividing-line between England and Scotland, with a station on the Glasgow & South-Western

railway. The Caledonian and North British railways have a station at Gretna on the English side of the Border. As the nearest village on the Scottish side, Gretna Green was notorious as the resort of eloping couples, who had failed to obtain the consent of parents or guardians to their union. Up till 1754, when Lord Hardwicke's act abolishing clandestine marriages came into force, the ceremony had commonly been performed in the Fleet prison in London. After that date runaway couples were compelled to seek the hospitality of a country where it sufficed for them to declare their wish to marry in the presence of witnesses. At Gretna Green the ceremony was usually performed by the blacksmith, but the toll-keeper, ferryman or in fact any person might officiate, and the toll-house, the inn, or, after 1826, Gretna Hall was the scene of many such weddings, the fees varying from half a guinea to a sum as large as impudence could extort or extravagance bestow. As many as two hundred couples were married at the toll-house in a year. The romantic traffic was practically, though not necessarily, put an end to in 1856, when the law required one of the contracting parties to reside in Scotland three weeks previous to the event.

GRÉTRY, ANDRÉ ERNEST MODESTE (1741-1813), French composer, was born at Liége on the 8th of February 1741, his father being a poor musician. He was a choir boy at the church of St Denis. In 1753 he became a pupil of Leclerc and later of Renekin and Moreau. But of greater importance was the practical tuition he received by attending the performance of an Italian opera company. Here he heard the operas of Galuppi, Pergolesi and other masters; and the desire of completing his own studies in Italy was the immediate result. To find the necessary means he composed in 1759 a mass which he dedicated to the canons of the Liége cathedral, and it was at the cost of Canon Hurley that he went to Italy in the March of 1759. In Rome he went to the Collège de Liége. Here Grétry resided for five years, studiously employed in completing his musical education under Casali. His proficiency in harmony and counterpoint was, however, according to his own confession, at all times very moderate. His first great success was achieved by *La Vendemmiatrice*, an Italian intermezzo or operetta, composed for the Aliberti theatre in Rome and received with universal applause. It is said that the study of the score of one of Monsigny's operas, lent to him by a secretary of the French embassy in Rome, decided Grétry to devote himself to French comic opera. On New Year's day 1767 he accordingly left Rome, and after a short stay at Geneva (where he made the acquaintance of Voltaire, and produced another operetta) went to Paris. There for two years he had to contend with the difficulties incident to poverty and obscurity. He was, however, not without friends, and by the intercession of Count Creutz, the Swedish ambassador, Grétry obtained a libretto from Marmontel, which he set to music in less than six weeks, and which, on its performance in August 1768, met with unparalleled success. The name of the opera was *Le Huron*. Two others, *Lucile* and *Le Tableau parlant*, soon followed, and thenceforth Grétry's position as the leading composer of comic opera was safely established. Altogether he composed some fifty operas. His masterpieces are *Zémire et Azor* and *Richard Cœur de Lion*,—the first produced in 1771, the second in 1784. The latter in an indirect way became connected with a great historic event. In it occurs the celebrated romance, *O Richard, ô mon roi, l'univers t'abandonne*, which was sung at the banquet—"fatal as that of Thyestes," remarks Carlyle—given by the bodyguard to the officers of the Versailles garrison on October 3, 1789. The *Marseillaise* not long afterwards became the reply of the people to the expression of loyalty borrowed from Grétry's opera. The composer himself was not uninfluenced by the great events he witnessed, and the titles of some of his operas, such as *La Rosière républicaine* and *La Fête de la raison*, sufficiently indicate the epoch to which they belong; but they are mere *pièces de circonstance*, and the republican enthusiasm displayed is not genuine. Little more successful was Grétry in his dealings with classical subjects. His genuine power lay in the delineation of character and in the expression of tender and typically French sentiment. The structure of his concerted pieces on the other hand is frequently flimsy, and his instrumentation so feeble that the orchestral parts of some of his works had to be rewritten by other composers, in order to make them acceptable to modern audiences. During the revolution Grétry lost much of his property, but the successive governments of France vied in favouring the composer, regardless of political differences. From the old court he received distinctions and rewards of all kinds; the republic made him an inspector of the conservatoire; Napoleon granted him the cross of the legion of honour and a pension. Grétry died on the 24th of September 1813, at the Hermitage in Montmorency, formerly the house of Rousseau. Fifteen years after his death Grétry's heart was transferred to his birthplace, permission having been obtained after a tedious lawsuit. In

1842 a colossal bronze statue of the composer was set up at Liége.

See Michael Brenet, *Vie de Grétry* (Paris, 1884); Joach. le Breton, *Notice historique sur la vie et les ouvrages de Grétry* (Paris, 1814); A. Grétry (his nephew), *Grétry en famille* (Paris, 1814); Felix van Hulst, *Grétry* (Liége, 1842); L. D. S. *Notice biographique sur Grétry* (Bruxelles, 1859).

GREUZE, JEAN BAPTISTE (1725-1805), French painter, was born at Tournus, in Burgundy, on the 21st of August 1725, and is generally said to have formed his own talent; this is, however, true only in the most limited sense, for at an early age his inclinations, though thwarted by his father, were encouraged by a Lyonnese artist named Grandon, or Grondom, who enjoyed during his lifetime considerable reputation as a portrait-painter. Grandon not only persuaded the father of Greuze to give way to his son's wishes, and permit the lad to accompany him as his pupil to Lyons, but, when at a later date he himself left Lyons for Paris—where his son-in-law Grétry the celebrated composer enjoyed the height of favour—Grandon carried young Greuze with him. Settled in Paris, Greuze worked from the living model in the school of the Royal Academy, but did not attract the attention of his teachers; and when he produced his first picture, "Le Père de famille expliquant la Bible à ses enfants," considerable doubt was felt and shown as to his share in its production. By other and more remarkable works of the same class Greuze soon established his claims beyond contest, and won for himself the notice and support of the well-known connoisseur La Live de Jully, the brother-in-law of Madame d'Épinay. In 1755 Greuze exhibited his "Aveugle trompé," upon which, presented by Pigalle the sculptor, he was immediately *agréé* by the Academy. Towards the close of the same year he left France for Italy, in company with the Abbé Louis Gougenot, who had deserted from the magistrature—although he had obtained the post of "conseillier au Châtelet"—in order to take the "petit collet." Gougenot had some acquaintance with the arts, and was highly valued by the Academicians, who, during his journey with Greuze, elected him an honorary member of their body on account of his studies in mythology and allegory; his acquirements in these respects are said to have been largely utilized by them, but to Greuze they were of doubtful advantage, and he lost rather than gained by this visit to Italy in Gougenot's company. He had undertaken it probably in order to silence those who taxed him with ignorance of "great models of style," but the Italian subjects which formed the entirety of his contributions to the Salon of 1757 showed that he had been put on a false track, and he speedily returned to the source of his first inspiration. In 1759, 1761 ("L'Accordée de village"—Louvre), and 1763 Greuze exhibited with ever-increasing success; in 1765 he reached the zenith of his powers and reputation. In that year he was represented with no less than thirteen works, amongst which may be cited "La Jeune Fille qui pleure son oiseau mort," "La Bonne Mère," "Le Mauvais fils puni" (Louvre) and "La Malédiction paternelle" (Louvre). The Academy took occasion to press Greuze for his diploma picture, the execution of which had been long delayed, and forbade him to exhibit on their walls until he had complied with their regulations. "J'ai vu la lettre," says Diderot, "qui est un modèle d'honnêteté et d'estime; j'ai vu la réponse de Greuze, qui est un modèle de vanité et d'impertinence: il fallait appuyer cela d'un chef-d'œuvre, et c'est ce que Greuze n'a pas fait." Greuze wished to be received as a historical painter, and produced a work which he intended to vindicate his right to despise his qualifications as a *peintre de genre*. This unfortunate canvas—"Sevère et Caracalla" (Louvre)—was exhibited in 1769 side by side with Greuze's portrait of Jeaurat (Louvre) and his admirable "Petite Fille au chien noir." The Academicians received their new member with all due honours, but at the close of the ceremonies the Director addressed Greuze in these words—"Monsieur, l'Académie vous a reçu, mais c'est comme peintre de genre; elle a eu égard à vos anciennes productions, qui sont excellentes, et elle a fermé les yeux sur celle-ci, qui n'est digne ni d'elle ni de vous." Greuze, greatly incensed, quarrelled with his *confrères*, and ceased to exhibit until, in 1804, the Revolution had thrown open the doors of the Academy to all the world. In the following year, on the 4th of March 1805, he died in the Louvre in great poverty. He had been in receipt of considerable wealth, which he had dissipated by extravagance and bad management, so that during his closing years he was forced even to solicit commissions which his enfeebled powers no longer enabled him to carry out with success. The brilliant reputation which Greuze acquired seems to have been due, not to his acquirements as a painter—for his practice is evidently that current in his own day—but to the character of the subjects which he treated. That return to nature which inspired Rousseau's attacks upon an artificial civilization demanded

expression in art. Diderot, in *Le Fils naturel et le père de famille*, tried to turn the vein of domestic drama to account on the stage; that which he tried and failed to do Greuze, in painting, achieved with extraordinary success, although his works, like the plays of Diderot, were affected by that very artificiality against which they protested. The touch of melodramatic exaggeration, however, which runs through them finds an apology in the firm and brilliant play of line, in the freshness and vigour of the flesh tints, in the enticing softness of expression (often obtained by almost an abuse of *méplats*), by the alluring air of health and youth, by the sensuous attractions, in short, with which Greuze invests his lessons of bourgeois morality. As Diderot said of "La Bonne Mère," "ça prêche la population;" and a certain piquancy of contrast is the result which never fails to obtain admirers. "La Jeune Fille à l'agneau" fetched, indeed, at the Pourtalès sale in 1865, no less than 1,000,200 francs. One of Greuze's pupils, Madame Le Doux, imitated with success the manner of her master; his daughter and granddaughter, Madame de Valory, also inherited some traditions of his talent. Madame de Valory published in 1813 a comédie-vaudeville, *Greuze, ou l'accordée de village*, to which she prefixed a notice of her grandfather's life and works, and the *Salons* of Diderot also contain, besides many other particulars, the story at full length of Greuze's quarrel with the Academy. Four of the most distinguished engravers of that date, Massard père, Flipart, Gaillard and Levasseur, were specially entrusted by Greuze with the reproduction of his subjects, but there are also excellent prints by other engravers, notably by Cars and Le Bas.

See also Normand, *J. B. Greuze* (1892).

(E. F. S. D.)

GREVILLE, CHARLES CAVENDISH FULKE (1794-1865), English diarist, a great-grandson by his father of the 5th earl of Warwick, and son of Lady Charlotte Bentinck, daughter of the duke of Portland, formerly a leader of the Whig party, and first minister of the crown, was born on the 2nd of April 1794. Much of his childhood was spent at his grandfather's house at Bulstrode. He was one of the pages of George III., and was educated at Eton and Christ Church, Oxford; but he left the university early, having been appointed private secretary to Earl Bathurst before he was twenty. The interest of the duke of Portland had secured for him the secretaryship of the island of Jamaica, which was a sinecure office, the duties being performed by a deputy, and the reversion of the clerkship of the council. Greville entered upon the discharge of the duties of clerk of the council in ordinary in 1821, and continued to perform them for nearly forty years. He therefore served under three successive sovereigns,—George IV., William IV. and Victoria,—and although no political or confidential functions are attached to that office, it is one which brings a man into habitual intercourse with the chiefs of all the parties in the state. Well-born, well-bred, handsome and accomplished, Greville led the easy life of a man of fashion, taking an occasional part in the transactions of his day and much consulted in the affairs of private life. Until 1855 when he sold his stud he was an active member of the turf, and he trained successively with Lord George Bentinck, and with the duke of Portland. But the celebrity which now attaches to his name is entirely due to the posthumous publication of a portion of a Journal or Diary which it was his practice to keep during the greater part of his life. These papers were given by him to his friend Mr Henry Reeve a short time before his death (which took place on the 18th of January 1865), with an injunction that they should be published, as far as was feasible, at not too remote a period after the writer's death. The journals of the reigns of George IV. and William IV. (extending from 1820 to 1837) were accordingly so published in obedience to his directions about ten years after that event. Few publications have been received with greater interest by the public; five large editions were sold in little more than a year, and the demand in America was as great as in England. These journals were regarded as a faithful record of the impressions made on the mind of a competent observer, at the time, by the events he witnessed and the persons with whom he associated. Greville did not stoop to collect or record private scandal. His object appears to have been to leave behind him some of the materials of history, by which the men and actions of his own time would be judged. He records not so much public events as the private causes which led to them; and perhaps no English memoir-writer has left behind him a more valuable contribution to the history of the 19th century. Greville published anonymously, in 1845, a volume on the *Past and Present Policy of England to Ireland*, in which he advocated the payment of the Roman Catholic clergy; and he was also the author of several pamphlets on the events of his day.

His brother, Henry Greville (1801-1872), attaché to the British embassy in Paris from 1834

to 1844, also kept a diary, of which part was published by Viscountess Enfield, *Leaves from the Diary of Henry Greville* (London, 1883-1884).

See the preface and notes to the *Greville Memoirs* by Henry Reeve. The memoirs appeared in three sets—one from 1817 to 1837 (London, 1875, 3 vols.), and two for the period from 1837 to 1860, three volumes in 1885 and two in 1887. When the first series appeared in 1875 some passages caused extreme offence. The copies issued were as far as possible recalled and passages suppressed.

GRÉVIN, JACQUES (*c.* 1539-1570), French dramatist, was born at Clermont about 1539. He studied medicine at the university of Paris. He became a disciple of Ronsard, and was one of the band of dramatists who sought to introduce the classical drama in France. As Sainte-Beuve points out, the comedies of Grévin show considerable affinity with the farces and *soties* that preceded them. His first play, *La Maubertine*, was lost, and formed the basis of a new comedy, *La Trésorière*, first performed at the college of Beauvais in 1558, though it had been originally composed at the desire of Henry II. to celebrate the marriage of Claude, duchess of Lorraine. In 1560 followed the tragedy of *Jules César*, imitated from the Latin of Muret, and a comedy, *Les Ébahis*, the most important but also the most indecent of his works. Grévin was also the author of some medical works and of miscellaneous poems, which were praised by Ronsard until the friends were separated by religious differences. Grévin became in 1561 physician and counsellor to Margaret of Savoy, and died at her court in Turin in 1570.

The *Théâtre* of Jacques Grévin was printed in 1562, and in the *Ancien Théâtre français*, vol. iv. (1855-1856). See L. Pinvert, *Jacques Grévin* (1899).

GRÈVY, FRANÇOIS PAUL JULES (1813-1891). President of the French Republic, was born at Mont-sous-Vaudrey in the Jura, on the 15th of August 1813. He became an advocate in 1837, and, having steadily maintained republican principles under the Orleans monarchy, was elected by his native department to the Constituent Assembly of 1848. Foreseeing that Louis Bonaparte would be elected president by the people, he proposed to vest the chief authority in a president of the Council elected and removable by the Assembly, or in other words, to suppress the Presidency of the Republic. After the *coup d'état* this proposition gained Grévy a reputation for sagacity, and upon his return to public life in 1868 he took a prominent place in the republican party. After the fall of the Empire he was chosen president of the Assembly on the 16th of February 1871, and occupied this position till the 2nd of April 1876, when he resigned on account of the opposition of the Right, which blamed him for having called one of its members to order in the session of the previous day. On the 8th of March 1876 he was elected president of the Chamber of Deputies, a post which he filled with such efficiency that upon the resignation of Marshal MacMahon he seemed to step naturally into the Presidency of the Republic (30th January 1879), and was elected without opposition by the republican parties (see FRANCE: *History*). Quiet, shrewd, attentive to the public interest and his own, but without any particular distinction, he would have left an unblemished reputation if he had not unfortunately accepted a second term (18th December 1885). Shortly afterwards the traffic of his son-in-law (Daniel Wilson) in the decorations of the Legion of Honour came to light. Grévy was not accused of personal participation in these scandals, but he was somewhat obstinate in refusing to realize that he was responsible indirectly for the use which his relative had made of the Élysée, and it had to be unpleasantly impressed upon him that his resignation was inevitable (2nd December 1887). He died at Mont-sous-Vaudrey on the 9th of September 1891. He owed both his success and his failure to the completeness with which he represented the particular type of the thrifty, generally sensible and patriotic, but narrow-minded and frequently egoistic *bourgeois*.

See his *Discours politiques et judiciaires, rapports et messages ... accompagnés de notices historiques et précédés d'une introduction par L. Delabrousse* (2 vols., 1888).

GREW, NEHEMIAH (1641-1712), English vegetable anatomist and physiologist, was the only son of Obadiah Grew (1607-1688), Nonconformist divine and vicar of St Michael's, Coventry, and was born in Warwickshire in 1641. He graduated at Cambridge in 1661, and ten years later took the degree of M.D. at Leiden, his thesis being *Disputatio medico-physica ... de liquore nervoso*. He began observations on the anatomy of plants in 1664, and in 1670 his essay, *The Anatomy of Vegetables begun*, was communicated to the Royal Society by Bishop Wilkins, on whose recommendation he was in the following year elected a fellow. In 1672, when the essay was published, he settled in London, and soon acquired an extensive practice as a physician. In 1673 he published his *Idea of a Phytological History*, which consisted of papers he had communicated to the Royal Society in the preceding year, and in 1677 he succeeded Henry Oldenburg as secretary of the society. He edited the *Philosophical Transactions* in 1678-1679, and in 1681 he published "by request" a descriptive catalogue of the rarities preserved at Gresham College, with which were printed some papers he had read to the Royal Society on the *Comparative Anatomy of Stomachs and Guts*. In 1682 appeared his great work on the *Anatomy of Plants*, which also was largely a collection of previous publications. It was divided into four books, *Anatomy of Vegetables begun*, *Anatomy of Roots*, *Anatomy of Trunks* and *Anatomy of Leaves, Flowers, Fruits and Seeds*, and was illustrated with eighty-two plates, while appended to it were seven papers mostly of a chemical character. Among his other publications were *Sea-water made Fresh* (1684), the *Nature and Use of the Salt contained in Epsom and such other Waters* (1697), which was a rendering of his *Tractatus de salis ... usu* (1695), and *Cosmologia sacra* (1701). He died suddenly on the 25th of March 1712. Linnaeus named a genus of trees *Grewia* (nat. ord. Tiliaceae) in his honour.

GREY, CHARLES GREY, 2ND EARL (1764-1845), English statesman, was the eldest surviving son of General Sir Charles Grey, afterwards 1st Earl Grey. He was born at his father's residence, Fallodon, near Alnwick, on the 13th of March 1764. General Grey (1729-1807), who was a younger son of the house of Grey of Howick, one of the most considerable territorial families in Northumberland, had already begun a career of active service which, like the political career of his son, covered nearly half a century. Before the latter was born, General Grey had served on the staff of Prince Ferdinand of Brunswick in the Seven Years' War and had been wounded at Minden. While the son was making verses at Eton, the father was serving against the revolted colonists in Pennsylvania and New Jersey, and while the young member for Northumberland was denouncing Pitt's war against the Convention, the veteran soldier was destroying the remnant of the French colonial empire by the capture of Martinique and Guadeloupe. When Napoleon threatened an invasion, General Grey took the command of the southern district, and at the peace of Amiens he was rewarded with a peerage, as Baron Grey of Alnwick, being created in 1806 Earl Grey and Viscount Howick. His elder brother, Sir Henry Grey of Howick, the head of the family, had supported the government in parliament. But the political career of young Grey, who was heir-presumptive to the family estates, took a different complexion.

Young Grey expected to reoccupy the seat which had been his uncle's; and his early years were spent in preparation for a parliamentary career. He was sent to Eton, and proceeded thence to Cambridge. William Pitt, a youth five years older, was then in residence as a master of arts, studiously paying court to the Whigs of the university; and at the general election of 1780 he came forward as a candidate for the academical seat. His name stood last on the poll, but he was brought in elsewhere, and his first speech proved him a man of the first mark. The unparalleled successes which followed portended grave changes. Pitt's elevation to the premiership, his brilliant and hard-fought battle in the house, and his complete rout of the Whig party at the general election of 1784, when he came in for Cambridge at the head of the poll, threatened the great territorial interest with nothing less than extinction. It was to this interest that Grey belonged; and hence, when at length returned for Northumberland in 1786, he at once came forward as a vigorous assailant of the government of Pitt. He was hailed by the opposition, and associated with Fox, Burke and Sheridan as a manager in the Hastings impeachment. During the nineteen years which remained of the career of Fox, he followed the great Whig statesman with absolute fidelity, and succeeded him as leader of the party. The shortcomings of Fox's statesmanship were inherited by Grey. Both were equally devoid of political originality, shunned the severer labours of the politician, and instinctively feared any deviation from the traditions of their party. Such men cannot save a party in its

decadence, and the history of Fox and Grey has been aptly termed the history of the decline and fall of Whiggism.

The stunning blow of 1784 was the first incident in this history. Its full significance was not at once perceived. An opposition, however weak in the beginning, generally has a tendency to revive, and Grey's early successes in the house helped to revive the Foxites. The European situation became favourable to this revival. The struggle in France for popular rights, culminating in the great Revolution, was watched by Fox with interested sympathy. He affected to regard the domination of Pitt as the domination of the crown, and as leading logically to absolutism, and saw in that popular sympathy for the French Revolution which naturally arose in England an instrument which might be employed to overthrow this domination.

But Pitt gathered the fruits of the windfall. The spread of "Jacobinism," or "French principles," became the pretext on which the stronger half of the opposition went over to the government. Burke led the movement in the Commons, the duke of Portland and Lord Fitzwilliam in the Lords, and with this second incident in the Whig decline began the difficulties of Grey's career. The domination of the premier had already stirred the keenest resentment in the younger and more ambitious members of the Whig party. Freed from the restraint of the steadier politicians under Burke and Portland, the residuum under Fox fell into a series of grave mistakes. Of this residuum Grey became the moving spirit, for though Fox did not check their activity, he disclaimed the responsibility of their policy. Fox had refused to condemn "French principles," and denounced the war with France; but he would take no part in exciting agitation in England. It was otherwise with the restless spirits among whom Grey was found. Enraged by the attitude of Pitt, which was grounded on the support of the constituencies as they then stood, the residuum plotted an ill-timed agitation for parliamentary reform.

The demand for parliamentary reform was as yet in a rudimentary stage. Forty years later it had become the demand of an unenfranchised nation, disabused by a sudden spread of political and economical knowledge. It was as yet but the occasional instrument of the scheming politician. Chatham had employed the cry in this sense. The Middlesex agitators had done the same; even the premier of the time, after his accession to power, had sought to strengthen his hands in the same way. But Pitt's hands were now strengthened abundantly; whereas the opposition had nothing to lose and much to gain by such a measure. The cry for reform thus became their natural expedient. Powerless to carry reform in the House, they sought to overawe parliament by external agitation, and formed the Society of the Friends of the People, destined to unite the forces of all the "patriotic" societies which already existed in the country, and to pour their violence irresistibly on a terrified parliament. Grey and his friends were enrolled in this portentous association, and presented in parliament its menacing petitions. Such petitions, which were in fact violent impeachments of parliament itself, proceeding from voluntary associations having no corporate existence, had been hitherto unknown in the English parliament. They had been well known in the French assembly. They had heralded and furthered the victory of the Jacobins, the dissolution of the constitution, the calling of the Convention and the fall of the monarchy.

The Society of the Friends of the People was originally an after-dinner folly, extemporized at the house of a man who afterwards gained an earldom by denouncing it as seditious. Fox discountenanced it, though he did not directly condemn it; but Grey was overborne by the fierce Jacobinism of Lauderdale, and avowed himself the parliamentary mouthpiece of this dangerous agitation. But Pitt, strong in his position, cut the ground from under Grey's feet by suppressing the agitation with a strong hand. The suspension of the Habeas Corpus Act, the Gagging Acts and the state prosecutions form a painful historical episode. But the discredit belongs as much to Grey and Lauderdale as to Pitt. Grey always spoke regretfully of his share in the movement. "One word from Fox," he said, "would have kept me out of all the mess of the Friends of the People. But he never spoke it."

It was Grey who moved the impeachment of Pitt, and he next promoted the equally foolish "Secession." Since the parliament did not properly represent the nation, and refused to reform itself or to impeach the minister, nothing remained but to disown it; and the opposition announced their intention of "seceding," or systematically absenting themselves from their places in parliament. This futile movement was originated by Grey, Lauderdale and the duke of Bedford. It obtained a somewhat wider support. It suited the languor of some dispirited politicians like Fox, and the avarice of some lawyers in large practice like Erskine; but sensible politicians at once condemned it. It directly ignored parliamentary government, and amounted to nothing but a pettish threat of revolution. "Secession," said Lord Lansdowne, with characteristic shrewdness, "either means rebellion, or it is nonsense." Pitt

easily dashed this feeble weapon from the hands of his opponents. He roused jealousy in the absent by praising the parts and the patriotism of the rest, and thus gradually brought them back. Grey himself reappeared to protest against the union with Ireland.

When Pitt died in 1806 nothing could prevent the reunited opposition from coming into power, and thus the Broad-bottom ministry was formed under Fox. On his death Grenville became premier, and Grey, now Lord Howick, foreign secretary, and leader of the House of Commons. Disunion, always the bane of English Liberalism, lurked in the coalition, and the Foxites and Grenvillites were only ostensibly at one. Grey opposed the war policy of Grenville; and this policy was not more successful than it had been in the hands of Pitt. And the change from the leadership of Fox to that of Grenville was only too perceptible. Both in court and country Grenville affected the role of Pitt, and assumed a stiff and peremptory attitude which ill became him. An ill-advised dissolution weakened their majority; they lost ground by the “delicate investigation” into the conduct of the princess of Wales; Lord Henry Petty’s budget was too specious to command confidence; and the king, fully aware of their weak situation, resolved to get rid of them. When they proposed to concede a portion of the Catholic claims, George refused and demanded of them an undertaking never to propose such a measure again. This was refused, and the Grenville-Grey cabinet retired in March 1807. In the same year Grey’s father died, and Grey went to the Upper House. Opposition united Grey and Grenville for a time, but the parties finally split on the old war question. When Napoleon returned from Elba in 1815, and once more seized the government of France, the same question arose which had arisen in 1792, Was England to go to war for the restoration of the Bourbons? Grenville followed the traditions of Pitt, and supported the ministry in at once renewing hostilities. Grey followed those of Fox, and maintained the right of France to choose her own governors, and the impossibility of checking the reaction in the emperor’s favour. The victory of Waterloo put an end to the dispute, but the disruption became permanent. The termination of the war, and the cessation of all action in common, reduced the power of the opposition to nothing. Grenville retired from public life, and his adherents reinforced the ministry. Little remained for the Whigs to do. But the persecution of the queen afforded an opportunity of showing that the ministry were not omnipotent; and the part taken on that occasion by Grey won him at once the increased respect of the nation and the undying aversion of George IV. It sealed the exclusion of himself and his few friends from office during the king’s life; and when in 1827 Grey came forth to denounce the ministry of Canning, he declared that he stood alone in the political world. His words were soon justified, for when Lord Goderich resigned, the remnant which had hitherto supported Grey, hastened to support the ministry of the duke of Wellington.

We now reach the principal episode in Grey’s career. In 1827 he seemed to stand forth the solitary and powerless relic of an extinct party. In 1832 we find that party restored to its old numbers and activity, supreme in parliament, popular in the nation, and Lord Grey at its head. The duke of Wellington’s foolish declaration against parliamentary reform, made in a season of great popular excitement, suddenly deprived him of the confidence of the country, and a coalition of the Whigs and Canningites became inevitable. The Whigs had in 1827 supported the Canningites; the latter now supported the Whigs, of whom Grey remained the traditional head. George IV. was dead, and no obstacle existed to Grey’s elevation. Grey was sent for by William IV. in November 1830, and formed a coalition cabinet, pledged to carry on the work in which the duke of Wellington had faltered. But Grey himself was the mere instrument of the times. An old-fashioned Whig, he had little personal sympathy with the popular cause, though he had sometimes indicated a certain measure of reform as necessary. When he took office, he guessed neither the extent to which the Reform Act would go, nor the means by which it would be carried. That he procured for the country a measure of constitutional reform for which he had agitated in his youth was little more than a coincidence. In his youth he had put himself at the head of a frantic agitation against parliament, because he there found himself powerless. In his old age the case was reversed. Suddenly raised to a position of authority in the country, he boldly stood between parliament, as then constituted, and the formidable agitation which now threatened it and by a forced reform saved it from revolution. In his youth he had assailed Pitt’s administration because Pitt’s administration threatened with extinction the political monopoly of that landed interest to which he belonged. In his old age, on the contrary, unable to check the progress of the wave, he swam with it, and headed the movement which compelled that landed interest to surrender its monopoly.

The second reading of the first Reform Bill was carried in the Commons by a majority of one. This was equivalent to a defeat, and further failures precipitated a dissolution. The confidence which the bold action of the ministry had won was soon plainly proved, for the second reading was carried in the new parliament by a majority of 136. When the bill had at

length passed the Commons after months of debate, it was Grey's task to introduce it to the Lords. It was rejected by a majority of 41. The safety of the country now depended on the prudence and courage of the ministry. The resignation of Grey and his colleagues was dreaded even by the opposition, and they remained in office with the intention of introducing a third Reform Bill in the next session. The last months of 1831 were the beginning of a political crisis such as England had not seen since 1688. The two extreme parties, the Ultra-Radicals and the Ultra-Tories, were ready for civil war. Between them stood the ministry and the majority of intelligent peace-loving Englishmen; and their course of action was soon decided. The bill must be passed, and there were but two ways of passing it. One was to declare the consent of the House of Lords unnecessary to the measure, the other to create, if necessary, new peers in sufficient number to outvote the opposition. These two expedients did not in reality differ. To swamp the house in the way proposed would have been to destroy it. The question whether the ministry should demand the king's consent to such a creation, if necessary, was debated in the cabinet in September. Brougham proposed it, and gradually a majority of the cabinet were won over. Grey had at first refused to employ even the threat of so unconstitutional a device as a means to the proposed end. But his continued refusal would have broken up the ministry, and the breaking up of the ministry must now have been the signal for revolution. The second reading in the Commons was passed in December by a majority of 162, and on New-Year's day 1832 the majority of the cabinet resolved on demanding power to carry it in the Lords by a creation of peers. Grey carried the resolution to the king. Some time still remained before the bill could be committed and read a third time. It was not until the 9th of April that Grey moved the second reading in the Lords. A sufficient number of the opposition temporized; and the second reading was allowed to pass by a majority of nine. Their intention was to mutilate the bill in committee. The Ultra-Tories, headed by the duke of Wellington, had entered a protest against the second reading, but they were now politically powerless. The struggle had become a struggle on the one hand for the whole bill, to be carried by a creation of peers, and on the other for some mutilated measure. Grey's instinct divined that the crisis was approaching. Either the king must consent to swamp the House, or the ministry must cease to stand in the breach between the peers and the country. The king, a weak and inexperienced politician, had in the meantime been wrought upon by the temporizing leaders in the Lords. He was induced to believe that if the Commons should reject the mutilated bill when it was returned to them, and the ministry should consequently retire, the mutilated bill might be reintroduced and passed by a Tory ministry. He was deaf to all representations of the state of public opinion; and to the surprise of the ministry, and the terror and indignation of every man of sense in the country, he rejected their proposal and accepted their resignation, May 9, 1832. The duke of Wellington undertook the hopeless task of constructing a ministry which should pass a restricted or sham Reform Bill. The only man who could have made the success of such a ministry even probable was Peel, and Peel's conscience and good sense forbade the attempt. He refused, and after a week of the profoundest agitation throughout the country, the king, beaten and mortified, was forced to send for Grey and Brougham. On being told that his consent to the creation of peers was the only condition on which they could undertake the government, he angrily and reluctantly yielded. The chancellor, with cool forethought, demanded this consent in writing. Grey thought such a demand harsh and unnecessary. "I wonder," he said to Brougham, when the interview was over, "you could have had the heart to press it." But Brougham was inexorable, and the king signed the following paper: "The king grants permission to Earl Grey, and to his chancellor, Lord Brougham, to create such a number of peers as will be sufficient to ensure the passing of the Reform Bill, first calling up peers' eldest sons.—William R., Windsor, May 17, 1832."

Grey had now won the game. There was no danger that he would have to resort to the expedient which he was authorized to employ. The introduction of sixty new peers would have destroyed the opposition, but it would have been equivalent to the abolition of the House. The king's consent made known, a sufficient number of peers were sure to withdraw to enable the bill to pass, and thus the dignity of both king and peerage would be saved. The duke of Wellington headed this movement on the part of the opposition; and the third reading of the bill was carried in the Lords by a majority of 84.

It is well known that in after years both Grey and Brougham disclaimed any intention of executing their threat. If this were so, they must have merely pretended to brave a danger which they secretly feared to face, and intended to avoid; and the credit of rescuing the country would belong to the duke of Wellington and the peers who seceded with him. To argue such cowardice in them from statements made when the crisis was long past, and when they were naturally willing to palliate the rough policy which they were forced to adopt, would be to set up a needless and unjustifiable paradox. Nothing else in the career of either Grey or Brougham leads us to suppose them capable of the moral baseness of yielding

up the helm of state, in an hour of darkness and peril, to reckless and unskilled hands. Such would have been the result if they had lacked the determination to carry out their programme to the end. The influence of every statesman in the country would then have been extinguished, and the United Kingdom would have been absolutely in the hands of O'Connell and Orator Hunt.

Grey took but little part in directing the legislation of the reformed parliament. Never anxious for power, he had executed the arduous task of 1831-1832 rather as a matter of duty than of inclination, and wished for an opportunity of retiring. Such an opportunity very shortly presented itself. The Irish policy of the ministry had not conciliated the Irish people, and O'Connell denounced them with the greatest bitterness. On the renewal of the customary Coercion Bill, the ministry was divided on the question whether to continue to the lord-lieutenant the power of suppressing public meetings. Littleton, the Irish secretary, was for abolishing it; and with the view of conciliating O'Connell, he informed him that the ministry intended to abandon it. But the result proved him to have been mistaken, and O'Connell, with some reason supposing himself to have been duped, called on Littleton to resign his secretaryship. It had also transpired in the discussion that Lord Althorp, the leader of the House of Commons, was privately opposed to retaining those clauses which it was his duty to push through the house. Lord Althorp therefore resigned, and Grey, who had lately passed his seventieth year, took the opportunity of resigning also. It was his opinion, it appeared, which had overborne the cabinet in favour of the public meeting clauses; and his voluntary withdrawal enabled Lord Althorp to return to his post and to proceed with the bill in its milder form. Grey was succeeded by Lord Melbourne; but no other change was made in the cabinet. Grey took no further part in politics. During most of his remaining years he continued to live in retirement at Howick, where he died on the 17th of July 1845, in his eighty-second year. By his wife Mary Elizabeth, only daughter of the first Lord Ponsonby, whom he married on the 18th of November 1794, he became the father of ten sons and five daughters. Grey's eldest son Henry (*q.v.*) became the 3rd earl, and among his other sons were General Charles Grey (1804-1870) and Admiral Frederick Grey (1805-1878).

In public life, Grey could always be upon occasion bold, strenuous and self-sacrificing; but he was little disposed for the active work of the politician. He was not one of those who took the statesman's duty "as a pleasure he was to enjoy." A certain stiffness and reserve ever seemed in the popular eye to hedge him in; nor was his oratory of the kind which stirs enthusiasm and delight. A tall, stately figure, fine voice and calm aristocratic bearing reminded the listener of Pitt rather than of Fox, and his speeches were constructed on the Attic rather than the Asiatic model. Though simple and straightforward, they never lacked either point or dignity; and they were admirably adapted to the audience to which they were addressed. The scrupulous uprightness of Grey's political and private character completed the ascendancy which he gained; and no politician could be named who, without being a statesman of the highest class, has left a name more enviably placed in English history.

(E. J. P.)

GREY, SIR EDWARD, 3rd Bart. (1862-), English statesman, was educated at Winchester and at Balliol College, Oxford, and succeeded his grandfather, the 2nd baronet, at the age of twenty. He entered the House of Commons as Liberal member for Berwick-on-Tweed in 1885, but he was best known as a country gentleman with a taste for sport, and as amateur champion tennis-player. His interest in politics was rather languid, but he was a disciple of Lord Rosebery, and in the 1892-1895 Liberal ministry he was under-secretary for foreign affairs. In this position he earned a reputation as a politician of thorough straightforwardness and grit, and as one who would maintain British interests independently of party; and he shared with Mr Asquith the reputation of being the ablest of the Imperialists who followed Lord Rosebery. Though outside foreign affairs he played but a small part in the period of Liberal opposition between 1895 and 1905, he retained public confidence as one who was indispensable to a Liberal administration. When Sir Henry Campbell-Bannerman's cabinet was formed in December 1905 he became foreign minister, and he retained this office when in April 1908 Mr Asquith became prime minister.

GREY, SIR GEORGE (1812-1898), British colonial governor and statesman, only son of Lieutenant-Colonel Grey of the 30th Foot, was born in Lisbon on the 14th of April 1812, eight days after the death of his father at the storming of Badajoz. He passed through Sandhurst with credit, and received his commission in 1829. His lieutenancy was dated 1833, and his captaincy 1839, in which year he sold out and left the army. In the early ’thirties he was quartered in Ireland, where the wretchedness of the poorer classes left a deep impression on his mind. In 1836 the Royal Geographical Society accepted his offer to explore the north-west region of West Australia, and accordingly he landed at Hanover Bay at the end of 1837. The surrounding country he found broken and difficult, and his hardships were aggravated by the tropical heat and his ignorance of the continent. In a skirmish with the natives, in which he was speared near the hip, he showed great courage, and put the assailants to flight, shooting the chief, who had wounded him. After a brave endeavour to continue his journey his wound forced him to retreat to the coast, whence he sailed to Mauritius to recruit. Next year he again essayed exploration, this time on the coast to the north and south of Shark’s Bay. He had three whale-boats and an ample supply of provisions, but by a series of disasters his stores were spoilt by storms, his boats wrecked in the surf, and the party had to tramp on foot from Gantheaume Bay to Perth, where Grey, in the end, walked in alone, so changed by suffering that friends did not know him. In 1839 he was appointed governor-resident at Albany, and during his stay there married Harriett, daughter of Admiral Spencer, and also prepared for publication an account, in two volumes, of his expeditions. In 1840 he returned to England, to be immediately appointed by Lord John Russell to succeed Colonel Gawler as governor of South Australia. Reaching the colony in May 1841, he found it in the depths of a depression caused by mismanagement and insane land speculation. By rigorously reducing public expenditure, and forcing the settlers to quit the town and betake themselves to tilling their lands, and with the opportune help of valuable copper discoveries, Grey was able to aid the infant colony to emerge from the slough. So striking were his energy and determination that when, in 1845, the little settlements in New Zealand were found to be involved in a native war, and on the verge of ruin, he was sent to save them. The Maori chiefs in open rebellion were defeated, and made their submission. Another powerful leader suspected of fomenting discontent was arrested, and friendly chieftains were subsidized and honoured. Bands of the natives were employed in making government roads, and were paid good wages. The governor gained the veneration of the Maori tribes, in whose welfare he took a close personal interest, and of whose legends and myths he made a valuable and scholarly collection, published in New Zealand in 1855 and reprinted thirty years afterwards. With peace prosperity came to New Zealand, and the colonial office desired to give the growing settlements full self-government. Grey, arguing that this would renew war with the Maori, returned the constitution to Downing Street. But though the colonial office sustained him, he became involved in harassing disputes with the colonists, who organized an active agitation for autonomy. In the end a second constitution, partly framed by Grey himself, was granted them, and Grey, after eight years of despotic but successful rule, was transferred to Cape Colony. He had been knighted for his services, and had undoubtedly shown strength, dexterity and humanity in dealing with the whites and natives. In South Africa his success continued. He thwarted a formidable Kaffir rebellion in the Eastern Provinces, and pushed on the work of settlement by bringing out men from the German Legion and providing them with homes. He gained the respect of the British, the confidence of the Boers, the admiration and the trust of the natives. The Dutch of the Free State and the Basuto chose him as arbitrator of their quarrels. When the news of the Indian Mutiny reached Cape Town he strained every nerve to help Lord Canning, despatching men, horses, stores and £60,000 in specie to Bombay. He persuaded a detachment, then on its way round the Cape as a reinforcement for Lord Elgin in China, to divert its voyage to Calcutta. Finally, in 1859, Grey almost reached what would have been the culminating point of his career by federating South Africa. Persuaded by him, the Orange Free State passed resolutions in favour of this great step, and their action was welcomed by Cape Town. But the colonial office disapproved of the change, and when Grey attempted to persevere with it Sir Edward Bulwer Lytton recalled him. A change of ministry during his voyage to England displaced Sir Edward Bulwer Lytton. But though the duke of Newcastle reinstated Grey, it was with instructions to let federation drop. In 1861 the colonial office sent him, for the fourth time in succession, to take up a post of exceptional difficulty by again entrusting him with the governorship of New Zealand, where an inglorious native war in Taranaki had just been succeeded by an armed truce. Grey did his best to make terms with the rebels and to re-establish friendship with the Maori king and the land league of tribes formed to stop further sales of land to the whites. But the Maori had got guns and powder, and were suspicious and truculent. In vain Grey, supported by Bishop Selwyn and by Fox and the peace party among the settlers, strove to avert war. It came in 1863, and spread from province to province. Ten thousand regulars and as many colonial riflemen were employed to put it down. The imperial troops were badly handled, and Grey,

losing patience, became involved in bitter disputes with their commanders. As an example to the former he himself attacked and captured Weraroa, the strongest of the Maori stockades, with a handful of militia, a feat which delighted the colonists, but made him as much disliked at the war office as he now was at Downing Street. Moreover, Grey had no longer real control over the islands. New Zealand had become a self-governing colony, and though he vindicated the colonists generally when libellous imputations of cruelty and land-grabbing were freely made against them in London, he crossed swords with his ministers when the latter confiscated three million acres of tribal land belonging to the insurgent Maori. Yet through all these troubles progress was made; many successes were gained in 1866, chiefly by the colonial militia, and a condition of something like tranquillity had been reached in 1867, when he received a curt intimation from the duke of Buckingham that he was about to be superseded. The colonists, who believed he was sacrificed for upholding their interests and good name, bade farewell to him in 1868 in an outburst of gratitude and sympathy; but his career as a colonial governor was at an end. Returning to England, he tried to enter public life, delivered many able speeches advocating what later came to be termed Imperialism, and stood for Newark. Discouraged, however, by the official Liberals, he withdrew and turned again to New Zealand. In 1872 he was given a pension of £1000 a year, and settled down on the island of Kawau, not far from Auckland, which he bought, and where he passed his leisure in planting, gardening and collecting books. In 1875, on the invitation of the Auckland settlers, he became superintendent of their province, and entered the New Zealand House of Representatives to resist the abolition of the provincial councils of the colony, a change then being urged on by Sir Julius Vogel in alliance with the Centralist Party. In this he failed, but his eloquence and courage drew round him a strong Radical following, and gave him the premiership in 1877. Manhood suffrage, triennial parliaments, a land-tax, the purchase of large estates and the popular election of the governor, were leading points of his policy. All these reforms, except the last, he lived to see carried; none of them were passed by him. A commercial depression in 1879 shook his popularity, and on the fall of his ministry in 1879 he was deposed, and for the next fifteen years remained a solitary and pathetic figure in the New Zealand parliament, respectfully treated, courteously listened to, but never again invited to lead. In 1891 he came before Australia as one of the New Zealand delegates to the federal convention at Sydney, and characteristically made his mark by standing out almost alone for “one man one vote” as the federal franchise. This point he carried, and the Australians thronged to hear him, so that his visits to Victoria and South Australia were personal triumphs. When, too, in 1894, he quitted New Zealand for London, some reparation was at last made him by the imperial government; he was called to the privy council, and graciously received by Queen Victoria on his visit to Windsor. Thereafter he lived in London, and died on the 20th of September 1898. He was given a public funeral at St Paul’s. Grey was all his life a collector of books and manuscripts. After leaving Cape Colony, he gave his library to Cape Town in 1862; his subsequent collection, which numbered 12,000 volumes, he presented to the citizens of Auckland in 1887. In gratitude the people of Cape Town erected a statue of him opposite their library building.

Lives of Sir George Grey have been written by W. L. and L. Rees (1892), Professor G. C. Henderson (1907) and J. Collier (1909).

(W. P. R.)

GREY, HENRY GREY, 3rd Earl (1802-1894), English statesman, was born on the 28th of December 1802, the son of the 2nd Earl Grey, prime minister at the time of the Reform Bill of 1832. He entered parliament in 1826, under the title of Viscount Howick, as member for Winchelsea, which constituency he left in 1831 for Northumberland. On the accession of the Whigs to power in 1830 he was made under-secretary for the colonies, and laid the foundation of his intimate acquaintance with colonial questions. He belonged at the time to the more advanced party of colonial reformers, sharing the views of Edward Gibbon Wakefield on questions of land and emigration, and resigned in 1834 from dissatisfaction that slave emancipation was made gradual instead of immediate. In 1835 he entered Lord Melbourne’s cabinet as secretary at war, and effected some valuable administrative reforms, especially by suppressing malpractices detrimental to the troops in India. After the partial reconstruction of the ministry in 1839 he again resigned, disapproving of the more advanced views of some of his colleagues. These repeated resignations gave him a reputation for crotchetiness, which he did not decrease by his disposition to embarrass his old colleagues by his action on free trade questions in the session of 1841. During the exile of the Liberals

from power he went still farther on the path of free trade, and anticipated Lord John Russell's declaration against the corn laws. When, on Sir Robert Peel's resignation in December 1845, Lord John Russell was called upon to form a ministry, Howick, who had become Earl Grey by the death of his father in the preceding July, refused to enter the new cabinet if Lord Palmerston were foreign secretary (see J. R. Thursfield in vol. i. and Hon. F. H. Baring in vol. xxiii. of the *English Historical Review*). He was greatly censured for perverseness, and particularly when in the following July he accepted Lord Palmerston as a colleague without remonstrance. His conduct, nevertheless, afforded Lord John Russell an escape from an embarrassing situation. Becoming colonial secretary in 1846, he found himself everywhere confronted with arduous problems, which in the main he encountered with success. His administration formed an epoch. He was the first minister to proclaim that the colonies were to be governed for their own benefit and not for the mother-country's; the first systematically to accord them self-government so far as then seemed possible; the first to introduce free trade into their relations with Great Britain and Ireland. The concession by which colonies were allowed to tax imports from the mother-country *ad libitum* was not his; he protested against it, but was overruled. In the West Indies he suppressed, if he could not overcome, discontent; in Ceylon he put down rebellion; in New Zealand he suspended the constitution he had himself accorded, and yielded everything into the masterful hands of Sir George Grey. The least successful part of his administration was his treatment of the convict question at the Cape of Good Hope, which seemed an exception to his rule that the colonies were to be governed for their own benefit and in accordance with their own wishes, and subjected him to a humiliating defeat. After his retirement he wrote a history and defence of his colonial policy in the form of letters to Lord John Russell, a dry but instructive book (*Colonial Policy of Lord John Russell's Administration*, 1853). He resigned with his colleagues in 1852. No room was found for him in the Coalition Cabinet of 1853, and although during the Crimean struggle public opinion pointed to him as the fittest man as minister for war, he never again held office. During the remainder of his long life he exercised a vigilant criticism on public affairs. In 1858 he wrote a work (republished in 1864) on parliamentary reform; in 1888 he wrote another on the state of Ireland; and in 1892 one on the United States tariff. In his latter years he was a frequent contributor of weighty letters to *The Times* on land, tithes, currency and other public questions. His principal parliamentary appearances were when he moved for a committee on Irish affairs in 1866, and when in 1878 he passionately opposed the policy of the Beaconsfield cabinet in India. He nevertheless supported Lord Beaconsfield at the dissolution, regarding Mr Gladstone's accession to power with much greater alarm. He was a determined opponent of Mr Gladstone's Home Rule policy. He died on the 9th of October 1894. None ever doubted his capacity or his conscientiousness, but he was generally deemed impracticable and disagreeable. Prince Albert, however, who expressed himself as ready to subscribe to all Grey's principles, and applauded him for having principles, told Stockmar that, although dogmatic, he was amenable to argument; and Sir Henry Taylor credits him with "more freedom from littlenesses of feeling than I have met before in any public man." His chief defect was perceived and expressed by his original tutor and subsequent adversary in colonial affairs, Edward Gibbon Wakefield, who wrote, "With more than a common talent for understanding principles, he has no originality of thought, which compels him to take all his ideas from somebody; and no power of working out theory in practice, which compels him to be always in somebody's hands as respects decision and action."

The earl had no sons, and he was followed as 4th earl by his nephew Albert Henry George (b. 1851), who in 1904 became governor-general of Canada.

GREY, LADY JANE (1537-1554), a lady remarkable no less for her accomplishments than for her misfortunes, was the great-granddaughter of Henry VII. of England. Her descent from that king was traced through a line of females. His second daughter Mary, after being left a widow by Louis XII. of France, married Charles Brandon, duke of Suffolk, who was a favourite with her brother King Henry VIII. Of this marriage came two daughters, the elder of whom, Lady Frances Brandon, was married to Henry Grey, marquess of Dorset; and their issue, again, consisted of daughters only. Lady Jane, the subject of this article, was the eldest of three whom the marquess had by Lady Frances. Thus it will appear that even if the crown of England had ever fallen into the female line of descent from Henry VII., she could not have put in a rightful claim unless the issue of his elder daughter, Margaret, had become extinct.

But Margaret had married James IV. of Scotland; and, though her descendant, James VI., was ultimately called to the English throne, Henry VIII. had placed her family after that of his second sister in the succession; so that, failing the lawful issue of Henry himself, Lady Jane would, according to this arrangement, have succeeded. It was to these circumstances that she owed her exceptional position in history, and became the victim of an ambition which was not her own.

She was born at her father's seat named Bradgate in Leicestershire about the year 1537. Her parents, though severe disciplinarians, bestowed more than ordinary care upon her education, and she herself was so teachable and delighted so much in study that she became the marvel of the age for her acquirements. She not only excelled in needlework and in music, both vocal and instrumental, but while still very young she had thoroughly mastered Latin, Greek, French and Italian. She was able to speak and write both Greek and Latin with an accuracy that satisfied even such critics as Ascham and her tutor Dr Aylmer, afterwards bishop of London. She also acquired some knowledge of at least three Oriental tongues, Hebrew, Chaldee and Arabic. In Ascham's *Schoolmaster* is given a touching account of the devotion with which she pursued her studies and the harshness she experienced from her parents. The love of learning was her solace; in reading Demosthenes and Plato she found a refuge from domestic unhappiness. When about ten years old she was placed for a time in the household of Thomas, Lord Seymour, who, having obtained her wardship, induced her parents to let her stay with him, even after the death of his wife, Queen Catherine Parr, by promising to marry her to his nephew, King Edward VI. Lord Seymour, however, was attainted of high treason and beheaded in 1549, and his brother, the duke of Somerset, made some overtures to the marquess of Dorset to marry her to his son the earl of Hertford. These projects, however, came to nothing. The duke of Somerset in his turn fell a victim to the ambition of Dudley, duke of Northumberland, and was beheaded three years after his brother. Meanwhile, the dukedom of Suffolk having become extinct by the deaths of Charles Brandon and his two sons, the title was conferred upon the marquess of Dorset, Lady Jane's father. Northumberland, who was now all-powerful, fearing a great reverse of fortune in case of the king's death, as his health began visibly to decline, endeavoured to strengthen himself by marriages between his family and those of other powerful noblemen, especially of the new-made duke of Suffolk. His three eldest sons being already married, the fourth, who was named Lord Guilford Dudley, was accordingly wedded to Lady Jane Grey about the end of May 1553. The match received the full approval of the king, who furnished the wedding apparel of the parties by royal warrant. But Edward's state of health warned Northumberland that he must lose no time in putting the rest of his project into execution. He persuaded the king that if the crown should descend to his sister Mary the work of the Reformation would be undone and the liberties of the kingdom would be in danger. Besides, both Mary and her sister Elizabeth had been declared illegitimate by separate acts of parliament, and the objections to Mary queen of Scots did not require to be pointed out. Edward was easily persuaded to break through his father's will and make a new settlement of the crown by deed. The document was witnessed by the signatures of all the council and of all but one of the judges; but those of the latter body were obtained only with difficulty by threats and intimidation.

Edward VI. died on the 6th July 1553, and it was announced to Lady Jane that she was queen. She was then but sixteen years of age. The news came upon her as a most unwelcome surprise, and for some time she resisted all persuasions to accept the fatal dignity; but at length she yielded to the entreaties of her father, her father-in-law and her husband. The better to mature their plans the cabal had kept the king's death secret for some days, but they proclaimed Queen Jane in the city on the 10th. The people received the announcement with manifest coldness, and a vintner's boy was even so bold as to raise a cry for Queen Mary, for which he next day had his ears nailed to the pillory and afterwards cut off. Mary, however, had received early intimation of her brother's death, and, retiring from Hunsdon into Norfolk, gathered round her the nobility and commons of those parts. Northumberland was despatched thither with an army to oppose her; but after reaching Newmarket he complained that the council had not sent him forces in sufficient numbers and his followers began to desert. News also came that the earl of Oxford had declared for Queen Mary; and as most of the council themselves were only seeking an opportunity to wash their hands of rebellion, they procured a meeting at Baynard's Castle, revoked their former acts as done under coercion, and caused the lord mayor to proclaim Queen Mary, which he did amid the shouts of the citizens. The duke of Suffolk was obliged to tell his daughter that she must lay aside her royal dignity and become a private person once more. She replied that she relinquished most willingly a crown that she had only accepted out of obedience to him and her mother, and her nine days' reign was over.

The leading actors in the conspiracy were now called to answer for their deeds. Northumberland was brought up to London a prisoner, tried and sent to the block, along with some of his partisans. The duke of Suffolk and Lady Jane were also committed to the Tower; but the former, by the influence of his duchess, procured a pardon. Lady Jane and her husband Lord Guilford Dudley were also tried, and received sentence of death for treason. This, however, was not immediately carried out; on the contrary, the queen seems to have wished to spare their lives and mitigated the rigour of their confinement. Unfortunately, owing to the general dislike of the queen's marriage with Philip of Spain, Sir Thomas Wyat soon after raised a rebellion in which the duke of Suffolk and his brothers took part, and on its suppression the queen was persuaded that it was unsafe to spare the lives of Lady Jane and her husband any longer. On hearing that they were to die, Lady Jane declined a parting interview with her husband lest it should increase their pain, and prepared to meet her fate with Christian fortitude. She and her husband were executed on the same day, on the 12th of February 1554, her husband on Tower Hill, and herself within the Tower an hour afterwards, amidst universal sympathy and compassion.

See Ascham's *Schoolmaster*; Burnet's *History of the Reformation*; Howard's *Lady Jane Grey*; Nicolas's Literary *Remains of Lady Jane Grey*; Tytler's *England under Edward VI. and Mary*; *The Chronicles of Queen Jane*, ed. J. G. Nichols; *The Accession of Queen Mary* (Guaras's narrative), ed. R. Garnett (1892); Foxe's *Acts and Monuments*.

GREY DE WILTON and GREY DE RUTHYN. The first Baron Grey de Wilton was Reginald de Grey, who was summoned to parliament as a baron in 1295 and who died in 1308. Reginald's son John, the 2nd baron (1268-1323), was one of the lords ordainers in 1310 and was a prominent figure in English politics during the reign of Edward II. The later barons Grey de Wilton were descended from John's eldest son Henry (d. 1342), while a younger son Roger (d. 1353) was the ancestor of the barons Grey de Ruthyn.

WILLIAM, 13TH LORD GREY DE WILTON (d. 1562), who succeeded to the title on the death of his brother Richard, about 1520, won great fame as a soldier by his conduct in France during the concluding years of Henry VIII.'s reign, and was one of the leaders of the victorious English army at the battle of Pinkie in 1547. He was then employed on the Scottish marches and in Scotland, and in 1549 he rendered good service in suppressing the rebellion in Oxfordshire and in the west of England; in 1551 he was imprisoned as a friend of the fallen protector, the duke of Somerset, and he was concerned in the attempt made by John Dudley, duke of Northumberland, to place Lady Jane Grey on the English throne In 1553. However, he was pardoned by Queen Mary and was entrusted with the defence of Guînes. Although indifferently supported he defended the town with great gallantry, but in January 1558 he was forced to surrender and for some time he remained a prisoner in France. Under Elizabeth, Grey was again employed on the Scottish border, and he was responsible for the pertinacious but unavailing attempt to capture Leith in May 1560. He died at Cheshunt in Hertfordshire on the 14th/25th of December 1562.

He was described by William Cecil as "a noble, valiant, painful and careful gentleman," and his son and successor, Arthur, wrote *A Commentary of the Services and Charges of William, Lord Grey of Wilton, K.G.* This has been edited by Sir P. de M. Grey Egerton for the Camden Society (1847).

Grey's elder son ARTHUR, 14TH LORD GREY DE WILTON (1536-1593), was during early life with his father in France and in Scotland; he fought at the battle of St Quentin and helped to defend Guînes and to assault Leith. In July 1580 he was appointed lord deputy of Ireland, and after an initial defeat in Wicklow was successful in reducing many of the rebels to a temporary submission. Perhaps the most noteworthy event during his tenure of this office was the massacre of 600 Italians and Spaniards at Smerwick in November 1580, an action for which he was responsible. Having incurred a heavy burden of debt Grey frequently implored the queen to recall him, and in August 1582 he was allowed to return to England (see E. Spenser, *View of the State of Ireland*, edited by H. Morley, 1890, and R. Bagwell, *Ireland under the Tudors*, vol. iii., 1890). While in Ireland Grey was served as secretary by Edmund Spenser, and in book v. of the *Faerie Queene* the poet represents his patron as a knight of very noble qualities named Artegall. As one of the commissioners who tried Mary queen of Scots, Grey defended the action of Elizabeth's secretary, William Davison, with regard to this matter, and he took part in the preparations for the defence of England against the Spaniards

in 1588. His account of the defence of Guînes was used by Holinshed in his *Chronicles*.

When he died on the 14th of October 1593 he was succeeded as 15th baron by his son Thomas (d. 1614), who while serving in Ireland incurred the enmity of Robert Devereux, earl of Essex, and of Henry Wriothesley, earl of Southampton; and after fighting against Spain in the Netherlands he was a member of the court which sentenced these two noblemen to death in 1601. On the accession of James I. he was arrested for his share in the "Bye" plot, an attempt made by William Watson and others to seize the king. He was tried and sentenced to death, but the sentence was not carried out and he remained in prison until his death on the 9th of July 1614. He displayed both ability and courage at his trial, remarking after sentence had been passed, "the house of Wilton hath spent many lives in their prince's service and Grey cannot beg his." Like his father Grey was a strong Puritan. He left no children and his barony became extinct.

In 1784 Sir Thomas Egerton, Bart., a descendant in the female line of the 14th baron, was created Baron Grey de Wilton. He died without sons in September 1814, when his barony became extinct; but the titles of Viscount Grey de Wilton and earl of Wilton, which had been conferred upon him in 1801, passed to Thomas Grosvenor (1799-1882), the second son of his daughter Eleanor (d. 1846); and her husband Robert Grosvenor, 1st marquess of Westminster. Thomas took the name of Egerton and his descendants still hold the titles.

Roger Grey, 1st Baron Grey de Ruthyn, who was summoned to parliament as a baron in 1324, saw much service as a soldier before his death on the 6th of March 1353. The second baron was his son Reginald, whose son Reginald (*c.* 1362-1440) succeeded to the title on his father's death in July 1388. In 1410 after a long dispute the younger Reginald won the right to bear the arms of the Hastings family. He enjoyed the favour both of Richard II. and Henry IV., and his chief military exploits were against the Welsh, who took him prisoner in 1402 and only released him upon payment of a heavy ransom. Grey was a member of the council which governed England during the absence of Henry V. in France in 1415; he fought in the French wars in 1420 and 1421 and died on the 30th of September 1440. His eldest son, Sir John Grey, K.G. (d. 1439), who predeceased his father, fought at Agincourt and was deputy of Ireland in 1427. He was the father of Edmund Grey (d. 1489), who succeeded his grandfather as Lord Grey de Ruthyn in 1440 and was created earl of Kent in 1465.

One of Reginald Grey's younger sons, Edward (1415-1457), succeeded his maternal grandfather as Baron Ferrers of Groby in 1445. He was the ancestor of the earls of Stamford and also of the Greys, marquesses of Dorset and dukes of Suffolk.

The barony of Grey de Ruthyn was merged in the earldom of Kent until the death of Henry, the 8th earl, in November 1639. It then devolved upon Kent's nephew Charles Longueville (1612-1643), through whose daughter Susan (d. 1676) it came to the family of Yelverton, who were earls of Sussex from 1717 to 1799. The next holder was Henry Edward Gould (1780-1810), a grandson of Henry Yelverton, earl of Sussex; and through Gould's daughter Barbara, marchioness of Hastings (d. 1858), it passed to the last marquess of Hastings, on whose death in 1868 the barony fell into abeyance, this being terminated in 1885 in favour of Hastings's sister Bertha (d. 1887), the wife of Augustus Wykeham Clifton. Their son, Rawdon George Grey Clifton (b. 1858), succeeded his mother as 24th holder of the barony.

GREYMOUTH, a seaport of New Zealand, the principal port on the west coast of South Island, in Grey county. Pop. (1906) 4569. It stands on the small estuary of the Grey or Mawhera river, has a good harbour, and railway communication with Hokitika, Reefton, &c., while the construction of a line to connect with Christchurch and Nelson was begun in 1887. The district is both auriferous and coal-bearing. Gold-dredging is a rich industry, and the coal-mines have attendant industries in coke, bricks and fire-clay. The timber trade is also well developed. The neighbouring scenery is picturesque, especially among the hills surrounding Lake Brunner (15 m. S.E.).

GREYTOWN (San Juan del Norte), the principal seaport on the Caribbean coast of

Nicaragua, in the extreme south-eastern corner of the republic, and at the mouth of the northern channel of the San Juan river delta. Pop. (1905) about 2500. The town occupies the seaward side of a narrow peninsula, formed by the windings of the river. Most of its houses are raised on piles 2 or 3 ft. above the ground. The neighbourhood is unhealthy and unsuited for agriculture, so that almost all food-stuffs must be imported, and the cost of living is high. Greytown has suffered severely from the accumulation of sand in its once fine harbour. Between 1832 and 1848 Point Arenas, the seaward end of the peninsula, was enlarged by a sandbank more than 1 m. long; between 1850 and 1875 the depth of water over the bar decreased from about 25 ft. to 5 ft., and the entrance channel, which had been nearly ½ m. wide, was almost closed. Subsequent attempts to improve the harbour by dredging and building jetties have only had partial success; but Greytown remains the headquarters of Nicaraguan commerce with Europe and eastern America. The village called America, 1 m. N., was built as the eastern terminus of a proposed interoceanic canal.

The harbour of San Juan, discovered by Columbus, was brought into further notice by Captain Diego Machuca, who in 1529 sailed down the river from Lake Nicaragua. The date of the first Spanish settlement on the spot is not known, but in the 17th century there were fortifications at the mouth of the river. In 1796 San Juan was made a port of entry by royal charter, and new defences were erected in 1821. In virtue of the protectorate claimed by Great Britain over the Mosquito Coast (*q.v.*), the Mosquito Indians, aided by a British force, seized the town in 1848 and occupied it until 1860, when Great Britain ceded its protectorate to Nicaragua by the treaty of Managua. This treaty secured religious liberty and trial by jury for all civil and criminal charges in Greytown; its seventh article declared the port free, but was never enforced.

GREYWACKE, or GRAUWACKE (a German word signifying a grey earthy rock), the designation, formerly more generally used by English geologists than at the present day, for impure, highly composite, gritty rocks belonging to the Palaeozoic systems. They correspond to the sandstones, grits and fine conglomerates of the later periods. Greywackes are mostly grey, brown, yellow or black, dull-coloured, sandy rocks which may occur in thick or thin beds along with slates, limestones, &c., and are abundant in Wales, the south of Scotland and the Lake district of England. They contain a very great variety of minerals, of which the principal are quartz, orthoclase and plagioclase, calcite, iron oxides and graphitic carbonaceous matters, together with (in the coarser kinds) fragments of such rocks as felsite, chert, slate, gneiss, various schists, quartzite. Among other minerals found in them are biotite and chlorite, tourmaline, epidote, apatite, garnet, hornblende and augite, sphene, pyrites. The cementing material may be siliceous or argillaceous, and is sometimes calcareous. As a rule greywackes are not fossiliferous, but organic remains may be common in the finer beds associated with them. Their component particles are usually not much rounded by attrition, and the rocks have often been considerably indurated by pressure and mineral changes, such as the introduction of interstitial silica. In some districts the greywackes are cleaved, but they show phenomena of this kind much less perfectly than the slates. Although the group is so diverse that it is difficult to characterize mineralogically, it has a well-established place in petrographical classifications, because these peculiar composite arenaceous deposits are very frequent among Silurian and Cambrian rocks, and rarely occur in Secondary or Tertiary systems. Their essential features are their gritty character and their complex composition. By increasing metamorphism greywackes frequently pass into mica-schists, chloride schists and sedimentary gneisses.

(J. S. F.)

GRIBEAUVAL, JEAN BAPTISTE DE (1715-1789), French artillery general, was the son of a magistrate of Amiens and was born there on the 15th of September 1715. He entered the French royal artillery in 1732 as a volunteer, and became an officer in 1735. For nearly twenty years regimental duty and scientific work occupied him, and in 1752 he became captain of a company of miners. A few years later he was employed in a military mission in Prussia. In 1757, being then a lieutenant-colonel, he was lent to the Austrian army on the

outbreak of the Seven Years' War, and served as a general officer of artillery. The siege of Glatz and the defence of Schweidnitz were his principal exploits. The empress Maria Theresa rewarded him for his work with the rank of lieutenant field-marshal and the cross of the Maria Theresa order. On his return to France he was made *maréchal de camp*, in 1764 inspector of artillery, and in 1765 lieutenant-general and commander of the order of St Louis. For some years after this he was in disfavour at court, and he became first inspector of artillery only in 1776, in which year also he received the grand cross of the St Louis order. He was now able to carry out the reforms in the artillery arm which are his chief title to fame. See ARTILLERY; and for full details Gribeauval's own *Table des constructions des principaux attirails de l'artillerie ... de M. de Gribeauval*, and the *règlement* for the French artillery issued in 1776. He died in 1789.

See Puységur in *Journal de Paris*, supplement of the 8th of July 1789; Chevalier de Passac, *Précis sur M. de Gribeauval* (Paris, 1816); Veyrines, *Gribeauval* (Paris, 1889), and Hennébert, *Gribeauval, lieutenant-général des armées du roy* (Paris, 1896).

GRIBOYEDOV, ALEXANDER SERGUEEVICH (1795-1829), Russian dramatic author, was born in 1795 at Moscow, where he studied at the university from 1810 to 1812. He then obtained a commission in a hussar regiment, but resigned it in 1816. Next year he entered the civil service, and in 1818 was appointed secretary of the Russian legation in Persia, whence he was transferred to Georgia. He had commenced writing early, and had produced on the stage at St Petersburg in 1816 a comedy in verse, translated from the French, called *The Young Spouses*, which was followed by other pieces of the same kind. But neither these nor the essays and verses which he wrote would have been long remembered but for the immense success gained by his comedy in verse, *Goré ot uma*, or "Misfortune from Intelligence" (Eng. trans. by N. Benardaky, 1857). A satire upon Russian society, or, as a high official styled it, "A pasquinade on Moscow," its plot is slight, its merits consisting in its accurate representation of certain social and official types—such as Famousoff, the lover of old abuses, the hater of reforms; his secretary, Molchanin, servile fawner upon all in office; the aristocratic young liberal and Anglomaniac, Repetiloff; contrasted with whom is the hero of the piece, Tchatsky, the ironical satirist, just returned from the west of Europe, who exposes and ridicules the weaknesses of the rest, his words echoing that outcry of the young generation of 1820 which reached its climax in the military insurrection of 1825, and was then sternly silenced by Nicholas. Griboyedov spent the summer of 1823 in Russia, completed his play and took it to St Petersburg. There it was rejected by the censorship. Many copies were made and privately circulated, but Griboyedov never saw it published. The first edition was printed in 1833, four years after his death. Only once did he see it on the stage, when it was acted by the officers of the garrison at Erivan. Soured by disappointment he returned to Georgia, made himself useful by his linguistic knowledge to his relative Count Paskievitch-Erivansky during a campaign against Persia, and was sent to St Petersburg with the treaty of 1828. Brilliantly received there, he thought of devoting himself to literature, and commenced a romantic drama, *A Georgian Night*. But he was suddenly sent to Persia as minister-plenipotentiary. Soon after his arrival at Teheran a tumult arose, caused by the anger of the populace against some Georgian and Armenian captives—Russian subjects—who had taken refuge in the Russian embassy. It was stormed, Griboyedov was killed (February 11, 1829), and his body was for three days so ill-treated by the mob that it was at last recognized only by an old scar on the hand, due to a wound received in a duel. It was taken to Tiflis, and buried in the monastery of St David. There a monument was erected to his memory by his widow, to whom he had been but a few months married.

GRIEG, EDVARD HAGERUP (1843-1907), Norwegian musical composer, was born on the 15th of June 1843 in Bergen, where his father, Alexander Grieg (*sic*), was English consul. The Grieg family were of Scottish origin, but the composer's grandfather, a supporter of the Pretender, left his home at Aberdeen after Charles Edward's defeat at Culloden, and went to Bergen, where he carried on business. The composer's mother, Gesine Hagerup, belonged to

a pure Norwegian peasant family; and it is from the mother rather than from the father that Edvard Grieg derived his musical talent. She had been educated as a pianist and began to give her son lessons on the pianoforte when he was six years of age. His first composition, “Variations on a German melody,” was written at the age of nine. A summer holiday in Norway with his father in 1858 seems to have exercised a powerful influence on the child’s musical imagination, which was easily kindled at the sight of mountain and fjord. In the autumn of the same year, at the recommendation of Ole Bull, young Grieg entered the Leipzig Conservatorium, where he passed, like all his contemporaries, under the influence of the Mendelssohn and Schumann school of romantics. But the curriculum of academic study was too narrow for him. He dreamed half his time away and overworked during the other half. In 1862 he completed his Leipzig studies, and appeared as pianist and composer before his fellow-citizens of Bergen. In 1863 he studied in Copenhagen for a short time with Gade and Emil Hartmann, both composers representing a sentimental strain of Scandinavian temperament, from which Grieg emancipated himself in favour of the harder inspiration of Richard Nordraak. “The scales fell from my eyes,” says Grieg of his acquaintance with Nordraak. “For the first time I learned through him to know the northern folk tunes and my own nature. We made a pact to combat the effeminate Gade-Mendelssohn mixture of Scandinavism, and boldly entered upon the new path along which the northern school at present pursues its course.” Grieg now made a kind of crusade in favour of national music. In the winter of 1864-1865 he founded the Copenhagen concert-society Euterpe, which was intended to produce the works of young Norwegian composers. During the winters of 1865-1866 and 1869-1870 Grieg was in Rome. In the autumn of 1866 he settled in Christiania, where from 1867 till 1880 he conducted a musical union. From 1880 to 1882 he directed the concerts of the Harmonic Society in Bergen. In 1872 the Royal Musical Academy of Sweden made Grieg a member; in 1874 the Norwegian Storthing granted him an annual stipend of 1600 kronen. He had already been decorated with the Olaf order in 1873. In 1888 he played his pianoforte concerto and conducted his “two melodies for strings” at a Philharmonic concert in London, and visited England again in 1891, 1894 and 1896, receiving the degree of Mus.D. from the university of Cambridge in 1894. He died at Bergen on the 4th of September 1907.

As a composer Grieg’s distinguishing quality is lyrical. Whether his orchestral works or his songs or his best pianoforte works are submitted to examination, it is almost always the note of song that tells. Sometimes, as in the music to Ibsen’s *Peer Gynt*, or in the suite for stringed orchestra, *Aus Holbergs Zeit*, this characteristic is combined with a strong power for raising pictures in the listener’s mind, and the romantic “programme” tendency in Grieg’s music becomes clearer the farther writers like Richard Strauss carry this movement. Grieg’s songs may be said to be generally the more spontaneous the more closely they conform to the simple model of the *Volkslied*; yet the much sung “Ich liebe dich” is a song of a different kind, which has hardly ever been surpassed for the perfection with which it depicts a strong momentary emotion, and it is difficult to ascribe greater merits to songs of Grieg even so characteristic as “Solvejg’s Lied” and “Ein Schwan.” The pianoforte concerto is brilliant and spontaneous; it has been performed by most pianists of the first rank, but its essential qualities and the pure nationality of its themes have been brought out to their perfection by one player only—the Norwegian pianist Knudsen. The first and second of Grieg’s violin sonatas are agreeable, so free and artless is the flow of their melody. In his numerous piano pieces and in those of his songs which are devoid of a definitely national inspiration the impression made is less permanent. Bülow called Grieg the “Chopin of the North.” The phrase is an exaggeration rather than an expression of the truth, for the range of the appeal in Chopin is far wider, nor has the national movement inaugurated by Grieg shown promise of great development. He is rather to be regarded as the pioneer of a musical mission which has been perfectly carried out by himself alone.

See La Mara, *Edvard Grieg* (Leipzig, 1898).

GRIESBACH, JOHANN JAKOB (1745-1812), German biblical critic, was born at Butzbach, a small town of Hesse-Darmstadt, where his father, Konrad Kaspar (1705-1777), was pastor, on the 4th of January 1745. He was educated at Frankfort-on-the-Main, and at the universities of Tübingen, Leipzig and Halle, where he became one of J. S. Semler’s most ardent disciples. It was Semler who induced him to turn his attention to the textual criticism of the New Testament. At the close of his undergraduate career he undertook a literary tour

through Germany, Holland, France and England. On his return to Halle, he acted for some time as *Privatdozent*, but in 1773 was appointed to a professorial chair; in 1775 he was translated to Jena, where the rest of his life was spent (though he received calls to other universities). He died on the 24th of March 1812. Griesbach's fame rests upon his work in New Testament criticism, in which he inaugurated a new epoch.

His critical edition of the New Testament first appeared at Halle, in three volumes, in 1774-1775. The first volume contained the first three Gospels, synoptically arranged; the second, the Epistles and the book of Revelation. All the historical books were reprinted in one volume in 1777, the synoptical arrangement of the Gospels having been abandoned as inconvenient. Of the second edition, considerably enlarged and improved, the first volume appeared in 1796 and the second in 1806 (Halle and London). Of a third edition, edited by David Schulz, only the first volume, containing the four Gospels, appeared (1827).

For the construction of his critical text Griesbach took as his basis the Elzevir edition. Where he differed from it he placed the Elzevir reading on the inner margin along with other readings he thought worthy of special consideration (these last, however, being printed in smaller type). To all the readings on this margin he attached special marks indicating the precise degree of probability in his opinion attaching to each. In weighing these probabilities he proceeded upon a particular theory which in its leading features he had derived from J. A. Bengel and J. S. Semler, dividing all the MSS. into three main groups—the Alexandrian, the Western and the Byzantine (see BIBLE: *New Testament*, "Textual Criticism"). A reading supported by only one recension he considered as having only one witness in its favour; those readings which were supported by all the three recensions, or even by two of them, especially if these two were the Alexandrian and the Western, he unhesitatingly accepted as genuine. Only when each of the three recensions gives a different reading does he proceed to discuss the question on other grounds. See his *Symbolae criticae ad supplendas et corrigendas variarum N.T. lectionum collectiones* (Halle, 1785, 1793), and his *Commentarius criticus in textum Graecum N.T.*, which extends to the end of Mark, and discusses the more important various readings with great care and thoroughness (Jena, 1794 ff.). Among the other works of Griesbach (which are comparatively unimportant) may be mentioned his university thesis *De codicibus quatuor evangelistarum Origenianis* (Halle, 1771) and a work upon systematic theology (*Anleitung zur Kenntniss der populären Dogmatik*, Jena, 1779). His *Opuscula*, consisting chiefly of university "Programs" and addresses, were edited by Gabler (2 vols., Jena, 1824).

See the article in Herzog-Hauck, *Realencyklopädie*, and the *Allgemeine deutsche Biographie*.

GRIESBACH, a watering-place in the grand duchy of Baden, in the valley of the Rench, 1550 ft. above the sea, 6 m. W. from Freudenstadt in Württemberg. It is celebrated for its saline chalybeate waters (twelve springs), which are specific in cases of anaemia, feminine disorders and diseases of the nervous system, and were used in the 16th century. The annual number of visitors is nearly 2000. Pop. (1900) 800. From 1665 to 1805 Griesbach was part of the bishopric of Strassburg.

See Haberer, *Die Renchbäder Petersthal und Griesbach* (Würzburg, 1866).

GRIFFE (French for "claw"), an architectural term for the spur, an ornament carved at the angle of the square base of columns.

GRIFFENFELDT, PEDER, COUNT (*Peder Schumacher*) (1635-1699), Danish statesman, was born at Copenhagen on the 24th of August 1635, of a wealthy trading family connected

with the leading civic, clerical and learned circles in the Danish capital. His tutor, Jens Vorde, who prepared him in his eleventh year for the university, praises his extraordinary gifts, his mastery of the classical languages and his almost disquieting diligence. The brilliant way in which he sustained his preliminary examination won him the friendship of the examiner, Bishop Jasper Brokman, at whose palace he first met Frederick III. The king was struck with the lad's bright grey eyes and pleasant humorous face; and Brokman, proud of his pupil, made him translate a chapter from a Hebrew Bible first into Latin and then into Danish, for the entertainment of the scholarly monarch. In 1654 young Schumacher went abroad for eight years, to complete his education. From Germany he proceeded to the Netherlands, staying at Leiden, Utrecht and Amsterdam, and passing in 1657 to Queen's College, Oxford, where he lived three years. The epoch-making events which occurred in England, while he was at Oxford, profoundly interested him, and coinciding with the Revolution in Denmark, which threw open a career to the middle classes, convinced him that his proper sphere was politics. In the autumn of 1660 Schumacher visited Paris, shortly after Mazarin's death, when the young Louis XIV. first seized the reins of power. Schumacher seems to have been profoundly impressed by the administrative superiority of a strong centralised monarchy in the hands of an energetic monarch who knew his own mind; and, in politics, as in manners, France ever afterwards was his model. The last year of his travels was spent in Spain, where he obtained a thorough knowledge of the Castilian language and literature. His travels, however, if they enriched his mind, relaxed his character, and he brought home easy morals as well as exquisite manners.

On his return to Copenhagen, in 1662, Schumacher found the monarchy established on the ruins of the aristocracy, and eager to buy the services of every man of the middle classes who had superior talents to offer. Determined to make his way in this "new Promised Land," the young adventurer contrived to secure the protection of Kristoffer Gabel, the king's confidant, and in 1663 was appointed the royal librarian. A romantic friendship with the king's bastard, Count Ulric Frederick Gyldenlöve, consolidated his position. In 1665 Schumacher obtained his first political post as the king's secretary, and the same year composed the memorable *Kongelov* (see DENMARK: *History*). He was now a personage at court, where he won all hearts by his amiability and gaiety; and in political matters also his influence was beginning to be felt.

On the death of Frederick III. (February 9th, 1670) Schumacher was the most trusted of all the royal counsellors. He alone was aware of the existence of the new throne of walrus ivory embellished with three silver life-size lions, and of the new regalia, both of which treasures he had, by the king's command, concealed in a vault beneath the royal castle. Frederick III. had also confided to him a sealed packet containing the *Kongelov*, which was to be delivered to his successor alone. Schumacher had been recommended to his son by Frederick III. on his death-bed. "Make him a great man, but do it slowly!" said Frederick, who thoroughly understood the characters of his son and of his minister. Christian V. was, moreover, deeply impressed by the confidence which his father had ever shown to Schumacher. When, on the 9th of February 1670, Schumacher delivered the *Kongelov* to Christian V., the king bade all those about him withdraw, and after being closeted a good hour with Schumacher, appointed him his "Obergeheimesekreter." His promotion was now almost disquietingly rapid. In May 1670 he received the titles of excellency and privy councillor; in July of the same year he was ennobled under the name of Griffenfeldt, deriving his title from the gold griffin with outspread wings which surmounted his escutcheon; in November 1673 he was created a count, a knight of the Elephant and, finally, imperial chancellor. In the course of the next few months he gathered into his hands every branch of the government: he had reached the apogee of his short-lived greatness.

But if his offices were manifold, so also were his talents. Seldom has any man united so many and such various gifts in his own person and carried them so easily—a playful wit, a vivid imagination, oratorical and literary eloquence and, above all, a profound knowledge of human nature both male and female, of every class and rank, from the king to the meanest citizen. He had captivated the accomplished Frederick III. by his literary graces and ingenious speculations; he won the obtuse and ignorant Christian V. by saving him trouble, by acting and thinking for him, and at the same time making him believe that he was thinking and acting for himself. Moreover, his commanding qualities were coupled with an organizing talent which made itself felt in every department of the state, and with a marvellous adaptability which made him an ideal diplomatist.

On the 25th of May 1671 the dignities of count and baron were introduced into Denmark "to give lustre to the court"; a few months later the order of the Danebrog was instituted as a fresh means of winning adherents by marks of favour. Griffenfeldt was the originator of these new institutions. To him monarchy was the ideal form of government. But he had also a

political object. The aristocracy of birth, despite its reverses, still remained the élite of society; and Griffenfeldt, the son of a burgess as well as the protagonist of monarchy, was its most determined enemy. The new baronies and countships, owing their existence entirely to the crown, introduced a strong solvent into aristocratic circles. Griffenfeldt saw that, in future, the first at court would be the first everywhere. Much was also done to promote trade and industry, notably by the revival of the *Kammer Kollegium*, or board of trade, and the abolition of some of the most harmful monopolies. Both the higher and the provincial administrations were thoroughly reformed with the view of making them more centralized and efficient; and the positions and duties of the various magistrates, who now also received fixed salaries, were for the first time exactly defined. But what Griffenfeldt could create, Griffenfeldt could dispense with, and it was not long before he began to encroach upon the jurisdiction of the new departments of state by private conferences with their chiefs. Nevertheless it is indisputable that, under the single direction of this master-mind, the Danish state was now able, for a time, to utilize all its resources as it had never done before.

In the last three years of his administration, Griffenfeldt gave himself entirely to the conduct of the foreign policy of Denmark. It is difficult to form a clear idea of this, first, because his influence was perpetually traversed by opposite tendencies; in the second place, because the force of circumstances compelled him, again and again, to shift his standpoint; and finally because personal considerations largely intermingled with his foreign policy, and made it more elusive and ambiguous than it need have been. Briefly, Griffenfeldt aimed at restoring Denmark to the rank of a great power. He proposed to accomplish this by carefully nursing her resources, and in the meantime securing and enriching her by alliances, which would bring in large subsidies while imposing a minimum of obligations. Such a conditional and tentative policy, on the part of a second-rate power, in a period of universal tension and turmoil, was most difficult; but Griffenfeldt did not regard it as impossible. The first postulate of such a policy was peace, especially peace with Denmark’s most dangerous neighbour, Sweden. The second postulate was a sound financial basis, which he expected the wealth of France to supply in the shape of subsidies to be spent on armaments. Above all things Denmark was to beware of making enemies of France and Sweden at the same time. An alliance, on fairly equal terms, between the three powers, would, in these circumstances, be the consummation of Griffenfeldt’s “system”; an alliance with France to the exclusion of Sweden would be the next best policy; but an alliance between France and Sweden, without the admission of Denmark, was to be avoided at all hazards. Had Griffenfeldt’s policy succeeded, Denmark might have recovered her ancient possessions to the south and east comparatively cheaply. But again and again he was overruled. Despite his open protests and subterraneous counter-mining, war was actually declared against Sweden in 1675, and his subsequent policy seemed so obscure and hazardous to those who did not possess the clue to the perhaps purposely tangled skein, that the numerous enemies whom his arrogance and superciliousness had raised up against him, resolved to destroy him.

On the 11th of March 1676, while on his way to the royal apartments, Griffenfeldt was arrested in the king’s name and conducted to the citadel, a prisoner of state. A minute scrutiny of his papers, lasting nearly six weeks, revealed nothing treasonable; but it provided the enemies of the fallen statesman with a deadly weapon against him in the shape of an entry in his private diary, in which he had imprudently noted that on one occasion Christian V. in a conversation with a foreign ambassador had “spoken like a child.” On the 3rd of May Griffenfeldt was tried not by the usual tribunal, in such cases the *Höjesteret*, or supreme court, but by an extraordinary tribunal of 10 dignitaries, none of whom was particularly well disposed towards the accused. Griffenfeldt, who was charged with simony, bribery, oath-breaking, malversation and *lèse-majesté*, conducted his own defence under every imaginable difficulty. For forty-six days before his trial he had been closely confined in a dungeon without lights, books or writing materials. Every legal assistance was illegally denied him. Nevertheless he proved more than a match for the forensic ability arrayed against him, and his first plea in defence is in a high degree dignified and manly. Finally, he was condemned to degradation and decapitation; though one of the ten judges not only refused to sign the sentence, but remonstrated in private with the king against its injustice. And indeed its injustice was flagrant. The primary offence of the ex-chancellor was the taking of bribes, which no twisting of the law could convert into a capital offence, while the charge of treason had not been substantiated. Griffenfeldt was pardoned on the scaffold, at the very moment when the axe was about to descend. On hearing that the sentence was commuted to life-long imprisonment, he declared that the pardon was harder than the punishment, and vainly petitioned for leave to serve his king for the rest of his life as a common soldier. For the next two and twenty years Denmark’s greatest statesman lingered out his life in a lonely state-prison, first in the fortress of Copenhagen, and finally at Munkholm on Trondhjem fiord. He died at Trondhjem on the 12th of March 1699. Griffenfeldt married Kitty Nansen, the

granddaughter of the great Burgomaster Hans Nansen, who brought him half a million rix-dollars. She died in 1672, after bearing him a daughter.

See *Danmark's Riges Histoire*, vol. v. (Copenhagen, 1897-1905); Jörgenson, *Peter Schumacher-Griffenfeldt* (Copenhagen, 1893-1894); O. Vaupell, *Rigskansler Grev Griffenfeldt* (Copenhagen, 1880-1882); Bain, *Scandinavia*, cap. x. (Cambridge, 1905).

(R. N. B.)

GRIFFIN [O'Griobta, O'Greeva], **GERALD** (1803-1840), Irish novelist and dramatic writer, was born at Limerick of good family, on the 12th of December 1803. His parents emigrated in 1820 to America, but he was left with an elder brother, who was a medical practitioner at Adare. As early as his eighteenth year he undertook for a short time the editorship of a newspaper in Limerick. Having written a tragedy, *Aguire*, which was highly praised by his friends, he set out in 1823 for London with the purpose of "revolutionizing the dramatic taste of the time by writing for the stage." In spite of the recommendations of John Banim, he had a hard struggle with poverty. It was only by degrees that his literary work obtained any favour. *The Noyades*, an opera entirely in recitative, was produced at the English Opera House in 1826; and the success of *Holland Tide Tales* (1827) led to *Tales of the Munster Festivals* (3 vols., 1827), which were still more popular. In 1829 appeared his fine novel, *The Collegians*, afterwards successfully adapted for the stage by Dion Boucicault under the title of *The Colleen Bawn*. He followed up this success with *The Invasion* (1832), *Tales of my Neighbourhood* (1835), *The Duke of Monmouth* (1836), and *Talis Qualis, or Tales of the Jury-room* (1842). He also wrote a number of lyrics touched with his native melancholy. But he became doubtful as to the moral influence of his writings, and ultimately he came to the conclusion that his true sphere of duty was to be found within the Church. He was admitted into a society of the Christian Brothers at Dublin, in September 1838, under the name of Brother Joseph, and in the following summer he removed to Cork, where he died of typhus fever on the 12th of June 1840. Before adopting the monastic habit he burned all his manuscripts; but *Gisippus*, a tragedy which he had composed before he was twenty, accidentally escaped destruction, and in 1842 was put on the Drury Lane stage by Macready with great success.

The collected works of Gerald Griffin were published in 1842-1843 in eight volumes, with a *Life* by his brother William Griffin, M.D.; an edition of his *Poetical and Dramatic Works* (Dublin, 1895) by C. G. Duffy; and a selection of his lyrics, with a notice by George Sigerson, is included in the *Treasury of Irish Poetry*, edited by Stopford A. Brooke and T. W. Rolleston (London, 1900).

GRIFFIN, a city and the county-seat of Spalding county, Georgia, U.S.A., 43 m. S. of Atlanta, and about 970 ft. above the sea. Pop. (1890) 4503; (1900) 6857 (3258 negroes); (1910) 7478. It is served by the Southern and the Central of Georgia railways, and is the southern terminus of the Griffin & Chattanooga Division of the latter. The city is situated in a rich agricultural region, and just outside the corporate limits is an agricultural experiment station, established by the state but maintained by the Federal government. Griffin has a large trade in cotton and fruit. The principal industry is the manufacture of cotton and cotton-seed oil. Buggies, wagons, chairs and harness are among the other manufactures. The municipality owns and operates the water and electric-lighting systems. Griffin was founded in 1840 and was chartered as a city in 1846.

GRIFFIN, Griffon or Gryphon (from Fr. *griffon*, Lat. *gryphus*, Gr. γρύψ), in the natural history of the ancients, the name of an imaginary rapacious creature of the eagle species,

represented with four legs, wings and a beak,—the fore part resembling an eagle and the hinder a lion. In addition, some writers describe the tail as a serpent. This animal, which was supposed to watch over gold mines and hidden treasures, and to be the enemy of the horse, was consecrated to the Sun; and the ancient painters represented the chariot of the Sun as drawn by griffins. According to Spanheim, those of Jupiter and Nemesis were similarly provided. The griffin of Scripture is probably the osprey, and the name is now given to a species of vulture. The griffin was said to inhabit Asiatic Scythia, where gold and precious stones were abundant; and when strangers approached to gather these the creatures leapt upon them and tore them in pieces, thus chastising human avarice and greed. The one-eyed Arimaspi waged constant war with them, according to Herodotus (iii. 16). Sir John de Mandeville, in his *Travels*, described a griffin as eight times larger than a lion.

The griffin is frequently seen as a charge in heraldry (see HERALDRY, fig. 163); and in architectural decoration is usually represented as a four-footed beast with wings and the head of a leopard or tiger with horns, or with the head and beak of an eagle; in the latter case, but very rarely, with two legs. To what extent it owes its origin to Persian sculpture is not known, the capitals at Persepolis have sometimes leopard or lion heads with horns, and four-footed beasts with the beaks of eagles are represented in bas-reliefs. In the temple of Apollo Branchidae near Miletus in Asia Minor, the winged griffin of the capitals has leopards' heads with horns. In the capitals of the so-called lesser propylaea at Eleusis conventional eagles with two feet support the angles of the abacus. The greater number of those in Rome have eagles' beaks, as in the frieze of the temple of Antoninus and Faustina, and their tails develop into conventional foliage. A similar device was found in the Forum of Trajan. The best decorative employment of the griffin is found in the vertical supports of tables, of which there are two or three examples in Pompeii and others in the Vatican and the museums in Rome. In some of these cases the head is that of a lion at one end of the support and an eagle at the other end, and there is only one strongly developed paw; the wings circling round at the top form conspicuous features on the sides of these supports, the surfaces below being filled with conventional Greek foliage.

GRIFFITH, SIR RICHARD JOHN (1784-1878), Irish geologist, was born in Dublin on the 20th of September 1784. He obtained in 1799 a commission in the Royal Irish Artillery, but a year later, when the corps was incorporated with that of England, he retired, and devoted his attention to civil engineering and mining. He studied chemistry, mineralogy and mining for two years in London under William Nicholson (editor of the *Journal of Nat. Phil.*), and afterwards examined the mining districts in various parts of England, Wales and Scotland. While in Cornwall he discovered ores of nickel and cobalt in material that had been rejected as worthless. He completed his studies under Robert Jameson and others at Edinburgh, was elected a Fellow of the Royal Society of Edinburgh in 1807, a member of the newly established Geological Society of London in 1808, and in the same year he returned to Ireland. In 1809 he was appointed by the commissioners to inquire into the nature and extent of the bogs in Ireland, and the means of improving them. In 1812 he was elected professor of geology and mining engineer to the Royal Dublin Society. During subsequent years he made many surveys and issued many reports on mineral districts in Ireland, and these formed the foundation of his first geological map of the country (1815). In 1822 Griffith became engineer of public works in Cork, Kerry and Limerick, and was occupied until 1830 in repairing old roads and in laying out many miles of new roads. Meanwhile in 1825 he was appointed to carry out the perambulation or boundary survey of Ireland, the object of which was to ascertain and mark the boundaries of every county, barony, parish and townland in preparation for the ordnance survey. This work was finished in 1844. He was also called upon to assist in preparing a bill for the general valuation of Ireland; the act was passed in 1826, and he was appointed commissioner of valuation, in which capacity he continued to act until 1868. On "Griffith's valuation" the various local and public assessments were made. His extensive investigations furnished him with ample material for improving his geological map, and the second edition was published in 1835. A third edition on a larger scale (1 in. to 4 m.) was issued under the Board of Ordnance in 1839, and it was further revised in 1855. For this great work and his other services to science he was awarded the Wollaston medal by the Geological Society in 1854. In 1850 he was made chairman of the Irish Board of Works, and in 1858 he was created a baronet. He died in Dublin on the 22nd of September 1878.

Among his many geological works the following may be mentioned: *Outline of the Geology*

of Ireland (1838); *Notice respecting the Fossils of the Mountain Limestone of Ireland, as compared with those of Great Britain, and also with the Devonian System* (1842); *A Synopsis of the Characters of the Carboniferous Limestone Fossils of Ireland* (1844) (with F. McCoy); *A Synopsis of the Silurian Fossils of Ireland* (1846) (with F. McCoy). See memoirs in *Quart. Journ. Geol. Soc.* xxxv. 39; and *Geol. Mag.*, 1878, p. 524, with bibliography.

GRILLE, a French term for an enclosure in either iron or bronze; there is no equivalent in English, “grating” applying more to a horizontal frame of bars over a sunk area, and “grate” to the iron bars of an open fireplace. The finest examples of the grille are those known as the *rejas*, which in Spanish churches form the enclosures of the chapels, such as the *reja* in the Capilla Real at Granada in wrought iron partly gilt (1522). Similar grilles are employed to protect the ground-floor windows of mansions not only in Spain but in Italy and Germany. In England the most beautiful example is that in front of Queen Eleanor’s tomb in Westminster Abbey, in wrought iron. The finest grilles in Italy are the enclosures of the tombs of the Della Scalas at Verona (end of 13th century), in Germany the grille of the cenotaph of Maximilian at Innsbruck (early 16th century) and in France those which enclose the Place Stanislaus, the Place de la Carrière and the churches of Nancy, which were wrought by Jean Lamour in the middle of the 18th century. Generally, however, throughout Germany the wrought iron grilles are fine examples of forging, and they are employed for the enclosures of the numerous fountains, in the tympana of gateways, and for the protection of windows. At Danzig in the Marienkirche are some fine examples in brass.

GRILLPARZER, FRANZ (1791-1872), the greatest dramatic poet of Austria, was born in Vienna, on the 15th of January 1791. His father, severe, pedantic, a staunch upholder of the liberal traditions of the reign of Joseph II., was an advocate of some standing; his mother, a nervous, finely-strung woman, belonged to the well-known musical family of Sonnleithner. After a desultory education, Grillparzer entered in 1807 the university of Vienna as a student of jurisprudence; but two years later his father died, leaving the family in straitened circumstances, and Franz, the eldest son, was obliged to turn to private tutoring. In 1813 he received an appointment in the court library, but as this was unpaid, he accepted after some months a clerkship that offered more solid prospects, in the Lower Austrian revenue administration. Through the influence of Graf Stadion, the minister of finance, he was in 1818 appointed poet to the Hofburgtheater, and promoted to the *Hofkammer* (exchequer); in 1832 he became director of the archives of that department, and in 1856 retired from the civil service with the title of *Hofrat*. Grillparzer had little capacity for an official career and regarded his office merely as a means of independence.

In 1817 the first representation of his tragedy *Die Ahnfrau* made him famous, but before this he had written a long tragedy in iambics, *Bianca von Castilien* (1807-1809), which was obviously modelled on Schiller’s *Don Carlos*; and even more promising were the dramatic fragments *Spartacus* and *Alfred der Grosse* (1809). *Die Ahnfrau* is a gruesome “fate-tragedy” in the trochaic measure of the Spanish drama, already made popular by Adolf Müllner in his *Schuld*; but Grillparzer’s work is a play of real poetic beauties, and reveals an instinct for dramatic as opposed to merely theatrical effect, which distinguishes it from other “fate-dramas” of the day. Unfortunately its success led to the poet’s being classed for the best part of his life with playwrights like Müllner and Houwald. *Die Ahnfrau* was followed by *Sappho* (1818), a drama of a very different type; in the classic spirit of Goethe’s *Tasso*, Grillparzer unrolled the tragedy of poetic genius, the renunciation of earthly happiness imposed upon the poet by his higher mission. In 1821 appeared *Das goldene Vliess*, a trilogy which had been interrupted in 1819 by the death of the poet’s mother—in a fit of depression she had taken her own life—and a subsequent visit to Italy. Opening with a powerful dramatic prelude in one act, *Der Gastfreund*, Grillparzer depicts in *Die Argonauten* Jason’s adventures in his quest for the Fleece; while *Medea*, a tragedy of noble classic proportions, contains the culminating events of the story which had been so often dramatized before. The theme is similar to that of *Sappho*, but the scale on which it is represented is larger; it is again the

tragedy of the heart's desire, the conflict of the simple happy life with that sinister power—be it genius, or ambition—which upsets the equilibrium of life. The end is bitter disillusionment, the only consolation renunciation. Medea, her revenge stilled, her children dead, bears the fatal Fleece back to Delphi, while Jason is left to realize the nothingness of human striving and earthly happiness.

For his historical tragedy *König Ottokars Glück und Ende* (1823, but owing to difficulties with the censor, not performed until 1825), Grillparzer chose one of the most picturesque events in Austrian domestic history, the conflict of Ottokar of Bohemia with Rudolph von Habsburg. With an almost modern realism he reproduced the motley world of the old chronicler, at the same time not losing sight of the needs of the theatre; the fall of Ottokar is but another text from which the poet preached the futility of endeavour and the vanity of worldly greatness. A second historical tragedy, *Ein treuer Diener seines Herrn* (1826, performed 1828), attempts to embody a more heroic gospel; but the subject—the superhuman self-effacement of Bankbanus before Duke Otto of Meran—proved too uncompromising an illustration of Kant's categorical imperative of duty to be palatable in the theatre. With these historical tragedies began the darkest ten years in the poet's life. They brought him into conflict with the Austrian censor—a conflict which grated on Grillparzer's sensitive soul, and was aggravated by his own position as a servant of the state; in 1826 he paid a visit to Goethe in Weimar, and was able to compare the enlightened conditions which prevailed in the little Saxon duchy with the intellectual thraldom of Vienna. To these troubles were added more serious personal worries. In the winter of 1820-1821 he had met for the first time Katharina Fröhlich (1801-1879), and the acquaintance rapidly ripened into love on both sides; but whether owing to a presentiment of mutual incompatibility, or merely owing to Grillparzer's conviction that life had no happiness in store for him, he shrank from marriage. Whatever the cause may have been, the poet was plunged into an abyss of misery and despair to which his diary bears heart-rending witness; his sufferings found poetic expression in the fine cycle of poems bearing the significant title *Tristia ex Ponto* (1835).

Yet to these years we owe the completion of two of Grillparzer's greatest dramas, *Des Meeres und der Liebe Wellen* (1831) and *Der Traum, ein Leben* (1834). In the former tragedy, a dramatization of the story of Hero and Leander, he returned to the Hellenic world of *Sappho*, and produced what is perhaps the finest of all German love-tragedies. His mastery of dramatic technique is here combined with a ripeness of poetic expression and with an insight into motive which suggests the modern psychological drama of Hebbel and Ibsen; the old Greek love-story of Musaeus is, moreover, endowed with something of that ineffable poetic grace which the poet had borrowed from the great Spanish poets, Lope de Vega and Calderon. *Der Traum, ein Leben*, Grillparzer's technical masterpiece, is in form perhaps even more Spanish; it is also more of what Goethe called a "confession." The aspirations of Rustan, an ambitious young peasant, are shadowed forth in the hero's dream, which takes up nearly three acts of the play; ultimately Rustan awakens from his nightmare to realize the truth of Grillparzer's own pessimistic doctrine that all earthly ambitions and aspirations are vanity; the only true happiness is contentment with one's lot, "des Innern stiller Frieden und die schuldbefreite Brust." *Der Traum, ein Leben* was the first of Grillparzer's dramas which did not end tragically, and in 1838 he produced his only comedy, *Weh' dem, der lügt*. But *Weh' dem, der lügt*, in spite of its humour of situation, its sparkling dialogue and the originality of its idea—namely, that the hero gains his end by invariably telling the truth, where his enemies as invariably expect him to be lying—was too strange to meet with approval in its day. Its failure was a blow to the poet, who turned his back for ever on the German theatre. In 1836 Grillparzer paid a visit to Paris and London, in 1843 to Athens and Constantinople. Then came the Revolution which struck off the intellectual fetters under which Grillparzer and his contemporaries had groaned in Austria, but the liberation came too late for him. Honours were heaped upon him; he was made a member of the Academy of Sciences; Heinrich Laube, as director of the Burgtheater, reinstated his plays on the repertory; he was in 1861 elected to the Austrian *Herrenhaus*; his eightieth birthday was a national festival, and when he died in Vienna, on the 21st of January 1872, the mourning of the Austrian people was universal. With the exception of a beautiful fragment, *Esther* (1861), Grillparzer published no more dramatic poetry after the fiasco of *Weh' dem, der lügt*, but at his death three completed tragedies were found among his papers. Of these, *Die Jüdin von Toledo*, an admirable adaptation from the Spanish, has won a permanent place in the German classical repertory; *Ein Bruderzwist im Hause Habsburg* is a powerful historical tragedy and *Libussa* is perhaps the ripest, as it is certainly the deepest, of all Grillparzer's dramas; the latter two plays prove how much was lost by the poet's divorce from the theatre.

Although Grillparzer was essentially a dramatist, his lyric poetry is in the intensity of its personal note hardly inferior to Lenau's; and the bitterness of his later years found vent in

biting and stinging epigrams that spared few of his greater contemporaries. As a prose writer, he has left one powerful short story, *Der arme Spielmann* (1848), and a volume of critical studies on the Spanish drama, which shows how completely he had succeeded in identifying himself with the Spanish point of view.

Grillparzer's brooding, unbalanced temperament, his lack of will-power, his pessimistic renunciation and the bitterness which his self-imposed martyrdom produced in him, made him peculiarly adapted to express the mood of Austria in the epoch of intellectual thraldom that lay between the Napoleonic wars and the Revolution of 1848; his poetry reflects exactly the spirit of his people under the Metternich régime, and there is a deep truth behind the description of *Der Traum, ein Leben* as the Austrian *Faust*. His fame was in accordance with the general tenor of his life; even in Austria a true understanding for his genius was late in coming, and not until the centenary of 1891 did the German-speaking world realize that it possessed in him a dramatic poet of the first rank; in other words, that Grillparzer was no mere "Epigone" of the classic period, but a poet who, by a rare assimilation of the strength of the Greeks, the imaginative depth of German classicism and the delicacy and grace of the Spaniards, had opened up new paths for the higher dramatic poetry of Europe.

Grillparzer's *Sämtliche Werke* are edited by A. Sauer, in 20 vols., 5th edition (Stuttgart, 1892-1894); also, since the expiry of the copyright in 1901, innumerable cheap reprints. *Briefe und Tagebücher*, edited by C. Glossy and A. Sauer (2 vols., Stuttgart, 1903). *Jahrbuch der Grillparzer-Gesellschaft*, edited by K. Glossy (the publication of the Grillparzer Society) (Vienna, 1891 ff.). See also H. Laube, *Franz Grillparzers Lebensgeschichte* (Stuttgart, 1884); J. Volkelt, *Franz Grillparzer als Dichter des Tragischen* (Nördlingen, 1888); E. Reich, *Franz Grillparzers Dramen* (Dresden, 1894); A. Ehrhard, *Franz Grillparzer* (Paris, 1900) (German translation by M. Necker, Munich, 1902); H. Sittenberger, *Grillparzer, sein Leben und Wirken* (Berlin, 1904); Gustav Pollak, *F. Grillparzer and the Austrian Drama* (New York, 1907). Of Grillparzer's works, translations have appeared in English of *Sappho* (1820, by J. Bramsen; 1846, by E. B. Lee; 1855, by L. C. Cumming; 1876, by E. Frothingham); and of *Medea* (1879, by F. W. Thurstan and J. A. Wittmann). Byron's warm admiration of *Sappho* (*Letters and Journals*, v. 171) is well known, while Carlyle's criticism, in his essay on *German Playwrights* (1829), is interesting as expressing the generally accepted estimate of Grillparzer in the first half of the 19th century. See the bibliography in K. Goedeke's *Grundriss zur Geschichte der deutschen Dichtung*, 2nd ed., vol. viii. (1905).

(J. G. R.)

GRIMALD (or GRIMOALD), **NICHOLAS** (1519-1562), English poet, was born in Huntingdonshire, the son probably of Giovanni Baptista Grimaldi, who had been a clerk in the service of Empson and Dudley in the reign of Henry VII. He was educated at Christ's College, Cambridge, where he took his B.A. degree in 1540. He then removed to Oxford, becoming a probationer-fellow of Merton College in 1541. In 1547 he was lecturing on rhetoric at Christ Church, and shortly afterwards became chaplain to Bishop Ridley, who, when he was in prison, desired Grimald to translate Laurentius Valla's book against the alleged *Donation of Constantine*, and the *De gestis Basiliensis Concilii* of Aeneas Sylvius (Pius II.). His connexion with Ridley brought him under suspicion, and he was imprisoned in the Marshalsea. It is said that he escaped the penalties of heresy by recanting his errors, and was despised accordingly by his Protestant contemporaries. Grimald contributed to the original edition (June 1557) of *Songes and Sonettes* (commonly known as *Tottel's Miscellany*), forty poems, only ten of which are retained in the second edition published in the next month. He translated (1553) Cicero's *De officiis as Marcus Tullius Ciceroes thre bokes of duties* (2nd ed., 1556); a Latin paraphrase of Virgil's *Georgics* (printed 1591) is attributed to him, but most of the works assigned to him by Bale are lost. Two Latin tragedies are extant; *Archipropheta sive Johannes Baptista*, printed at Cologne in 1548, probably performed at Oxford the year before, and *Christus redivivus* (Cologne, 1543), edited by Prof. J. M. Hart (for the Modern Language Association of America, 1886, separately issued 1899). It cannot be determined whether Grimald was familiar with Buchanan's *Baptistes* (1543), or with J. Schoeppe's *Johannes decollatus vel Ectrachelistes* (1546). Grimald provides a purely romantic motive for the catastrophe in the passionate attachment of Herodias to Herod, and constantly resorts to lyrical methods. As a poet Grimald is memorable as the earliest follower of Surrey in the production of blank verse. He writes sometimes simply enough, as in the lines on his own childhood addressed to his mother, but in general his style is more artificial, and his metaphors more studied than is the case with the other contributors to the

Miscellany. His classical reading shows itself in the comparative terseness and smartness of his verses. His epitaph was written by Barnabe Googe in May 1562.

See C. H. Herford, *Studies in the Literary Relations of England and Germany* (pp. 113-119, 1886). *A Catalogue of printed books ... by writers bearing the name of Grimaldi* (ed. A. B. Grimaldi), printed 1883; and Arber's reprint oí *Tottel's Miscellany*.

GRIMALDI, GIOVANNI FRANCESCO (1606-1680), Italian architect and painter, named Il Bolognese from the place of his birth, was a relative of the Caracci family, under whom it is presumed he studied first. He was afterwards a pupil of Albani. He went to Rome, and was appointed architect to Pope Paul V., and was also patronized by succeeding popes. Towards 1648 he was invited to France by Cardinal Mazarin, and for about two years was employed in buildings for that minister and for Louis XIV., and in fresco-painting in the Louvre. His colour was strong, somewhat excessive in the use of green; his touch light. He painted history, portraits and landscapes—the last with predilection, especially in his advanced years—and executed engravings and etchings from his own landscapes and from those of Titian and the Caracci. Returning to Rome, he was made president of the Academy of St Luke; and in that city he died on the 28th of November 1680, in high repute not only for his artistic skill but for his upright and charitable deeds. His son Alessandro assisted him both in painting and in engraving. Paintings by Grimaldi are preserved in the Quirinal and Vatican palaces, and in the church of S. Martino a'Monti; there is also a series of his landscapes in the Colonna Gallery.

GRIMALDI, JOSEPH (1779-1837), the most celebrated of English clowns, was born in London on the 18th of December 1779, the son of an Italian actor. When less than two years old he was brought upon the stage at Drury Lane; at the age of three he began to appear at Sadler's Wells; and he did not finally retire until 1828. As the clown of pantomime he was considered without an equal, his greatest success being in *Mother Goose*, at Covent Garden (1806 and often revived). Grimaldi died on the 31st of May 1837.

His *Memoirs* in two volumes (1838) were edited by Charles Dickens.

GRIMKÉ, SARAH MOORE (1792-1873) and **ANGELINA EMILY** (1805-1879), American reformers, born in Charleston, South Carolina—Sarah on the 6th of November 1792, and Angelina on the 20th of February 1805—were daughters of John Fachereau Grimké (1752-1819), an artillery officer in the Continental army, a jurist of some distinction, a man of wealth and culture and a slave-holder.

Their older brother, Thomas Smith Grimké (1786-1834), was born in Charleston; graduated at Yale in 1807; was a successful lawyer, and in 1826-1830 was a member of the state Senate, in which he, almost alone of the prominent lawyers of the state, opposed nullification; he strongly advocated spelling-reform, temperance and absolute non-resistance, and published *Addresses on Science, Education and Literature* (1831). His early intellectual influence on Sarah was strong.

In her thirteenth year Sarah was godmother to her sister Angelina. Sarah in 1821 revisited Philadelphia, whither she had accompanied her father on his last illness, and there, having been already dissatisfied with the Episcopal Church and with the Presbyterian, she became a Quaker; so, too, did Angelina, who joined her in 1829. Both sisters (Angelina first) soon grew into a belief in immediate abolition, strongly censured by many Quakers, who were even more shocked by a sympathetic letter dated "8th Month, 30th, 1835" written by Angelina to W. L. Garrison, followed in 1836 by her *Appeal to the Christian Women of the South*, and at

the end of that year, by an *Epistle to the Clergy of the Southern States*, written by Sarah, who now thoroughly agreed with her younger sister. In the same year, at the invitation of Elizur Wright (1804-1885), corresponding secretary of the American Anti-Slavery Society, Angelina, accompanied by Sarah, began giving talks on slavery, first in private and then in public, so that in 1837, when they set to work in Massachusetts, they had to secure the use of large halls. Their speaking from public platforms resulted in a letter issued by some members of the General Association of Congregational Ministers of Massachusetts, calling on the clergy to close their churches to women exhorters; Garrison denounced the attack on the Grimké sisters and Whittier ridiculed it in his poem "The Pastoral Letter." Angelina pointedly answered *Miss Beecher on the Slave Question* (1837) in letters in the *Liberator*. Sarah, who had never forgotten that her studies had been curtailed because she was a girl, contributed to the Boston *Spectator* papers on "The Province of Woman" and published *Letters on the Condition of Women and the Equality of the Sexes* (1838)—the real beginning of the "woman's rights" movement in America, and at the time a cause of anxiety to Whittier and others, who urged upon the sisters the prior importance of the anti-slavery cause. In 1838 Angelina married Theodore Dwight Weld (1803-1895), a reformer and abolition orator and pamphleteer, who had taken part in the famous Lane Seminary debates in 1834, had left the Seminary for the lecture platform when the anti-slavery society was broken up by the Lane trustees, but had lost his voice in 1836 and had become editor of the publications of the American Anti-Slavery Society.[1] They lived, with Sarah, at Fort Lee, New Jersey, in 1838-1840, then on a farm at Belleville, New Jersey, and then conducted a school for black and white alike at Eagleswood, near Perth Amboy, New Jersey, from 1854 to 1864. Removing to Hyde Park, Massachusetts, the three were employed in Dr Lewis's school. There Sarah died on the 23rd of December 1873, and Angelina on the 26th of October 1879. Both sisters indulged in various "fads"—Graham's diet, bloomer-wearing, absolute non-resistance. Angelina did no public speaking after her marriage, save at Pennsylvania Hall (Philadelphia), destroyed by a mob immediately after her address there; but besides her domestic and school duties she was full of tender charity. Sarah at the age of 62 was still eager to study law or medicine, or to do something to aid her sex; at 75 she translated and abridged Lamartine's life of Joan of Arc.

See Catherine H. Birney, *The Grimké Sisters* (Boston, 1885).

1 Weld was the author of several anti-slavery books which had considerable influence at the time. Among them are *The Bible against Slavery* (1837), *American Slavery as It Is* (1839), a collection of extracts from Southern papers, and *Slavery and the Internal Slave Trade in the U.S.* (1841).

GRIMM, FRIEDRICH MELCHIOR, Baron von (1723-1807), French author, the son of a German pastor, was born at Ratisbon on the 26th of December 1723. He studied at the University of Leipzig, where he came under the influence of Gottsched and of J. A. Ernesti, to whom he was largely indebted for his critical appreciation of classical literature. When nineteen he produced a tragedy, *Banise*, which met with some success. After two years of study he returned to Ratisbon, where he was attached to the household of Count Schönberg. In 1748 he accompanied August Heinrich, Count Friesen, to Paris as secretary, and he is said by Rousseau to have acted for some time as reader to Frederick, the young hereditary prince of Saxe-Gotha. His acquaintance with Rousseau, through a mutual sympathy in regard to musical matters, soon ripened into intimate friendship, and led to a close association with the encyclopaedists. He rapidly obtained a thorough knowledge of the French language, and acquired so perfectly the tone and sentiments of the society in which he moved that all marks of his foreign origin and training seemed effaced. A witty pamphlet entitled *Le Petit Prophète de Boehmischbroda* (1753), written by him in defence of Italian as against French opera, established his literary reputation. It is possible that the origin of the pamphlet is partly to be accounted for by his vehement passion[1] for Mlle Fel, the *prima donna* of the Italian company. In 1753 Grimm, following the example of the abbé Raynal, began a literary correspondence with various German sovereigns. Raynal's letters, *Nouvelles littéraires*, ceased early in 1755. With the aid of friends, especially of Diderot and Mme d'Épinay, during his temporary absences from France, Grimm himself carried on the correspondence, which consisted of two letters a month, until 1773, and eventually counted among his subscribers Catherine II. of Russia, Stanislas Poniatowski, king of Poland, and many princes of the smaller German States. It was probably in 1754 that Grimm was introduced by Rousseau to Madame

d'Épinay, with whom he soon formed a *liaison* which led to an irreconcilable rupture between him and Rousseau. Rousseau was induced by his resentment to give in his *Confessions* a wholly mendacious portrait of Grimm's character. In 1755, after the death of Count Friesen, who was a nephew of Marshal Saxe and an officer in the French army, Grimm became *secrétaire des commandements* to the duke of Orleans, and in this capacity he accompanied Marshal d'Estrées on the campaign of Westphalia in 1756-57. He was named envoy of the town of Frankfort at the court of France in 1759, but was deprived of his office for criticizing the comte de Broglie in a despatch intercepted by Louis XV. He was made a baron of the Holy Roman Empire in 1775. His introduction to Catherine II. of Russia took place at St Petersburg in 1773, when he was in the suite of Wilhelmine of Hesse-Darmstadt on the occasion of her marriage to the czarevitch Paul. He became minister of Saxe-Gotha at the court of France in 1776, but in 1777 he again left Paris on a visit to St Petersburg, where he remained for nearly a year in daily intercourse with Catherine. He acted as Paris agent for the empress in the purchase of works of art, and executed many confidential commissions for her. In 1783 and the following years he lost his two most intimate friends, Mme d'Épinay and Diderot. In 1792 he emigrated, and in the next year settled in Gotha, where his poverty was relieved by Catherine, who in 1796 appointed him minister of Russia at Hamburg. On the death of the empress Catherine he took refuge with Mme d'Épinay's granddaughter, Émilie de Belsunce, comtesse de Bueil. Grimm had always interested himself in her, and had procured her dowry from the empress Catherine. She now received him with the utmost kindness. He died at Gotha on the 19th of December 1807.

The correspondence of Grimm was strictly confidential, and was not divulged during his lifetime. It embraces nearly the whole period from 1750 to 1790, but the later volumes, 1773 to 1790, were chiefly the work of his secretary, Jakob Heinrich Meister. At first he contented himself with enumerating the chief current views in literature and art and indicating very slightly the contents of the principal new books, but gradually his criticisms became more extended and trenchant, and he touched on nearly every subject—political, literary, artistic, social and religious—which interested the Parisian society of the time. His notices of contemporaries are somewhat severe, and he exhibits the foibles and selfishness of the society in which he moved; but he was unbiassed in his literary judgments, and time has only served to confirm his criticisms. In style and manner of expression he is thoroughly French. He is generally somewhat cold in his appreciation, but his literary taste is delicate and subtle; and it was the opinion of Sainte-Beuve that the quality of his thought in his best moments will compare not unfavourably even with that of Voltaire. His religious and philosophical opinions were entirely negative.

Grimm's *Correspondance littéraire, philosophique et critique ..., depuis 1753 jusqu'en 1769*, was edited, with many excisions, by J. B. A. Suard and published at Paris in 1812, in 6 vols. 8vo; *deuxième partie, de 1771 à 1782*, in 1812 in 5 vols. 8vo; and *troisième partie, pendant une partie des années 1775 et 1776, et pendant les années 1782 à 1790 inclusivement*, in 1813 in 5 vols. 8vo. A supplementary volume appeared in 1814; the whole correspondence was collected and published by M. Jules Taschereau, with the assistance of A. Chaudé, in a *Nouvelle Edition, revue et mise dans un meilleur ordre, avec des notes et des éclaircissements, et où se trouvent rétablies pour la première fois les phrases supprimées par la censure impériale* (Paris, 1829, 15 vols. 8vo); and the *Correspondance inédite, et recueil de lettres, poésies, morceaux, et fragments retranchés par la censure impériale en 1812 et 1813* was published in 1829. The standard edition is that of M. Tourneux (16 vols., 1877-1882). Grimm's *Mémoire historique sur l'origine et les suites de mon attachement pour l'impératrice Catherine II jusqu'au décès de sa majesté impériale*, and Catherine's correspondence with Grimm (1774-1796) were published by J. Grot in 1880, in the *Collection* of the Russian Imperial Historical Society. She treats him very familiarly, and calls him Héraclite, Georges Dandin, &c. At the time of the Revolution she begged him to destroy her letters, but he refused, and after his death they were returned to St Petersburg. Grimm's side of the correspondence, however, is only partially preserved. He signs himself "Pleureur." Some of Grimm's letters, besides the official correspondence, are included in the edition of M. Tourneux; others are contained in the *Erinnerungen einer Urgrossmutter* of K. von Bechtolsheim, edited (Berlin, 1902) by Count C. Oberndorff. See also Mme d'Épinay's *Mémoires*; Rousseau's *Confessions*; the notices contained in the editions quoted; E. Scherer, *Melchior Grimm* (1887); Sainte-Beuve, *Causeries du lundi*, vol. vii. For further works bearing on the subject, see K. A. Georges, *Friedrich Melchior Grimm* (Hanover and Leipzig, 1904).

1 Rousseau's account of this affair (*Confessions*, 2nd part, 8th book) must be received with caution.

GRIMM, JACOB LUDWIG CARL (1785-1863), German philologist and mythologist, was born on the 4th of January 1785 at Hanau, in Hesse-Cassel. His father, who was a lawyer, died while he was a child, and the mother was left with very small means; but her sister, who was lady of the chamber to the landgravine of Hesse, helped to support and educate her numerous family. Jacob, with his younger brother Wilhelm (born on the 24th of February 1786), was sent in 1798 to the public school at Cassel. In 1802 he proceeded to the university of Marburg, where he studied law, a profession for which he had been destined by his father. His brother joined him at Marburg a year later, having just recovered from a long and severe illness, and likewise began the study of law. Up to this time Jacob Grimm had been actuated only by a general thirst for knowledge and his energies had not found any aim beyond the practical one of making himself a position in life. The first definite impulse came from the lectures of Savigny, the celebrated investigator of Roman law, who, as Grimm himself says (in the preface to the *Deutsche Grammatik*), first taught him to realize what it meant to study any science. Savigny's lectures also awakened in him that love for historical and antiquarian investigation which forms the basis of all his work. Then followed personal acquaintance, and it was in Savigny's well-provided library that Grimm first turned over the leaves of Bodmer's edition of the Old German minnesingers and other early texts, and felt an eager desire to penetrate further into the obscurities and half-revealed mysteries of their language. In the beginning of 1805 he received an invitation from Savigny, who had removed to Paris, to help him in his literary work. Grimm passed a very happy time in Paris, strengthening his taste for the literatures of the middle ages by his studies in the Paris libraries. Towards the close of the year he returned to Cassel, where his mother and Wilhelm had settled, the latter having finished his studies. The next year he obtained a situation in the war office with the very small salary of 100 thalers. One of his grievances was that he had to exchange his stylish Paris suit for a stiff uniform and pigtail. But he had full leisure for the prosecution of his studies. In 1808, soon after the death of his mother, he was appointed superintendent of the private library of Jerome Buonaparte, king of Westphalia, into which Hesse-Cassel had been incorporated by Napoleon. Jerome appointed him an auditor to the state council, while he retained his other post. His salary was increased in a short interval from 2000 to 4000 francs, and his official duties were hardly more than nominal. After the expulsion of Jerome and the reinstalment of an elector, Grimm was appointed in 1813 secretary of legation, to accompany the Hessian minister to the headquarters of the allied army. In 1814 he was sent to Paris to demand restitution of the books carried off by the French, and in 1814-1815 he attended the congress of Vienna as secretary of legation. On his return he was again sent to Paris on the same errand as before. Meanwhile Wilhelm had received an appointment in the Cassel library, and in 1816 Jacob was made second librarian under Völkel. On the death of Völkel in 1828 the brothers expected to be advanced to the first and second librarianships respectively, and were much dissatisfied when the first place was given to Rommel, keeper of the archives. So they removed next year to Göttingen, where Jacob received the appointment of professor and librarian, Wilhelm that of under-librarian. Jacob Grimm lectured on legal antiquities, historical grammar, literary history, and diplomatics, explained Old German poems, and commented on the *Germania* of Tacitus. At this period he is described as small and lively in figure, with a harsh voice, speaking a broad Hessian dialect. His powerful memory enabled him to dispense with the manuscript which most German professors rely on, and he spoke extempore, referring only occasionally to a few names and dates written on a slip of paper. He himself regretted that he had begun the work of teaching so late in life; and as a lecturer he was not successful: he had no idea of digesting his facts and suiting them to the comprehension of his hearers; and even the brilliant, terse and eloquent passages which abound in his writings lost much of their effect when jerked out in the midst of a long array of dry facts. In 1837, being one of the seven professors who signed a protest against the king of Hanover's abrogation of the constitution established some years before, he was dismissed from his professorship, and banished from the kingdom of Hanover. He returned to Cassel together with his brother, who had also signed the protest, and remained there till, in 1840, they accepted an invitation from the king of Prussia to remove to Berlin, where they both received professorships, and were elected members of the Academy of Sciences. Not being under any obligation to lecture, Jacob seldom did so, but together with his brother worked at the great dictionary. During their stay at Cassel Jacob regularly attended the meetings of the academy, where he read papers on the most varied subjects. The best known of these are those on Lachmann, Schiller, and his brother Wilhelm (who died in 1859), on old age, and on the origin of language. He also described his impressions of Italian and Scandinavian travel, interspersing his more general observations with linguistic details, as is the case in all his works.

Grimm died in 1863, working up to the last. He was never ill, and worked on all day, without haste and without pause. He was not at all impatient of interruption, but seemed

rather to be refreshed by it, returning to his work without effort. He wrote for the press with great rapidity, and hardly ever made corrections. He never revised what he had written, remarking with a certain wonder of his brother, “Wilhelm reads his manuscripts over again before sending them to press!” His temperament was uniformly cheerful, and he was easily amused. Outside his own special work he had a marked taste for botany. The spirit which animated his work is best described by himself at the end of his autobiography. “Nearly all my labours have been devoted, either directly or indirectly, to the investigation of our earlier language, poetry and laws. These studies may have appeared to many, and may still appear, useless; to me they have always seemed a noble and earnest task, definitely and inseparably connected with our common fatherland, and calculated to foster the love of it. My principle has always been in these investigations to under-value nothing, but to utilize the small for the illustration of the great, the popular tradition for the elucidation of the written monuments.”

The purely scientific side of Grimm’s character developed slowly. He seems to have felt the want of definite principles of etymology without being able to discover them, and indeed even in the first edition of his grammar (1819) he seems to be often groping in the dark. As early as 1815 we find A. W. Schlegel reviewing the *Altdeutsche Wälder* (a periodical published by the two brothers) very severely, condemning the lawless etymological combinations it contained, and insisting on the necessity of strict philological method and a fundamental investigation of the laws of language, especially in the correspondence of sounds. This criticism is said to have had a considerable influence on the direction of Grimm’s studies.

The first work he published, *Über den altdeutschen Meistergesang* (1811), was of a purely literary character. Yet even in this essay Grimm showed that *Minnesang* and *Meistersang* were really one form of poetry, of which they merely represented different stages of development, and also announced his important discovery of the invariable division of the *Lied* into three strophic parts.

His text-editions were mostly prepared in common with his brother. In 1812 they published the two ancient fragments of the *Hildebrandslied* and the *Weissenbrunner Gebet*, Jacob having discovered what till then had never been suspected—the alliteration in these poems. However, Jacob had little taste for text-editing, and, as he himself confessed, the evolving of a critical text gave him little pleasure. He therefore left this department to others, especially 601
Lachmann, who soon turned his brilliant critical genius, trained in the severe school of classical philology, to Old and Middle High German poetry and metre. Both brothers were attracted from the beginning by all national poetry, whether in the form of epics, ballads or popular tales. They published in 1816-1818 an analysis and critical sifting of the oldest epic traditions of the Germanic races under the title of *Deutsche Sagen*. At the same time they collected all the popular tales they could find, partly from the mouths of the people, partly from manuscripts and books, and published in 1812-1815 the first edition of those *Kinder- und Hausmärchen* which have carried the name of the brothers Grimm into every household of the civilized world, and founded the science of folk-lore. The closely allied subject of the satirical beast epic of the middle ages also had a great charm for Jacob Grimm, and he published an edition of the *Reinhart Fuchs* in 1834. His first contribution to mythology was the first volume of an edition of the Eddaic songs, undertaken conjointly with his brother, published in 1815, which, however, was not followed by any more. The first edition of his *Deutsche Mythologie* appeared in 1835. This great work covers the whole range of the subject, tracing the mythology and superstitions of the old Teutons back to the very dawn of direct evidence, and following their decay and loss down to the popular traditions, tales and expressions in which they still linger.

Although by the introduction of the Code Napoléon into Westphalia Grimm’s legal studies were made practically barren, he never lost his interest in the scientific study of law and national institutions, as the truest exponents of the life and character of a people. By the publication (in 1828) of his *Rechtsalterthümer* he laid the foundations of that historical study of the old Teutonic laws and constitutions which was continued with brilliant success by Georg L. Maurer and others. In this work Grimm showed the importance of a linguistic study of the old laws, and the light that can be thrown on many a dark passage in them by a comparison of the corresponding words and expressions in the other old cognate dialects. He also knew how—and this is perhaps the most original and valuable part of his work—to trace the spirit of the laws in countless allusions and sayings which occur in the old poems and sagas, or even survive in modern colloquialisms.

Of all his more general works the boldest and most far-reaching is his *Geschichte der deutschen Sprache*, where at the same time the linguistic element is most distinctly brought forward. The subject of the work is, indeed, nothing less than the history which lies hidden in the words of the German language—the oldest national history of the Teutonic tribes

determined by means of language. For this purpose he laboriously collects the scattered words and allusions to be found in classical writers, and endeavours to determine the relations in which the German language stood to those of the Getae, Thracians, Scythians, and many other nations whose languages are known only by doubtfully identified, often extremely corrupted remains preserved by Greek and Latin authors. Grimm's results have been greatly modified by the wider range of comparison and improved methods of investigation which now characterize linguistic science, and many of the questions raised by him will probably for ever remain obscure; but his book will always be one of the most fruitful and suggestive that have ever been written.

Grimm's famous *Deutsche Grammatik* was the outcome of his purely philological work. The labours of past generations—from the humanists onwards—had collected an enormous mass of materials in the shape of text-editions, dictionaries and grammars, although most of it was uncritical and often untrustworthy. Something had even been done in the way of comparison and the determination of general laws, and the conception of a comparative Teutonic grammar had been clearly grasped by the illustrious Englishman George Hickes, at the beginning of the 18th century, and partly carried out by him in his *Thesaurus*. Ten Kate in Holland had afterwards made valuable contributions to the history and comparison of the Teutonic languages. Even Grimm himself did not at first intend to include all the languages in his grammar; but he soon found that Old High German postulated Gothic, that the later stages of German could not be understood without the help of the Low German dialects, including English, and that the rich literature of Scandinavia could as little be ignored. The first edition of the first part of the *Grammar*, which appeared in 1819, and is now extremely rare, treated of the inflections of all these languages, together with a general introduction, in which he vindicated the importance of an historical study of the German language against the a priori, quasi-philosophical methods then in vogue.

In 1822 this volume appeared in a second edition—really a new work, for, as Grimm himself says in the preface, it cost him little reflection to mow down the first crop to the ground. The wide distance between the two stages of Grimm's development in these two editions is significantly shown by the fact that while the first edition gives only the inflections, in the second volume phonology takes up no fewer than 600 pages, more than half of the whole volume. Grimm had, at last, awakened to the full conviction that all sound philology must be based on rigorous adhesion to the laws of sound-change, and he never afterwards swerved from this principle, which gave to all his investigations, even in their boldest flights, that iron-bound consistency, and that force of conviction which distinguish science from dilettanteism; up to Grimm's time philology was nothing but a more or less laborious and conscientious dilettanteism, with occasional flashes of scientific inspiration; he made it into a science. His advance must be attributed mainly to the influence of his contemporary R. Rask. Rask was born two years later than Grimm, but his remarkable precocity gave him somewhat the start. Even in Grimm's first editions his Icelandic paradigms are based entirely on Rask's grammar, and in his second edition he relied almost entirely on Rask for Old English. His debt to Rask can only be estimated at its true value by comparing his treatment of Old English in the two editions; the difference is very great. Thus in the first edition he declines *dæg*, *dæges*, plural *dægas*, not having observed the law of vowel-change pointed out by Rask. There can be little doubt that the appearance of Rask's Old English grammar was a main inducement for him to recast his work from the beginning. To Rask also belongs the merit of having first distinctly formulated the laws of sound-correspondence in the different languages, especially in the vowels, those more fleeting elements of speech which had hitherto been ignored by etymologists.

This leads to a question which has been the subject of much controversy,—Who discovered what is known as *Grimm's law*? This law of the correspondence of consonants in the older Indo-germanic, Low and High German languages respectively was first fully stated by Grimm in the second edition of the first part of his grammar. The correspondence of single consonants had been more or less clearly recognized by several of his predecessors; but the one who came nearest to the discovery of the complete law was the Swede J. Ihre, who established a considerable number of "literarum permutationes," such as *b* for *f*, with the examples *bæra = ferre*, *befwer = fiber*. Rask, in his essay on the origin of the Icelandic language, gives the same comparisons, with a few additions and corrections, and even the very same examples in most cases. As Grimm in the preface to his first edition expressly mentions this essay of Rask, there is every probability that it gave the first impulse to his own investigations. But there is a wide difference between the isolated permutations of his predecessors and the comprehensive generalizations under which he himself ranged them. The extension of the law to High German is also entirely his own. The only fact that can be adduced in support of the assertion that Grimm wished to deprive Rask of his claims to

priority is that he does not expressly mention Rask's results in his second edition. But this is part of the plan of his work, viz. to refrain from all controversy or reference to the works of others. In his first edition he expressly calls attention to Rask's essay, and praises it most ungrudgingly. Rask himself refers as little to Ihre, merely alluding in a general way to Ihre's permutations, although his own debt to Ihre is infinitely greater than that of Grimm to Rask or any one else. It is true that a certain bitterness of feeling afterwards sprang up between Grimm and Rask, but this was the fault of the latter, who, impatient of contradiction and irritable in controversy, refused to acknowledge the value of Grimm's views when they involved modification of his own. The importance of Grimm's generalization in the history of philology cannot be overestimated, and even the mystic completeness and symmetry of its formulation, although it has proved a hindrance to the correct explanation of the causes of the changes, was well calculated to strike the popular mind, and give it a vivid idea of the paramount importance of law, and the necessity of disregarding mere superficial resemblance. The most lawless etymologist bows down to the authority of Grimm's law, even if he honours it almost as much in the breach as in the observance.

The grammar was continued in three volumes, treating principally of derivation, composition and syntax, which last was left unfinished. Grimm then began a third edition, of which only one part, comprising the vowels, appeared in 1840, his time being afterwards taken up mainly by the dictionary. The grammar stands alone in the annals of science for comprehensiveness, method and fullness of detail. Every law, every letter, every syllable of inflection in the different languages is illustrated by an almost exhaustive mass of material. It has served as a model for all succeeding investigators. Diez's grammar of the Romance languages is founded entirely on its methods, which have also exerted a profound influence on the wider study of the Indo-Germanic languages in general.

In the great German dictionary Grimm undertook a task for which he was hardly suited. His exclusively historical tendencies made it impossible for him to do justice to the individuality of a living language; and the disconnected statement of the facts of language in an ordinary alphabetical dictionary fatally mars its scientific character. It was also undertaken on so large a scale as to make it impossible for him and his brother to complete it themselves. The dictionary, as far as it was worked out by Grimm himself, may be described as a collection of disconnected antiquarian essays of high value.

Grimm's scientific character is notable for its combination of breadth and unity. He was as far removed from the narrowness of the specialist who has no ideas, no sympathies beyond some one author, period or corner of science, as from the shallow dabbler who feverishly attempts to master the details of half-a-dozen discordant pursuits. Even within his own special studies there is the same wise concentration; no Mezzofanti-like parrot display of useless polyglottism. The very foundations of his nature were harmonious; his patriotism and love of historical investigation received their fullest satisfaction in the study of the language, traditions, mythology, laws and literature of his own countrymen and their nearest kindred. But from this centre his investigations were pursued in every direction as far as his unerring instinct of healthy limitation would allow. He was equally fortunate in the harmony that subsisted between his intellectual and moral nature. He made cheerfully the heavy sacrifices that science demands from its disciples, without feeling any of that envy and bitterness which often torment weaker natures; and although he lived apart from his fellow men, he was full of human sympathies, and no man has ever exercised a profounder influence on the destinies of mankind. His was the very ideal of the noblest type of German character.

The following is a complete list of his separately published works, those which he published in common with his brother being marked with a star. For a list of his essays in periodicals, &c., see vol. v. of his *Kleinere Schriften*, from which the present list is taken. His life is best studied in his own "Selbstbiographie," in vol. i. of the *Kleinere Schriften*. There is also a brief memoir by K. Gödeke in *Göttinger Professoren* (Gotha (Perthes), 1872): *Über den altdeutschen Meistergesang* (Göttingen, 1811); **Kinder- und Hausmärchen* (Berlin, 1812-1815) (many editions); **Das Lied von Hildebrand und das Weissenbrunner Gebet* (Cassel, 1812); *Altdeutsche Wälder* (Cassel, Frankfort, 1813-1816, 3 vols.); **Der arme Heinrich von Hartmann von der Aue* (Berlin, 1815); **Irmenstrasse und Irmensäule* (Vienna, 1815); **Die Lieder der allen Edda* (Berlin, 1815), *Silva de romances viejos* (Vienna, 1815); **Deutsche Sagen* (Berlin, 1816-1818, 2nd ed., Berlin, 1865-1866); *Deutsche Grammatik* (Göttingen, 1819, 2nd ed., Göttingen, 1822-1840) (reprinted 1870 by W. Scherer, Berlin); *Wuk Stephanovitsch's kleine serbische Grammatik, verdeutscht mit einer Vorrede* (Leipzig and Berlin, 1824); *Zur Recension der deutschen Grammatik* (Cassel, 1826); **Irische Elfenmärchen, aus dem Englischen* (Leipzig, 1826); *Deutsche Rechtsaltertümer* (Göttingen, 1828, 2nd ed., 1854); *Hymnorum veteris ecclesiae XXVI. interpretatio theodisca* (Göttingen, 1830); *Reinhart Fuchs* (Berlin, 1834); *Deutsche Mythologie* (Göttingen, 1835, 3rd ed., 1854, 2 vols.); *Taciti Germania edidit* (Göttingen, 1835); *Über meine Entlassung* (Basel, 1838);

(together with Schmeller) *Lateinische Gedichte des X. und XI. Jahrhunderts* (Göttingen, 1838); *Sendschreiben an Karl Lachmann über Reinhart Fuchs* (Berlin, 1840); *Weistümer*, Th. i. (Göttingen, 1840) (continued, partly by others, in 5 parts, 1840-1869); *Andreas und Elene* (Cassel, 1840); *Frau Aventure* (Berlin, 1842); *Geschichte der deutschen Sprache* (Leipzig, 1848, 3rd ed., 1868, 2 vols.); *Das Wort des Besitzes* (Berlin, 1850); **Deutsches Wörterbuch*, Bd. i. (Leipzig, 1854); *Rede auf Wilhelm Grimm und Rede über das Alter* (Berlin, 1868, 3rd ed., 1865); *Kleinere Schriften* (Berlin, 1864-1870, 5 vols.).

(H. Sw.)

GRIMM, WILHELM CARL (1786-1859). For the chief events in the life of Wilhelm Grimm see article on Jacob Grimm above. As Jacob himself said in his celebrated address to the Berlin Academy on the death of his brother, the whole of their lives were passed together. In their schooldays they had one bed and one table in common, as students they had two beds and two tables in the same room, and they always lived under one roof, and had their books and property in common. Nor did Wilhelm's marriage in any way disturb their harmony. As Cleasby said ("Life of Cleasby," prefixed to his *Icelandic Dictionary*, p. lxix.), "they both live in the same house, and in such harmony and community that one might almost imagine the children were common property." Wilhelm's character was a complete contrast to that of his brother. As a boy he was strong and healthy, but as he grew up he was attacked by a long and severe illness, which left him weak all his life. His was a less comprehensive and energetic mind than that of his brother, and he had less of the spirit of investigation, preferring to confine himself to some limited and definitely bounded field of work; he utilized everything that bore directly on his own studies, and ignored the rest. These studies were almost always of a literary nature. It is characteristic of his more aesthetic nature that he took great delight in music, for which his brother had but a moderate liking, and had a remarkable gift of story-telling. Cleasby, in the account of his visit to the brothers, quoted above, tells that "Wilhelm read a sort of farce written in the Frankfort dialect, depicting the 'malheurs' of a rich Frankfort tradesman on a holiday jaunt on Sunday. It was very droll, and he read it admirably." Cleasby describes him as "an uncommonly animated, jovial fellow." He was, accordingly, much sought in society, which he frequented much more than his brother.

His first work was a spirited translation of the Danish *Kæmpeviser, Altdänische Heldenlieder*, published in 1811-1813, which made his name at first more widely known than that of his brother. The most important of his text editions are—*Ruolandslied* (Göttingen, 1838); *Konrad von Würzburg's Goldene Schmiede* (Berlin, 1840); *Grave Ruodolf* (Göttingen, 1844, 2nd ed.); *Athis und Prophilias* (Berlin, 1846); *Altdeutsche Gespräche* (Berlin, 1851); *Freidank* (Göttingen, 1860, 2nd ed.). Of his other works the most important is *Deutsche Heldensage* (Berlin, 1868, 2nd ed.). His *Deutsche Runen* (Göttingen, 1821) has now only an historical interest.

(H. Sw.)

GRIMMA, a town in the kingdom of Saxony, on the left bank of the Mulde, 19 m. S.E. of Leipzig on the railway Döbeln-Dresden. Pop. (1905) 11,182. It has a Roman Catholic and three Evangelical churches, and among other principal buildings are the Schloss built in the 12th century, and long a residence of the margraves of Meissen and the electors of Saxony; the town-hall, dating from 1442, and the famous school Fürstenschule (*Illustre Moldanum*), erected by the elector Maurice on the site of the former Augustinian monastery in 1550, having provision for 104 free scholars and a library numbering 10,000 volumes. There are also a modern school, a teachers' seminary, a commercial school and a school of brewing. Among the industries of the town are ironfounding, machine building and dyeworks, while paper and gloves are manufactured there. Gardening and agriculture generally are also important branches of industry. In the immediate neighbourhood are the ruins of the Cistercian nunnery from which Catherine von Bora fled in 1523, and the village of Döben, with an old castle. Grimma is of Sorbian origin, and is first mentioned in 1203. It passed then into possession of Saxony and has remained since part of that country.

See Lorenz, *Die Stadt Grimma, historisch beschrieben* (Leipzig, 1871); Rössler, *Geschichte*

der königlich sächsischen Fürsten- und Landesschule Grimma (Leipzig, 1891); L. Schmidt, *Urkundenbuch der Stadt Grimma* (Leipzig, 1895); and Fraustadt, *Grimmenser Stammbuch* (Grimma, 1900).

GRIMMELSHAUSEN, HANS JAKOB CHRISTOFFEL VON (*c.* 1625-1676), German author, was born at Gelnhausen in or about 1625. At the age of ten he was kidnapped by Hessian soldiery, and in their midst tasted the adventures of military life in the Thirty Years' War. At its close, Grimmelshausen entered the service of Franz Egon von Fürstenberg, bishop of Strassburg and in 1665 was made *Schultheiss* (magistrate) at Renchen in Baden. On obtaining this appointment, he devoted himself to literary pursuits, and in 1669 published *Der abenteuerliche Simplicissimus, Teutsch, d.h. die Beschreibung des Lebens eines seltsamen Vaganten, genannt Melchior Sternfels von Fuchsheim*, the greatest German novel of the 17th century. For this work he took as his model the picaresque romances of Spain, already to some extent known in Germany. *Simplicissimus* is in great measure its author's autobiography; he begins with the childhood of his hero, and describes the latter's adventures amid the stirring scenes of the Thirty Years' War. The realistic detail with which these pictures are presented makes the book one of the most valuable documents of its time. In the later parts Grimmelshausen, however, over-indulges in allegory, and finally loses himself in a Robinson Crusoe story. Among his other works the most important are the so-called *Simplicianische Schriften: Die Erzbetrügerin und Landstörtzerin Courasche* (*c.* 1669); *Der seltsame Springinsfeld* (1670) and *Das wunderbarliche Vogelnest* (1672). His satires, such as *Der teutsche Michel* (1670), and "gallant" novels, like *Dietwald und Amelinde* (1670) are of inferior interest. He died at Renchen on the 17th of August 1676, where a monument was erected to him in 1879.

Editions of *Simplicissimus* and the *Simplicianische Schriften* have been published by A. von Keller (1854), H. Kurz (1863-1864), J. Tittmann (1877) and F. Bobertag (1882). A reprint of the first edition of the novel was edited by R. Kögel for the series of *Neudrucke des 16. und 17. Jahrhunderts* (1880). See the introductions to these editions; also F. Antoine, *Étude sur le Simplicissimus de Grimmelshausen* (1882) and E. Schmidt in his *Charakteristiken*, vol. i. (1886).

GRIMOARD, PHILIPPE HENRI, Comte de (1753-1815), French soldier and military writer, entered the royal army at the age of sixteen, and in 1775 published his *Essai théorique et practique sur les batailles*. Shortly afterwards Louis XVI. placed him in his own military cabinet and employed him especially in connexion with schemes of army reform. By the year of the Revolution he had become one of Louis's most valued counsellors, in political as well as military matters, and was marked out, though only a colonel, as the next Minister of War. In 1791 Grimoard was entrusted with the preparation of the scheme of defence for France, which proved two years later of great assistance to the Committee of Public Safety. The events of 1792 put an end to his military career, and the remainder of his life was spent in writing military books.

The following works by him, besides his first essay, have retained some importance: *Histoire des dernières campagnes de Turenne* (Paris, 1780), *Lettres et mémoires de Turenne* (Paris, 1780), *Troupes légères et leur emploi* (Paris, 1782), *Conquêtes de Gustave-Adolphe* (Stockholm and Neufchatel, 1782-1791); *Mémoires de Gustave Adolphe* (Paris, 1790), Correspondence of Marshal Richelieu (Paris, 1789), St Germain (1789), and Bernis (1790), *Vie et règne de Frédéric le Grand* (London, 1788), *Lettres et mémoires du maréchal de Saxe* (Paris, 1794), *L'Expédition de Minorque en 1756* (Paris, 1798), *Recherches sur la force de l'armée française depuis Henri IV jusqu'en 1805* (Paris, 1806), *Mémoires du maréchal de Tessé* (Paris, 1806), *Lettres de Bolingbroke* (Paris, 1808), *Traité, sur le service d'état-major* (Paris, 1809), and (with Servan) *Tableau historique de la guerre de la Révolution 1792-1794* (Paris, 1808).

GRIMSBY, or GREAT GRIMSBY, a municipal, county and parliamentary borough of Lincolnshire, England; an important seaport near the mouth of the Humber on the south shore. Pop. (1901) 63,138. It is 155 m. N. by E. from London by the Great Northern railway, and is also served by the Great Central railway. The church of St James, situated in the older part of the town, is a cruciform Early English building, retaining, in spite of injudicious restoration, many beautiful details. The chief buildings are that containing the town hall and the grammar school (a foundation of 1547), the exchange, a theatre, and the customs house and dock offices. A sailors' and fishermen's Harbour of Refuge, free library, constitutional club and technical school are maintained. The duke of York public gardens were opened in 1894. Adjacent to Grimsby on the east is the coastal watering-place of Cleethorpes.

The dock railway station lies a mile from the town station. In 1849 the Great Central (then the Manchester, Sheffield and Lincolnshire) railway initiated a scheme of reclamation and dock-construction. This was completed in 1854, and subsequent extensions were made. There are two large fish-docks, and, for general traffic, the Royal dock, communicating with the Humber through a tidal basin, the small Union dock, and the extensive Alexandra dock, together with graving docks, timber yards, a patent slip, &c. These docks have an area of about 104 acres, but were found insufficient for the growing traffic of the port, and in 1906 the construction of a large new dock, of about 40 acres' area and 30 to 35 ft. depth, was undertaken by the Great Central Company at Immingham, 5 m. above Grimsby on the Humber. The principal imports are butter, woollens, timber, cereals, eggs, glass, cottons, preserved meat, wool, sugar and bacon. The exports consist chiefly of woollen yarn, woollens, cotton goods, cotton yarn, machinery, &c. and coal. It is as a fishing port, however, that Grimsby is chiefly famous. Two of the docks are for the accommodation of the fishing fleet, which, consisting principally of steam trawlers, numbers upwards of 500 vessels. Regular passenger steamers run from Grimsby to Dutch and south Swedish ports, and to Esbjerg (Denmark), chiefly those of the Wilson line and the Great Central railway. The chief industries of Grimsby are shipbuilding, brewing, tanning, manufactures of ship tackle, ropes, ice for preserving fish, turnery, flour, linseed cake, artificial manure; and there are saw mills, bone and corn mills, and creosote works. The municipal borough is under a mayor, 12 aldermen and 36 councillors. Area, 2852 acres.

Grimsby (*Grimesbi*) is supposed to have been the landing-place of the Danes on their first invasion of Britain towards the close of the 8th century. It was a borough by prescription as early as 1201, in which year King John granted the burgesses a charter of liberties according to the custom of the burgesses of Northampton. Henry III. in 1227 granted to "the mayor and good men" of Grimsby, that they should hold the town for a yearly rent of £111, and confirmed the same in 1271. These charters were confirmed by later sovereigns. A governing charter, under the title of mayor and burgesses, was given by James II. in 1688, and under this the appointment of officers and other of the corporation, arrangements are to a great extent regulated. In 1201 King John granted the burgesses an annual fair for fifteen days, beginning on the 25th of May. Two annual fairs are now held, namely on the first Monday in April and the second Monday in October. No early grant of a market can be found, but in 1792 the market-day was Wednesday. In 1888 it had ceased to exist. Grimsby returned two members to the parliament of 1298, but in 1833 the number was reduced to one.

In the time of Edward III. Grimsby was an important seaport, but the haven became obstructed by sand and mud deposited by the Humber, and so the access of large vessels was prevented. At the beginning of the 19th century a subscription was raised by the proprietors of land in the neighbourhood for improving the harbour, and an act was obtained by which they were incorporated under the title "The Grimsby Haven Co." The fishing trade had become so important by 1800 that it was necessary to construct a new dock.

GRIMSTON, SIR HARBOTTLE (1603-1685), English politician, second son of Sir Harbottle Grimston, Bart. (d. 1648), was born at Bradfield Hall, near Manningtree, on the 27th of January 1603. Educated at Emmanuel College, Cambridge, he became a barrister of Lincoln's Inn, then recorder of Harwich and recorder of Colchester. As member for Colchester, Grimston sat in the Short Parliament of 1640, and he represented the same borough during the Long Parliament, speedily becoming a leading member of the popular party. He attacked Archbishop Laud with great vigour; was a member of the important committees of the parliament, including the one appointed in consequence of the attempted

seizure of the five members; and became deputy-lieutenant of Essex after the passing of the militia ordinance in January 1642. He disliked taking up arms against the king, but remained nominally an adherent of the parliamentary party during the Civil War. In the words of Clarendon, he “continued rather than concurred with them.” Grimston does not appear to have taken the Solemn League and Covenant, but after the conclusion of the first period of the war he again became more active. He was president of the committee which investigated the escape of the king from Hampton Court in 1647, and was one of those who negotiated with Charles at Newport in 1648, when, according to Burnet, he fell upon his knees and urged the king to come to terms. From this time Grimston’s sympathies appear to have been with the Royalists. Turned out of the House of Commons when the assembly was “purged” by colonel Pride, he was imprisoned; but was released after promising to do nothing detrimental to the parliament or the army, and spent the next few years in retirement. Before this time, his elder brother having already died, he had succeeded his father as 2nd baronet. In 1656 Sir Harbottle was returned to Cromwell’s second parliament as member for Essex; but he was not allowed to take his seat; and with 97 others who were similarly treated he issued a remonstrance to the public. He was among the secluded members who re-entered the Long Parliament in February 1660, was then a member of the council of state, and was chosen Speaker of the House of Commons in the Convention Parliament of 1660. As Speaker he visited Charles II. at Breda, and addressed him in very flattering terms on his return to London; but he refused to accede to the king’s demand that he should dismiss Burnet from his position as chaplain to the Master of the Rolls, and in parliament he strongly denounced any relaxation of the laws against papists. Grimston did not retain the office of Speaker after the dissolution of the Convention Parliament, but he was a member of the commission which tried the regicides, and in November 1660 he was appointed Master of the Rolls. Report says he paid Clarendon £8000 for the office, while Burnet declares he obtained it “without any application of his own.” He died on the 2nd of January 1685. His friend and chaplain, Burnet, speaks very highly of his piety and impartiality, while not omitting the undoubted fact that he was “much sharpened against popery.” He translated the law reports of his father-in-law, the judge, Sir George Croke (1560-1642), which were written in Norman-French, and five editions of this work have appeared. Seven of his parliamentary speeches were published, and he also wrote *Strena Christiana* (London, 1644, and other editions). Grimston’s first wife, Croke’s daughter Mary, bore him six sons and two daughters; and by his second wife, Anne, daughter and heiress of Sir Nathaniel Bacon, K.B., a grandson of Sir Nicholas Bacon, he had one daughter.

Of his sons one only, Samuel (1643-1700), survived his father, and when he died in October 1700 the baronetcy became extinct. Sir Harbottle’s eldest daughter, Mary, married Sir Capel Luckyn, Bart., and their grandson, William Luckyn, succeeded to the estates of his great-uncle, Sir Samuel Grimston, and took the name of Grimston in 1700. This William Luckyn Grimston (1683-1756) was created Baron Dunboyne and Viscount Grimston in the peerage of Ireland in 1719. He was succeeded as 2nd viscount by his son James (1711-1773), whose son James Bucknall (1747-1808) was made an English peer as baron Verulam of Gorhambury in 1790. Then in 1815 his son James Walter (1775-1845), 2nd baron Verulam, was created earl of Verulam, and the present peer is his direct descendant. Sir Harbottle Grimston bought Sir Nicholas Bacon’s estate at Gorhambury, which is still the residence of his descendants.

See G. Burnet, *History of My Own Time*, edited by O. Airy (Oxford, 1900).

GRIMTHORPE, EDMUND BECKETT, 1ST BARON (1816-1905), son of Sir Edmund Beckett Denison, was born on the 12th of May 1816. He was educated at Doncaster and Eton, whence he proceeded to Trinity College, Cambridge, and graduated thirtieth wrangler in 1838. He was called to the bar at Lincoln’s Inn in 1841. Upon succeeding to the baronetcy in 1874 he dropped the name of Denison, which his father had assumed in 1816. From 1877 to 1900 he was chancellor and vicar-general of York, and he was raised to the peerage in 1886. He was made a Q.C. in 1854, and was for many years a leader of the Parliamentary Bar. He devoted himself to the study of astronomy, horology and architecture, more especially Gothic ecclesiastical architecture. As early as 1850 he had become a recognized authority on clocks, watches and bells, and in particular on the construction of turret clocks, for he had designed Dent’s Great Exhibition clock, and his *Rudimentary Treatise* had gone through many editions. In 1851 he was called upon, in conjunction with the astronomer royal (Mr, afterwards Sir, G. B. Airy) and Mr Dent, to design a suitable clock for the new Houses of Parliament. The

present tower clock, popularly known as “Big Ben,” was constructed after Lord Grimthorpe’s designs. In a number of burning questions during his time Lord Grimthorpe took a prominent part. It is, however, in connexion with the restoration of St Albans Abbey that he is most widely known. The St Albans Abbey Reparation Committee, which had been in existence since 1871, and for which Sir Gilbert Scott had carried out some admirable repairs, obtained a faculty from the Diocesan Court in 1877 to repair and restore the church and fit it for cathedral and parochial services. Very soon, however, the committee found itself unable to raise the necessary funds, and it was at this juncture that a new faculty was granted to Lord Grimthorpe (then Sir Edmund Beckett) to “restore, repair and refit” the abbey at his own expense. Lord Grimthorpe made it an express stipulation that the work should be done according to his own designs and under his own supervision. His public spirit in undertaking the task was undeniable, but his treatment of the roof, the new west front, and the windows inserted in the terminations of the transepts, excited a storm of adverse criticism, and was the subject of vigorous protests from the professional world of architecture. He died on the 29th of April 1905, being succeeded as 2nd baron by his nephew, E. W. Beckett (b. 1856), who had sat in parliament as conservative member for the Whitby division of Yorkshire from 1885.

GRINDAL, EDMUND (*c.* 1519-1583), successively bishop of London, archbishop of York and archbishop of Canterbury, born about 1519, was son of William Grindal, a farmer of Hensingham, in the parish of St Bees, Cumberland. He was educated at Magdalene and Christ’s Colleges and then at Pembroke Hall, Cambridge, where he graduated B.A. and was elected fellow in 1538. He proceeded M.A. in 1541, was ordained deacon in 1544 and was proctor and Lady Margaret preacher in 1548-1549. Probably through the influence of Ridley, who had been master of Pembroke Hall, Grindal was selected as one of the Protestant disputants during the visitation of 1549. He had a considerable talent for this work and was often employed on similar occasions. When Ridley became bishop of London, he made Grindal one of his chaplains and gave him the precentorship of St Paul’s. He was soon promoted to be one of Edward VI.’s chaplains and prebendary of Westminster, and in October 1552 was one of the six divines to whom the Forty-two articles were submitted for examination before being sanctioned by the Privy Council. According to Knox, Grindal distinguished himself from most of the court preachers in 1553 by denouncing the worldliness of the courtiers and foretelling the evils to follow on the king’s death.

That event frustrated Grindal’s proposed elevation to the episcopal bench and he did not consider himself bound to await the evils which he had foretold. He abandoned his preferments on Mary’s accession and made his way to Strassburg. Thence, like so many of the Marian exiles, he proceeded to Frankfurt, where he endeavoured to compose the disputes between the “Coxians” (see Cox, Richard), who regarded the 1552 Prayer Book as the perfection of reform, and the Knoxians, who wanted further simplification. He returned to England in January 1559, was appointed one of the committee to revise the liturgy, and one of the Protestant representatives at the Westminster conference. In July he was also elected Master of Pembroke Hall in succession to the recusant Dr Thomas Young (1514-1580) and Bishop of London in succession to Bonner.

Grindal himself was, however, inclined to be recalcitrant from different motives. He had qualms about vestments and other traces of “popery” as well as about the Erastianism of Elizabeth’s ecclesiastical government. His Protestantism was robust enough; he did not mind recommending that a priest “might be put to some torment” (*Hatfield MSS.* i. 269); and in October 1562 he wrote to Cecil begging to know “if that second Julian, the king of Navarre, is killed; as he intended to preach at St Paul’s Cross, and might take occasion to mention God’s judgements on him” (*Domestic Cal.*, 1547-1580, p. 209). But he was loth to execute judgments upon English Puritans, and modern high churchmen complain of his infirmity of purpose, his opportunism and his failure to give Parker adequate assistance in rebuilding the shattered fabric of the English Church. Grindal lacked that firm faith in the supreme importance of uniformity and autocracy which enabled Whitgift to persecute with a clear conscience nonconformists whose theology was indistinguishable from his own. Perhaps he was as wise as his critics; at any rate the rigour which he repudiated hardly brought peace or strength to the Church when practised by his successors, and London, which was always a difficult see, involved Bishop Sandys in similar troubles when Grindal had gone to York. As it was, although Parker said that Grindal “was not resolute and severe enough for the

government of London," his attempts to enforce the use of the surplice evoked angry protests, especially in 1565, when considerable numbers of the nonconformists were suspended; and Grindal of his own motion denounced Cartwright to the Council in 1570. Other anxieties were brought upon him by the burning of his cathedral in 1561, for although Grindal himself is said to have contributed £1200 towards its rebuilding, the laity of his diocese were niggardly with their subscriptions and even his clergy were not liberal.

In 1570 Grindal was translated to the archbishopric of York, where Puritans were few and coercion would be required mainly for Roman Catholics. His first letter from Cawood to Cecil told that he had not been well received, that the gentry were not "well-affected to godly religion and among the common people many superstitious practices remained." It is admitted by his Anglican critics that he did the work of enforcing uniformity against the Roman Catholics with good-will and considerable tact. He must have given general satisfaction, for even before Parker's death two persons so different as Burghley and Dean Nowell independently recommended Grindal's appointment as his successor, and Spenser speaks warmly of him in the *Shepherd's Calendar* as the "gentle shepherd Algrind." Burghley wished to conciliate the moderate Puritans and advised Grindal to mitigate the severity which had characterized Parker's treatment of the nonconformists. Grindal indeed attempted a reform of the ecclesiastical courts, but his metropolitical activity was cut short by a conflict with the arbitrary temper of the queen. Elizabeth required Grindal to suppress the "prophesyings" or meetings for discussion which had come into vogue among the Puritan clergy, and she even wanted him to discourage preaching; she would have no doctrine that was not inspired by her authority. Grindal remonstrated, claiming some voice for the Church, and in June 1577 was suspended from his jurisdictional, though not his spiritual, functions for disobedience. He stood firm, and in January 1578 Secretary Wilson informed Burghley that the queen wished to have the archbishop deprived. She was dissuaded from this extreme course, but Grindal's sequestration was continued in spite of a petition from Convocation in 1581 for his reinstatement. Elizabeth then suggested that he should resign; this he declined to do, and after making an apology to the queen he was reinstated towards the end of 1582. But his infirmities were increasing, and while making preparations for his resignation, he died on the 6th of July 1583 and was buried in Croydon parish church. He left considerable benefactions to Pembroke Hall, Cambridge, Queen's College, Oxford, and Christ's College, Cambridge; he also endowed a free school at St Bees, and left money for the poor of St Bees, Canterbury, Lambeth and Croydon.

Strype's *Life of Grindal* is the principal authority; see also *Dict. Nat. Biogr.* and, besides the authorities there cited, Gough's General Index to Parker Soc. Publ.; Acts of the Privy Council; Cal. of Hatfield MSS.; Dixon's *Hist. of the Church of England*; Frere's volume in Stephens' and Hunt's series; *Cambridge Mod. Hist.* vol. iii.; Gee's *Elizabethan Clergy*; Birt's *Elizabethan Religious Settlement*; and Pierce's *Introduction to the Marprelate Tracts* (1909).

(A. F. P.)

GRINDELWALD, a valley in the Bernese Oberland, and one of the chief resorts of tourists in Switzerland. It is shut in on the south by the precipices of the Wetterhorn, Mettenberg and Eiger, between which two famous glaciers flow down. On the north it is sheltered by the Faulhorn range, while on the east the Great Scheidegg Pass leads over to Meiringen; and on the south-west the Little Scheidegg or Wengern Alp (railway 11½ m. across) divides it from Lauterbrunnen. The main village is connected with Interlaken by a rack railway (13 m.). The valley is very green, and possesses excellent pastures, as well as fruit trees, though little corn is grown. It is watered by the Black Lütschine, a tributary of the Aar. The height of the parish church above the sea-level is 3468 ft. The population in 1900 was 3346, practically all Protestant and German-speaking, and living in 558 houses. The glacier guides are among the best in the Alps. The valley was originally inhabited by the serfs of various great lords in summer for the sake of pasturage. A chapel in a cave was superseded about 1146 by a wooden church, replaced about 1180 by a stone church, which was pulled down in 1793 to erect the present building. Gradually the Austin canons of Interlaken bought out all the other owners in the valley, but when that house was suppressed in 1528 by the town of Bern the inhabitants gained their freedom. The houses near the hotel Adler bear the name of Gydisdorf, but there is no village of Grindelwald properly speaking, though that name is usually given to the assemblage of hotels and shops between Gydisdorf and the railway station. Grindelwald is now very much frequented by visitors in winter.

See W. A. B. Coolidge, *Walks and Excursions in the Valley of Grindelwald* (also in French and German) (Grindelwald, 1900); Emmanuel Friedli, *Bärndütsch als Spiegel bernischen Volkstums*, vol. ii. (Grindelwald, Bern, 1908); E. F. von Mülinen, *Beiträge zur Heimatkunde des Kantons Bern, deutschen Teils*, vol. i. (Bern, 1879), pp. 24-26; G. Strasser, *Der Gletschermann* (Grindelwald, 1888-1890). Scattered notices may be found in the edition (London, 1899) of the "General Introduction" (entitled "Hints and Notes for Travellers in the Alps") to John Ball's *Alpine Guide*.

(W. A. B. C.)

GRINGOIRE (or GRINGORE), **PIERRE** (*c.* 1480-1539), French poet and dramatist, was born about the year 1480, probably at Caen. In his first work, *Le Chasteau de labour* (1499), a didactic poem in praise of diligence, he narrates the troubles following on marriage. A young couple are visited by Care, Need, Discomfort, &c.; and other personages common to medieval allegories take part in the action. In November 1501 Gringoire was in Paris directing the production of a mystery play in honour of the archduke Philip of Austria, and in subsequent years he received many similar commissions. The fraternity of the *Enfans sans Souci* advanced him to the dignity of *Mère Sotte* and afterwards to the highest honour of the gild, that of *Prince des Sots*. For twenty years Gringoire seems to have been at the head of this illustrious confrérie. As *Prince des Sots* he exercised an extraordinary influence. At no time was the stage, rude and coarse as it was, more popular as a true exponent of the popular mind. Gringoire's success lay in the fact that he followed, but did not attempt to lead; on his stage the people saw exhibited their passions, their judgments of the moment, their jealousies, their hatreds and their ambitions. Brotherhoods of the kind existed all over 606
France. In Paris there were the *Enfans sans Souci*, the *Basochiens*, the *Confrérie de la Passion* and the *Souverain Empire de Galilée*; at Dijon there were the *Mère Folle* and her family; in Flanders the *Société des Arbalétriers* played comedies; at Rouen the *Cornards* or *Conards* yielded to none in vigour and fearlessness of satire. On Shrove Tuesday 1512 Gringoire, who was the accredited defender of the policy of Louis XII., and had already written many political poems, represented the *Jeu du Prince des Sots et Mère Sotte*. It was at the moment when the French dispute with Julius II. was at its height. *Mère Sotte* was disguised as the Church, and disputed the question of the temporal power with the prince. The political meaning was even more thinly veiled in the second part of the entertainment, a morality named *L'Homme obstiné*, the principal personage representing the pope. The performance concluded with a farce. Gringoire adopted for his device on the frontispiece of this trilogy, *Tout par Raison*, *Raison par Tout*, *Par tout Raison*. He has been called the *Aristophane des Halles*. In one respect at least he resembles Aristophanes. He is serious in his merriment; there is purpose behind his extravagances. The Church was further attacked in a poem printed about 1510, *La Chasse du cerf des cerfs* (*serf des serfs*, i.e. *servus servorum*), under which title that of the pope is thinly veiled. About 1514 he wrote his mystery of the *Vie de Monseigneur Saint-Louis par personnages* in nine books for the *confrérie* of the masons and carpenters. He became in 1518 herald at the court of Lorraine, with the title of Vaudemont, and married Catherine Roger, a lady of gentle birth. During the last twenty years of a long life he became orthodox, and dedicated a *Blason des hérétiques* to the duke of Lorraine. There is no record of the payment of his salary as a herald after Christmas 1538, so that he died probably in 1539.

His works were edited by C. d'Héricault and A. de Montaiglon for the *Bibliothèque elzévirienne* in 1858. This edition was incomplete, and was supplemented by a second volume in 1877 by Montaiglon and M. James de Rothschild. These volumes include the works already mentioned, except *Le Chasteau de labour*, and in addition, *Les Folles Entreprises* (1505), a collection of didactic and satirical poems, chiefly ballades and rondeaux, one section of which is devoted to the exposition of the tyranny of the nobles, and another to the vices of the clergy; *L'Entreprise de Venise* (*c.* 1509), a poem in seven-lined stanzas, giving a list of the Venetian fortresses which belonged, according to Gringoire, to other powers; *L'Espoir de paix* (1st ed. not dated; another, 1510), a verse treatise on the deeds of "certain popes of Rome," dedicated to Louis XII.; and *La Coqueluche* (1510), a verse description of an epidemic, apparently influenza. For details of his other satires, *Les Abus du monde* (1509), *Complainte de trop tard marié, Les Fantasies du monde qui règne*; of his religious verse, *Chants royaux* (on the Passion, 1527), *Heures de Notre Dame* (1525); and a collection of tales in prose and verse, taken from the *Gesta Romanorum*, entitled *Les Fantasies de Mère Sotte* (1516), see G. Brunet, *Manuel du libraire* (*s.v.* Gringore). Most of Gringoire's works conclude with an acrostic giving the name of the author. The *Chasteau de labour* was translated into

English by Alexander Barclay and printed by Wynkyn de Worde in 1506. Barclay's translation was edited (1905) with his original for the Roxburghe Club by Mr A. W. Pollard, who provided an account of Gringoire, and a bibliography of the book. See also, for the *Jeu du Prince des Sots*, Petit de Julleville, *La Comédie et les mœurs en France au moyen âge*, pp. 151-168 (Paris, 1886); for *Saint Louis*, the same author's *Les Mystères*, i. 331 et seq., ii. 583-597 (1880), with further bibliographical references; and E. Picot, *Gringore et les comédiens italiens* (1877). The real Gringoire cannot be said to have many points of resemblance with the poet described in Victor Hugo's *Notre-Dame de Paris*, nor is there more foundation in fact for the one-act prose comedy of Théodore de Banville.

GRINNELL, a city in Poweshiek county, Iowa, U.S.A., 55 m. E. by N. of Des Moines. Pop. (1900) 3860, of whom 274 were foreign-born; (1905) 4634; (1910) 5036. Grinnell is served by the Chicago, Rock Island & Pacific, and the Iowa Central railways. It is the seat of Iowa College (co-educational), founded in 1847 by the Iowa Band (Congregationalists and graduates of New England colleges and Andover Theological Seminary, who had devoted themselves to home missionary educational work in Iowa, and who came to Iowa in 1843), and by a few earlier pioneers from New England. The college opened in 1848 at Davenport, and in 1859 removed to Grinnell, where there was a school called Grinnell University, which it absorbed. Closely affiliated with the college are the Grinnell Academy and the Grinnell School of Music. In 1907-1908 the College had 463 students, the Academy had 129 students, and the School of Music had 141 students. Among the manufactures are carriages and gloves. The city was named in honour of one of its founders, Josiah Bushnell Grinnell (1821-1891), a Congregational clergyman, friend of and sympathizer with John Brown, and from 1863 to 1867 a member of the National House of Representatives. Grinnell was settled in 1854, was incorporated as a town in 1865, and in 1882 was chartered as a city of the second class. In 1882 it suffered severely from a cyclone.

GRIQUALAND EAST and **GRIQUALAND WEST,** territorial divisions of the Cape Province of the Union of South Africa. Griqualand East, which lies south of Basutoland and west of Natal, is so named from the settlement there in 1862 of Griquas under Adam Kok. It forms part of the Transkeian Territories of the Cape, and is described under KAFFRARIA. Griqualand West, formerly Griqualand simply, also named after its Griqua inhabitants, is part of the great tableland of South Africa. It is bounded S. by the Orange river, W. and N. by Bechuanaland, E. by the Transvaal and Orange Free State Province, and has an area of 15,197 sq. m. It has a general elevation of 3000 to 4000 ft. above the sea, low ranges of rocky hills, the Kaap, Asbestos, Vansittart and Langeberg mountains, traversing its western portion in a general N.E.-S.W. direction. The only perennial rivers are in the eastern district, through which the Vaal flows from a point a little above Fourteen Streams to its junction with the Orange (160 m.). In this part of its course the Vaal receives the Harts river from the north and the Riet from the east. The Riet, 4 m. within the Griqualand frontier, is joined by the Modder. The banks of the rivers are shaded by willows; elsewhere the only tree is the mimosa. The greater part of the country is barren, merging N.W. into absolute desert. The soil is, however, wherever irrigated, extremely fertile. The day climate is hot and dry, but the nights are frequently cold. Rain rarely falls, though thunderstorms of great severity occasionally sweep over the land, and sandstorms are prevalent in the summer. A portion of the country is adapted for sheep-farming and the growing of crops, horse-breeding is carried on at Kimberley, and asbestos is worked in the south-western districts, but the wealth of Griqualand West lies in its diamonds, which are found along the banks of the Vaal and in the district between that river and the Riet. From the first discovery of diamonds in 1867 up to the end of 1905 the total yield of diamonds was estimated at 13½ tons, worth £95,000,000.

The chief town is Kimberley (*q.v.*), the centre of the diamond mining industry. It is situated on the railway from Cape Town to the Zambezi, which crosses the country near its eastern border. Three miles south of Kimberley is Beaconsfield (*q.v.*). On the banks of the Vaal are Barkly West (*q.v.*), Windsorton (pop. 800) and Warrenton (pop. 1500); at all these places are river diggings, diamonds being found along the river from Fourteen Streams to the Harts

confluence. Warrenton is 44 m. N. by rail from Kimberley. Douglas (pop. 300), on the south bank of the Vaal, 12 m. above its confluence with the Orange, is the centre of an agricultural district, a canal 9½ m. long serving to irrigate a considerable area. Thirty-five miles N.W. of Douglas is Griquatown (pop. 401), the headquarters of the first Griqua settlers. Campbell (pop. 250) is 30 m. E. of Griquatown, and Postmasburg 42 m. N. by W. A census taken in 1877 showed the population of Griqualand West to be 45,277, of whom 12,347 were whites. At the census of 1891 the population was 83,215, of whom 29,602 were whites, and in 1904 the population was 108,498, of whom 32,570 were whites.

History.—Before the settlement in it of Griqua clans the district was thinly inhabited by Bushmen and Hottentots. At the end of the 18th century a horde known as Bastaards, descendants of Dutch farmers and Hottentot women, led a nomadic life on the plains south of the Orange river. In 1803 a missionary named Anderson induced a number of the Bastaards with their chief Barend Barends to settle north of the river, and a mission station was formed at a place where there was a strong flowing fountain, which has now disappeared, which gave the name of Klaarwater to what is now known as Griquatown or Griquastad. Klaarwater became a retreat for other Bastaards, Hottentot refugees, Kaffirs and Bechuanas. From Little Namaqualand came a few half-breeds and others under the leadership of Adam Kok, son of Cornelius Kok and grandson of Adam Kok (*c.* 1710-1795), a man of mixed white and Hottentot blood who is regarded as the founder of the modern Griquas. The settlement prospered, and in 1813, at the instance of the Rev. John Campbell, who had been sent by the London Missionary Society to inspect the country, the tribesmen abandoned the name of Bastaards in favour of that of Griquas,[1] some of them professing descent from a Hottentot tribe, originally settled near Saldanha Bay, called by the early Dutch settlers at the Cape Chariguriqua or Grigriqua. Under the guidance of missionaries the Griquas made some progress in civilization, and many professed Christianity. Adam Kok and Barends having moved eastward in 1820, those who remained behind elected as their head man a teacher in the mission school named Andries Waterboer, who successfully administered the settlement, and by defeating the Makololo raiders greatly increased the prestige of the tribe. Meanwhile Adam Kok and his companions had occupied part of the country between the Modder and Orange rivers. In 1825 Kok settled at the mission station of Philippolis (founded two years previously), and in a short time had exterminated the Bushmen inhabiting that region. He died about 1835, and after a period of civil strife was succeeded by his younger son, Adam Kok III. This chief in November 1843 signed a treaty placing himself under British protection. Many Dutch farmers were settled on the land he claimed. In 1845 he received British military aid in a contest with the white settlers, and in 1848 helped the British under Sir Harry Smith against the Boers (see Orange Free State: *History*). Eventually finding himself straitened by the Boers of the newly established Orange Free State, he removed in 1861-1863 with his people, some 3000 in number, to the region (then depopulated by Kaffir wars) now known as Griqualand East. His sovereign rights to all territory north of the Orange he sold to the Free State for £4000. He founded Kokstad (*q.v.*) and died in 1876. Waterboer, the principal Griqua chief, had entered into treaty relations with the British government as early as 1834, and he received a subsidy of £150 a year. He proved a stanch ally of the British, and kept the peace on the Cape frontier to the day of his death in 1852. He was succeeded by his son Nicholas Waterboer, under whom the condition of the Griquas declined—a decline induced by the indolence of the people and intensified by the drying up of the water supplies, cattle plague and brandy drinking. During this period white settlers acquired farms in the country, and the loss of their independence by the Griquas became inevitable. The discovery of diamonds along the banks of the Vaal in 1867 entirely altered the fortunes of the country, and by the end of 1869 the rush to the alluvial diggings had begun. At the diggers' camps the Griquas exercised no authority, but over part of the district the South African Republic and the Orange Free State claimed sovereignty. At Klip Drift (now Barkly West) the diggers formed a regular government and elected Theodore Parker as their president. Most of the diggers being British subjects, the high commissioner of South Africa interfered, and a Cape official was appointed magistrate at Klip Drift, President Parker resigning office in February 1871. At this time the "dry diggings," of which Kimberley is the centre, had been discovered,[2] and over the miners there the Orange Free State asserted jurisdiction. The land was, however, claimed by Nicholas Waterboer, who, on the advice of his agent, David Arnot, petitioned the British to take over his country. This Great Britain consented to do, and on the 27th of October 1871 proclamations were issued by the high commissioner receiving Waterboer and his Griquas as British subjects and defining the limits of his territory. In addition to the Kimberley district this territory included that part of the diamondiferous area which had been claimed by the Transvaal, but which had been declared, as the result of the arbitration of R. W. Keate, lieutenant-governor of Natal, part of Waterboer's land. On the 4th of November a small party of Cape Mounted Police took possession of the dry diggings and

hoisted the British flag. Shortly afterwards the representative of the Orange Free State withdrew. The Free State was greatly incensed by the action of the British government, but the dispute as to the sovereignty was settled in 1876 by the payment of £90,000 by the British to the Free State as compensation for any injury inflicted on the state.

The diggers, who under the nominal rule of the Transvaal and Free State had enjoyed practical independence, found the new government did little for their benefit, and a period of disorder ensued, which was not put an end to by the appointment in January 1873 of Mr (afterwards Sir) Richard Southey[3] as sole administrator, in place of the three commissioners who had previously exercised authority. In the July following the territory was made a crown colony and Southey's title changed to that of lieutenant-governor. The government remained unpopular, the diggers complaining of its unrepresentative character, the heavy taxation exacted, and the inadequate protection of property. They formed a society for mutual protection, and the discontent was so great that an armed force was sent (early in 1875) from the Cape to overawe the agitators. At the same time measures were taken to render the government more popular. The settlement of the dispute with the Free State paved the way for the annexation of Griqualand to the Cape Colony on the 15th of October 1880.

See KIMBERLEY, CAPE COLONY, TRANSVAAL and ORANGE FREE STATE. For the early history of the country and an account of life at the diggings, 1871-1875, consult G. M'Call Theal's *Compendium of the History and Geography of South Africa* (London, 1878), chapters xl. and xli.; Gardner F. Williams, *The Diamond Mines of South Africa* (New York and London, 1902); and the works bearing on the subject quoted in that book. See also Theal's *History of South Africa ... 1834-1854* (London, 1893); J. Campbell, *Travels in South Africa* (London, 1815), *Travels ... A Second journey ...* (2 vols., London, 1822); the Blue Books C. 459 of 1871 and C. 508 of 1872 (the last-named containing the Keate award, &c.); the Griqualand West report in *Papers relating to Her Majesty's Colonial Possessions*, part ii. (1875), and the Life of *Sir Richard Southey, K.C.M.G.*, by A. Wilmot (London, 1904). For the Griqua people consult G. W. Stow, *The Native Races of South Africa*, chapters xvii.-xx. (London, 1905).

1 The Griquas, as a distinct tribe, numbered at the Cape census of 1904 but 6289. They have largely intermarried with Kaffir and Bechuana tribes.

2 The order of discovery of the chief mines was:—Dutoitspan, Sept. 1870; Bultfontein, Nov. 1870; De Beers, May 1871; Colesberg Kop (Kimberley), July 1871.

3 Sir Richard Southey (1809-1901) was the son of one of the emigrants from the west of England to Cape Colony (1820). He organized and commanded a corps of Guides in the Kaffir war of 1834-35, and was with Sir Harry Smith at Boomplaats (1848). From 1864 to 1872 he was colonial secretary at the Cape. He gave up his appointment in Griqualand West in 1875, and lived thereafter in retirement. In 1891 he was created a K.C.M.G.

GRISAILLE, a French term, derived from *gris*, grey, for painting in monochrome in various shades of grey, particularly used in decoration to represent objects in relief. The frescoes of the roof of the Sistine chapel have portions of the design in *grisaille*. At Hampton Court the lower part of the decoration of the great staircase by Verrio is in *grisaille*. The term is also applied to monochrome painting in enamels, and also to stained glass; a fine example of *grisaille* glass is in the window known as the Five Sisters, at the end of the north transept in York cathedral.

GRISELDA, a heroine of romance. She is said to have been the wife of Walter, marquis of Saluces or Saluzzo, in the 11th century, and her misfortunes were considered to belong to history when they were handled by Boccaccio and Petrarch, although the probability is that Boccaccio borrowed his narrative from a Provençal *fabliau*. He included it in the recitations of the tenth day (*Decamerone*), and must have written it about 1350. Petrarch related it in a Latin letter in 1373, and his translation formed the basis of much of the later literature. The letter was printed by Ulrich Zel about 1470, and often subsequently. It was translated into French as *La Patience de Griselidis* and printed at Bréhan-Loudéac in 1484, and its

popularity is shown by the number of early editions quoted by Brunet (*Manuel du libraire, s.v.* Petrarca). The story was dramatized in 1395, and a *Mystère de Griselidis, marquise de Saluses par personnaiges* was printed by Jehan Bonfons (no date). Chaucer followed Petrarch's version in the *Canterbury Tales*. Ralph Radcliffe, who flourished under Henry VIII., is said to have written a play on the subject, and the story was dramatized by Thomas Dekker, Henry Chettle and W. Haughton in 1603.

An example of the many ballads of Griselda is given in T. Deloney's *Garland of Good Will* (1685), and the 17th-century chap-book, *The History of Patient Grisel* (1619), was edited by H. B. Wheatley (1885) for the Villon Society with a bibliographical and literary introduction.

GRISI, GIULIA (1811-1869), Italian opera-singer, daughter of one of Napoleon's Italian officers, was born in Milan. She came of a family of musical gifts, her maternal aunt Josephina Grassini (1773-1850) being a favourite opera-singer both on the continent and in London; her mother had also been a singer, and her elder sister Giudetta and her cousin Carlotta were both exceedingly talented. Giulia was trained to a musical career, and made her stage début in 1828. Rossini and Bellini both took an interest in her, and at Milan she was the first Adalgisa in Bellini's *Norma*, in which Pasta took the title-part. Grisi appeared in Paris in 1832, as Semiramide in Rossini's opera, and had a great success; and in 1834 she appeared in London. Her voice was a brilliant dramatic soprano, and her established position as a prima donna continued for thirty years. She was a particularly fine actress, and in London opera her association with such singers as Lablache, Rubini, Tamburini and Mario was long remembered as the palmy days of Italian opera. In 1854 she toured with Mario In America. She had married Count de Melcy in 1836, but this ended in a divorce; and in 1856 she married Mario (*q.v.*). She died in Berlin on the 29th of November 1869.

GRISON (*Galictis vittata*), a carnivorous mammal, of the family *Mustelidae*, common in Central and South America and Mexico. It is about the size of a marten, and has the upper surface of a bluish-grey tint, and the under surface is dark brown. The grison lives on small mammals and birds, and in settled districts is destructive to poultry. Allamand's grison (*G. allamandi*), with the same range, is somewhat larger. Another member of the genus is the tayra or taira (*G. barbara*), about as large as an otter, with a range from Mexico to Argentina. This species hunts in companies (see CARNIVORA).

GRISONS (Ger. *Graubünden*), the most easterly of the Swiss cantons and also the largest in extent, though relatively the most sparsely populated. Its total area is 2753.2 sq. m., of which 1634.4 sq. m. are classed as "productive" (forests covering 503.1 sq. m. and vineyards 1.3 sq. m.), but it has also 138.6 sq. m. of glaciers, ranking in this respect next after the Valais and before Bern. The whole canton is mountainous, the principal glacier groups being those of the Tödi, N. (11,887 ft.), of Medels, S.W. (Piz Medel, 10,509 ft.), of the Rheinwald or the Adula Alps, S.W. (Rheinwaldhorn, 11,149 ft.), with the chief source of the Rhine, of the Bernina, S.E. (Piz Bernina, 13,304 ft.), the most extensive, of the Albula, E. (Piz Kesch, 11,228 ft.), and of the Silvretta, N.E. (Piz Linard, 11,201 ft.). The principal valleys are those of the upper Rhine and of the upper Inn (or Engadine, *q.v.*). The three main sources of the Rhine are in the canton. The valley of the Vorder Rhine is called the Bündner Oberland, that of the Mittel Rhine the Val Medels, and that of the Hinter Rhine (the principal), in different parts of its course, the Rheinwald, the Schams valley and the Domleschg valley, while the upper valley of the Julia is named the Oberhalbstein. The chief affluents of the Rhine in the canton are the Glenner (flowing through the Lugnetz valley), the Avers Rhine, the Albula (swollen by the Julia and the Landwasser), the Plessur (Schanfigg valley) and the Landquart

(coming from the Prättigau). The Rhine and the Inn flow respectively into the North and the Black Seas. Of other streams that of Val Mesocco joins the Ticino and so the Po, while the Maira or Mera (Val Bregaglia) and the Poschiavino join the Adda, and the Rambach (Münster valley) the Adige, all four thus ultimately reaching the Adriatic Sea. The inner valleys are the highest in Central Europe, and among the loftiest villages are Juf, 6998 ft. (the highest permanently inhabited village in the Alps), at the head of the Avers glen, and St Moritz, 6037 ft., in the Upper Engadine. The lower courses of the various streams are rent by remarkable gorges, such as the Via Mala, the Rofna, the Schyn, and those in the Avers, Medels and Lugnetz glens, as well as that of the Züge in the Landwasser glen. Below Coire, near Malans, good wine is produced, while in the Val Mesocco, &c., maize and chestnuts flourish. But the forests and the mountain pasturages are the chief source of wealth. The lower pastures maintain a fine breed of cows, while the upper are let out in summer to Bergamasque shepherds. There are many mineral springs, such as those of St Moritz, Schuls, Alvaneu, Fideris, Le Prese and San Bernardino. The climate and vegetation, save on the southern slope of the Alps, are alpine and severe. But yearly vast numbers of strangers visit different spots in the canton, especially Davos (*q.v.*), Arosa and the Engadine. As yet there are comparatively few railways. There is one from Maienfeld (continued north to Constance and north-west to Zürich) to Coire (11 m.), which sends off a branch line from Landquart, E., past Klosters to Davos (31 m.). From Coire the line bears west to Reichenau (6 m.), whence one branch runs S.S.E. beneath the Albula Pass to St Moritz (50 m.), and another S.W. up the Hinter Rhine valley to Ilanz (20½ m.). There are, however, a number of fine carriage roads across the passes leading to or towards Italy. Besides those leading to the Engadine may be noted the roads from Ilanz past Disentis over the Oberalp Pass (6719 ft.) to Andermatt, from Disentis over the Lukmanier Pass (6289 ft.) to Biasca, on the St Gotthard railway, from Reichenau past Thusis and Splügen over the San Bernardino Pass (6769 ft.) to Bellinzona on the same railway line, and from Splügen over the Splügen Pass (6946 ft.) to Chiavenna. The Septimer Pass (7582 ft.) from the Julier route to the Maloja route has now only a mule path, but was probably known in Roman times (as was possibly the Splügen), and was much frequented in the middle ages.

The population of the canton in 1900 was 104,520. Of this number 55,155 (mainly near Coire and Davos, in the Prättigau and in the Schanfigg valley) were Protestants, while 49,142 (mainly in the Bündner Oberland, the Val Mesocco and the Oberhalbstein) were Romanists, while there were also 114 Jews (81 of whom lived in Davos). In point of language 48,762 (mainly near Coire and Davos, in the Prättigau and in the Schanfigg valley) were German-speaking, while 17,539 (mostly in the Val Mesocco, the Val Bregaglia and the valley of Poschiavo, but including a number of Italian labourers engaged on the construction of the Albula railway) were Italian-speaking. But the characteristic tongue of the Grisons is a survival of an ancient Romance language (the *lingua rustica* of the Roman Empire), which has lagged behind its sisters. It has a scanty printed literature, but is still widely spoken, so that, of the 38,651 persons in the Swiss Confederation who speak it, no fewer than 36,472 are in the Grisons. It is distinguished into two dialects: the Romonsch (sometimes wrongly called Romansch), which prevails in the Bündner Oberland and in the Hinter Rhine valley (Schams and Domleschg), and the Ladin (closely related to the tongue spoken in parts of the South Tyrol), that survives in the Engadine and in the neighbouring valleys of Bergün, Oberhalbstein and Münster. (See F. Rausch's *Geschichte der Literatur des rhaeto-romanischen Volkes*, Frankfort, 1870, and Mr Coolidge's bibliography of this language, given on pp. 22-23 of Lorria and Martel's *Le Massif de la Bernina*, Zürich, 1894.) Yet in the midst of this Romance-speaking population are islets (mostly, if not entirely, due to immigration in the 13th century from the German-speaking Upper Valais) of German-speaking inhabitants, so in the Vals and Safien glens, and at Obersaxen (all in the Bündner Oberland), in the Rheinwald (the highest part of the Hinter Rhine valley), and in the Avers glen (middle reach of the Hinter Rhine valley), as well as in and around Davos itself.

There is not much industrial activity in the Grisons. A considerable portion of the population is engaged in attending to the wants of the foreign visitors, but there is a considerable trade with Italy, particularly in the wines of the Valtellina, while many young men seek their fortunes abroad (returning home after having accumulated a small stock of money) as confectioners, pastry-cooks and coffee-house keepers. A certain number of lead and silver mines were formerly worked, but are now abandoned. The capital of the canton is Coire (*q.v.*).

The canton is divided into 14 administrative districts, and includes 224 communes. It sends 2 members (elected by a popular vote) to the Federal *Ständerath*, and 5 members (also elected by a popular vote) to the Federal *Nationalrath*. The existing cantonal constitution was accepted by the people in 1892, and came into force on 1st January 1894. The legislature

(*Grossrath*—no numbers fixed by the constitution) is elected for 2 years by a popular vote, as are the 5 members of the executive (*Kleinrath*) for 3 years. The "obligatory referendum" obtains in the case of all laws and important matters of expenditure, while 3000 citizens can demand ("facultative referendum") a popular vote as to resolutions and ordinances made by the legislature. Three thousand citizens also have the right of "initiative" as to legislative projects, but 5000 signatures are required for a proposed revision of the cantonal constitution. In the revenue and expenditure of the canton the taxes are never counted. This causes an apparent deficit which is carried to the capital account, and is met by the land tax (art. 19 of the constitution), so that there is never a real deficit, as the amount of the land tax varies annually according to the amount that *must* be provided. In the pre-1799 constitution of the three Raetian Leagues the system of the "referendum" was in working as early as the 16th century, not merely as between the three Leagues themselves, but as between the bailiwicks (*Hochgerichte*), the sovereign units within each League, and sometimes (as in the Upper Engadine) between the villages composing each bailiwick.

The greater part (excluding the three valleys where the inhabitants speak Italian) of the modern canton of the Grisons formed the southern part of the province of Raetia (probably the aboriginal inhabitants, the Raeti, were Celts rather than, as was formerly believed, Etruscans), set up by the Romans after their conquest of the region in 15 B.C. The Romanized inhabitants were to a certain extent (The Romonsch or Ladin tongue is a survival of the Roman dominion) Teutonized under the Ostrogoths (A.D. 493-537) and under the Franks (from 537 onwards). Governors called *Praesides* are mentioned in the 7th and 8th centuries, while members of the same family occupied the episcopal see of Coire (founded 4th-5th centuries). About 806 Charles the Great made this region into a county, but in 831 the bishop procured for his dominions exemption ("immunity") from the jurisdiction of the counts, while before 847 his see was transferred from the Italian province of Milan to the German province of Mainz (Mayence) and was thus cut off from Italy to be joined to Germany. In 916 the region was united with the duchy of Alamannia, but the bishop still retained practical independence, and his wide-spread dominions placed him even above the abbots of Disentis and Pfäfers, who likewise enjoyed "immunity." In the 10th century the bishop obtained fresh privileges from the emperors (besides the Val Bregaglia in 960), and so became the chief of the many feudal nobles who struggled for power in the region. He became a prince of the empire in 1170 and later allied himself with the rising power (in the region) of the Habsburgers. This led in 1367 to the foundation of the League of God's House or the *Gotteshausbund* (composed of the city and chapter of Coire, and of the bishop's subjects, especially in the Engadine, Val Bregaglia, Domleschg and Oberhalbstein) in order to stem his rising power, the bishop entering it in 1392. In 1395 the abbot of Disentis, the men of the Lugnetz valley, and the great feudal lords of Räzuns and Sax (in 1399 the counts of Werdenberg came in) formed another League, called the *Ober Bund* (as comprising the highlands in the Vorder Rhine valley) and also wrongly the "Grey League" (as the word interpreted "grey" is simply a misreading of *graven* or counts, though the false view has given rise to the name of Grisons or Graubünden for the whole canton), their alliance being strengthened in 1424 when, too, the free men of the Rheinwald and Schams came in, and in 1480 the Val Mesocco also. Finally, in 1436, the third Raetian League was founded, that of the *Zehngerichtenbund* or League of the Ten Jurisdictions, by the former subjects of the count of Toggenburg, whose dynasty then became extinct; they include the inhabitants of the Prättigau, Davos, Maienfeld, the Schanfigg valley, Churwalden, and the lordship of Belfort (*i.e.* the region round Alvaneu), and formed ten bailiwicks, whence the name of the League. In 1450 the *Zehngerichtenbund* concluded an alliance with the *Gotteshausbund* and in 1471 with the *Ober Bund*; but of the so-called perpetual alliance at Vazerol, near Tiefenkastels, there exists no authentic evidence in the oldest chronicles, though diets were held there. By a succession of purchases (1477-1496) nearly all the possessions of the extinct dynasty of the counts of Toggenburg in the Prättigau had come to the junior or Tyrolese line of the Habsburgers. On its extinction (1496) in turn they passed to the elder line, the head of which, Maximilian, was already emperor-elect and desired to maintain the rights of his family there and in the Lower Engadine. Hence in 1497 the Ober Bund and in 1498 the *Gotteshausbund* became allies of the Swiss Confederation. War broke out in 1499, but was ended by the great Swiss victory (22nd May 1499) at the battle of the Calven gorge (above Mals) which, added to another Swiss victory at Dornach (near Basel), compelled the emperor to recognize the *practical* independence of the Swiss and their allies of the Empire. The religious Reformation brought disunion into the three Leagues, as the *Ober Bund* clung in the main to the old faith, and for this reason their connexion with the Swiss Confederation was much weakened. In 1526, by the Articles of Ilanz, the last remaining traces of the temporal jurisdiction of the bishop of Coire was abolished. In 1486 Poschiavo had at last been secured from Milan, and Maienfeld with Malans was bought in 1509, while in 1549 the Val Mesocco (included in the *Ober Bund* since

1480) purchased its freedom of its lords, the Trivulzió family of Milan. In 1512 the three Leagues conquered from Milan the rich and fertile Valtellina, with Bormio and Chiavenna, and held these districts as subject lands till in 1797 they were annexed to the Cisalpine Republic. The struggle for lucrative offices in these lands further sharpened the long rivalry between the families of Planta (Engadine) and Salis (Val Bregaglia), while in the 17th century this rivalry was complicated by political enmities, as the Plantas favoured the Spanish side and the Salis that of France during the long struggle (1620-1639) for the Valtellina (see JENATSCH and VALTELLINA). Troubles arose (1622) also in the Prättigau through the attempts of the Habsburgers to force the inhabitants to give up Protestantism. Finally, after the emperor had *formally* recognized, by the treaty of Westphalia (1648), the independence of the Swiss Confederation, the rights of the Habsburgers in the Prättigau and the Lower Engadine were bought up (1649 and 1652). But the Austrian *enclaves* of Tarasp (Lower Engadine) and of Räzuns (near Reichenau) were only annexed to the Grisons in 1809 and 1815 respectively, in each case France holding the lordship for a short time after its cession by Austria. In 1748 (finally in 1762) the three Leagues secured the upper portion of the valley of Münster. In 1799 the French invaded the canton, which became the scene of a fierce conflict (1799-1800) between them and the united Russian and Austrian army, in the course of which the French burnt (May 1799) the ancient convent of Disentis with all its literary treasures. In April 1799 the provisional government agreed to the incorporation of the three Leagues in the Helvetic Republic, though it was not till June 1801 that the canton of Raetia became formally part of the Helvetic Republic. In 1803, by Napoleon's Act of Mediation, it entered, under the name of Canton of the Grisons or Graubünden, the reconstituted Swiss Confederation, of which it then first became a full member.

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(W. A. B. C.)

GRISWOLD, RUFUS WILMOT (1815-1857), American editor and compiler, was born in Benson, Vermont, on the 15th of February 1815. He travelled extensively, worked in newspaper offices, was a Baptist clergyman for a time, and finally became a journalist in New York City, where he was successively a member of the staffs of *The Brother Jonathan*, *The New World* (1839-1840) and *The New Yorker* (1840). From 1841 to 1843 he edited *Graham's Magazine* (Philadelphia), and added to its list of contributors many leading American writers. From 1850 to 1852 he edited the *International Magazine* (New York), which in 1852 was merged into *Harper's Magazine*. He died in New York City on the 27th of August 1857. He is best known as the compiler and editor of various anthologies (with brief biographies and critiques), such as *Poets and Poetry of America* (1842), his most popular and valuable book; *Prose Writers of America* (1846); *Female Poets of America* (1848); and *Sacred Poets of England and America* (1849). Of his own writings his *Republican Court: or American Society in the Days of Washington* (1854) is the only one of permanent value. He edited the first

American edition of Milton's prose works (1845), and, as literary executor, edited, with James R. Lowell and N. P. Willis, the works (1850) of Edgar Allan Poe. Griswold's great contemporary reputation as a critic has not stood the test of time; but he rendered a valuable service in making Americans better acquainted with the poetry and prose of their own countrymen.

See *Passages from the Correspondence and Other Papers of Rufus W. Griswold* (Cambridge, Mass., 1898), edited by his son William McCrillis Griswold (1853-1899).

GRIVET, a monkey, *Cercopithecus sabaeus*, of the guenon group, nearly allied to the green monkey. It is common throughout equatorial Africa. The chin, whiskers and a broad band across the forehead, as well as the under-parts, are white, and the head and back olive-green. These monkeys are very commonly seen in menageries.

GROAT (adapted from the Dutch *groot*, great, thick; cf. Ger. *Groschen*; the Med. Lat. *grossus* gives Ital. *grosso*, Fr. *gros*, as names for the coin), a name applied as early as the 13th century on the continent of Europe to any large or thick coin. The groat was almost universally a silver coin, but its value varied considerably, as well at different times as in different countries. The English groat was first coined in 1351, of a value somewhat higher than a penny. The continuous debasement of both the penny and the groat left the latter finally worth four pennies. The issue of the groat was discontinued after 1662, but a coin worth fourpence was again struck in 1836. Although frequently referred to as a groat, it had no other official designation than a "fourpenny piece." Its issue was again discontinued in 1856. The groat was imitated in Scotland by a coin struck by David II. in 1358. In Ireland it was first struck by Edward IV. in 1460.

GROCER, literally one who sells by the gross, a wholesale dealer; the word is derived through the O. Fr. form, *grossia*, from the Med. Lat. *grossarius*, defined by du Cange, *Glossarium*, s.v. *Grossares*, as *solidae mercis propola*. The name, as a general one for dealers by wholesale, "engrossers" as opposed to "regrators," the retail dealers, is found with the commodity attached; thus in the *Munimenta Gildhallae* ("Rolls" series) ii. 1.304 (quoted in the *New English Dictionary*) is found an allusion to *grossours de vin*, cf. *groser of fysshe*, *Surtees Misc.* (1888) 63, for the customs of Malton (quoted *ib.*). The specific application of the word to one who deals either by wholesale or retail in tea, coffee, cocoa, dried fruits, spices, sugar and all kinds of articles of use or consumption in a household is connected with the history of the Grocers' Company of London, one of the twelve "great" livery companies. In 1345 the pepperers and the spicers amalgamated and were known as the Fraternity of St Anthony. The name "grocers" first appears in 1373 in the records of the company. In 1386 the association was granted a right of search over all "spicers" in London, and in 1394 they obtained the right to inspect or "garble" spices and other "subtil wares." Their first charter was obtained in 1428; letters patent in 1447 granted an extension of the right of search over the whole county, but removed the "liberties" of the city of London. They sold all kinds of drugs, medicines, ointments, plasters, and medicated and other waters. For the separation of the apothecaries from the grocers in 1617 see Apothecary. (See further Livery Companies.)

See *The Grocery Trade*, by J. Aubrey Rees (1910).

GROCYN, WILLIAM (1446?-1519), English scholar, was born at Colerne, Wiltshire, about 1446. Intended by his parents for the church, he was sent to Winchester College, and in 1465 was elected to a scholarship at New College, Oxford. In 1467 he became a fellow, and had among his pupils William Warham, afterwards archbishop of Canterbury. In 1479 he accepted the rectory of Newton Longville, in Buckinghamshire, but continued to reside at Oxford. As reader in divinity in Magdalen College in 1481, he held a disputation with John Taylor, professor of divinity, in presence of King Richard III., and the king acknowledged his skill as a debater by the present of a buck and five marks. In 1485 he became prebendary of Lincoln cathedral. About 1488 Grocyn left England for Italy, and before his return in 1491 he had visited Florence, Rome and Padua, and studied Greek and Latin under Demetrius Chalchondyles and Politian. As lecturer in Exeter College he found an opportunity of indoctrinating his countrymen in the new Greek learning.

Erasmus says in one of his letters that Grocyn taught Greek at Oxford before his visit to Italy. The Warden of New College, Thomas Chaundler, invited Cornelius Vitelli, then on a visit to Oxford, to act as praelector. This was about 1475, and as Vitelli was certainly familiar with Greek literature, Grocyn may have learnt Greek from him. He seems to have lived in Oxford until 1499, but when his friend Colet became dean of St Paul's in 1504 he was settled in London. He was chosen by his friend to deliver lectures in St Paul's; and in this connexion he gave a singular proof of his honesty. He had at first denounced all who impugned the authenticity of the *Hierarchia ecclesiastica* ascribed to Dionysius the Areopagite, but, being led to modify his views by further investigation, he openly declared that he had been completely mistaken. He also counted Linacre, William Lily, William Latimer and More among his friends, and Erasmus writing in 1514 says that he was supported by Grocyn in London, and calls him "the friend and preceptor of us all." He held several preferments, but his generosity to his friends involved him in continual difficulties, and though in 1506 he was appointed on Archbishop Warham's recommendation master or warden of All Hallows College at Maidstone in Kent, he was still obliged to borrow from his friends, and even to pledge his plate as a security. He died in 1519, and was buried in the collegiate church at Maidstone. Linacre acted as his executor, and expended the money he received in gifts to the poor and the purchase of books for poor scholars. With the exception of a few lines of Latin verse on a lady who snowballed him, and a letter to Aldus Manutius at the head of Linacre's translation of Proclus's *Sphaera* (Venice, 1499), Grocyn has left no literary proof of his scholarship or abilities. His proposal to execute a translation of Aristotle in company with Linacre and Latimer was never carried out. Wood assigns some Latin works to Grocyn, but on insufficient authority. By Erasmus he has been described as "vir severissimae castissimae vitae, ecclesiasticarum constitutionum observantissimus pene usque ad superstitionem, scholasticae theologiae ad unguem doctus ac natura etiam acerrimi judicii, demum in omni disciplinarum genere exacte versatus" (*Declarationes ad censuras facultatis theologiae Parisianae*, 1522).

An account of Grocyn by Professor Burrows appeared in the Oxford Historical Society's *Collectanea* (1890).

GRODNO, one of the Lithuanian governments of western Russia, lying between 51° 40′ and 52° N. and between 22° 12′ and 26° E., and bounded N. by the government of Vilna, E. by Minsk, S. by Volhynia, and W. by the Polish governments of Lomza and Siedlce. Area, 14,926 sq. m. Except for some hills (not exceeding 925 ft.) in the N., it is a uniform plain, and is drained chiefly by the Bug, Niemen, Narev and Bobr, all navigable. There are also several canals, the most important being the Augustowo and Oginsky. Granites and gneisses crop out along the Bug, Cretaceous, and especially Tertiary, deposits elsewhere. The soil is mostly sandy, and in the district of Grodno and along the rivers is often drift-sand. Forests, principally of *Coniferae*, cover more than one-fourth of the area. Amongst them are some of vast extent, *e.g.* those of Grodno (410 sq. m.) and Byelovitsa (Bialowice) (376 sq. m.), embracing wide areas of marshy ground. In the last mentioned forest the wild ox survives, having been jealously preserved since 1803. Peat bogs, sometimes as much as 4 to 7 ft. thick, cover extensive districts. The climate is wet and cold; the annual mean temperature being 44.5° F., the January mean 22.5° and the July mean 64.5°. The rainfall amounts to 21½ in.; hail is frequent. Agriculture is the predominant industry. The peasants own 42½% of the land, that is, about 4,000,000 acres, and of these over 2¼ million acres are arable. The crops principally grown are potatoes, rye, oats, wheat, flax, hemp and some tobacco. Horses, cattle

and sheep are bred in fairly large numbers. There is, however, a certain amount of manufacturing industry, especially in woollens, distilling and tobacco. In woollens this government ranks second (after Moscow) in the empire, the centre of the industry being Byelostok. Other factories produce silk, shoddy and leather. The government is crossed by the main lines of railway from Warsaw to St Petersburg and from Warsaw to Moscow. The population numbered 1,008,521 in 1870 and 1,616,630 in 1897; of these last 789,801 were women and 255,946 were urban. In 1906 it was estimated at 1,826,600. White Russians predominate (54%), then follow Jews (17.4%), Poles (10%), Lithuanians and Germans. The government is divided into nine districts, the chief towns, with their populations in 1897, being Grodno (*q.v.*), Brest-Litovsk (pop. 42,812 in 1901), Byelsk (7461), Byelostok or Bialystok (65,781 in 1901), Kobrin (10,365), Pruzhany (7634), Slonim (15,893), Sokolsk (7595) and Volkovysk (10,584). In 1795 Grodno, which had been Polish for ages, was annexed by Russia.

GRODNO, a town of Russia, capital of the government of the same name in 53° 40′ N. and 23° 50′ E., on the right bank of the Niemen, 160 m. by rail N.E. of Warsaw and 98 m. S.W. of Vilna on the main line to St Petersburg. Pop. (1901) 41,736, nearly two-thirds Jews. It is an episcopal see of the Orthodox Greek church and the headquarters of the II. Army Corps. It has two old castles, now converted to other uses, and two churches (16th and 17th centuries). Tobacco factories and distilleries are important; machinery, soap, candles, vehicles and firearms are also made. Built in the 12th century, Grodno was almost entirely destroyed by the Mongols (1241) and Teutonic knights (1284 and 1391). Stephen Bathory, king of Poland, made it his capital, and died there in 1586. The Polish Estates frequently met at Grodno after 1673, and there in 1793 they signed the second partition of Poland. It was at Grodno that Stanislaus Poniatowski resigned the Polish crown in 1795.

GROEN VAN PRINSTERER, GUILLAUME (1801-1876), Dutch politician and historian, was born at Voorburg, near the Hague, on the 21st of August 1801. He studied at Leiden university, and graduated in 1823 both as doctor of literature and LL.D. From 1829 to 1833 he acted as secretary to King William I. of Holland, afterwards took a prominent part in Dutch home politics, and gradually became the leader of the so-called anti-revolutionary party, both in the Second Chamber, of which he was for many years a member, and outside. In Groen the doctrines of Guizot and Stahl found an eloquent exponent. They permeate his controversial and political writings and historical studies, of which his *Handbook of Dutch History* (in Dutch) and *Maurice et Barnevelt* (in French, 1875, a criticism of Motley's *Life of Van Olden-Barnevelt*) are the principal. Groen was violently opposed to Thorbecke, whose principles he denounced as ungodly and revolutionary. Although he lived to see these principles triumph, he never ceased to oppose them until his death, which occurred at the Hague on the 19th of May 1876. He is best known as the editor of the *Archives et correspondance de la maison d'Orange* (12 vols., 1835-1845), a great work of patient erudition, which procured for him the title of the "Dutch *Gachard*." J. L. Motley acknowledges his indebtedness to Groen's Archives in the preface to his *Rise of the Dutch Republic*, at a time when the American historian had not yet made the acquaintance of King William's archivist, and also bore emphatic testimony to Groen's worth as a writer of history in the correspondence published after his death. At the first reception, in 1858, of Motley at the royal palace at the Hague, the king presented him with a copy of Groen's *Archives* as a token of appreciation and admiration of the work done by the "worthy vindicator of William I., prince of Orange." This copy, bearing the king's autograph inscription, afterwards came into the possession of Sir William Vernon Harcourt, Motley's son-in-law.

GROIN. (1) An obsolete word for the grunting of swine, from Lat. *grunnire*, and so applied to the snout of a pig; it is probably the origin of the word, more commonly spelled "groyne," for a small timber framework or wall of masonry used on sea coasts as a breakwater to prevent the encroachment of sand and shingle. (2) (Of uncertain origin; from an older form *grynde* or *grinde*; the derivation from "grain," an obsolete word meaning "fork," cannot, according to the *New English Dictionary*, be accepted), in anatomy the folds or grooves formed between the lower part of the abdomen and the thighs, covering the inguinal glands, and so applied in architecture to the angle or "arris" formed by the intersection of two vaults crossing one another, occasionally called by workmen "groin point." If the vaults are both of the same radius and height, their intersections lie in a vertical plane, in other cases they form winding curves for which it is difficult to provide centering. In early medieval vaulting this was sometimes arranged by a slight alteration in the geometrical curve of the vault, but the problem was not satisfactorily solved until the introduction of the rib which henceforth ruled the vaulting surface of the web or cell (see VAULT). The name "Welsh groin" or "underpitch" is generally given to the vaulting surface or web where the main longitudinal vault is higher than the cross or transverse vaults; as the transverse rib (of much greater radius than that of the wall rib), projected diagonally in front of the latter, the filling-in or web has to be carried back from the transverse to the wall rib. The term "groin centering" is used where, in groining without ribs, the whole surface is supported by centering during the erection of the vaulting. In ribbed work the stone ribs only are supported by timber ribs during the progress of the work, any light stuff being used while filling in the spandrils. (See VAULT.)

GROLMANN, KARL WILHELM GEORG VON (1777-1843), Prussian soldier, was born in Berlin on the 30th of July 1777. He entered an infantry regiment when scarcely thirteen, became an ensign in 1795, second lieutenant 1797, first lieutenant 1804 and staff-captain in 1805. As a subaltern he had become one of Scharnhorst's intimates, and he was 612
distinguished for his energetic and fearless character before the war of 1806, in which he served throughout, from Jena to the peace of Tilsit, as a staff officer, and won the rank of major for distinguished service in action. After the peace, and the downfall of Prussia, he was one of the most active of Scharnhorst's assistants in the work of reorganization (1809), joined the *Tugendbund* and endeavoured to take part in Schill's abortive expedition, after which he entered the Austrian service as a major on the general staff. Thereafter he journeyed to Cadiz to assist the Spaniards against Napoleon, and he led a corps of volunteers in the defence of that port against Marshal Victor in 1810. He was present at the battle of Albuera, at Saguntum, and at Valencia, becoming a prisoner of war at the surrender of the last-named place. Soon, however, he escaped to Switzerland, whence early in 1813 he returned to Prussia as a major on the general staff. He served successively under Colonel von Dolffs and General von Kleist, and as commissioner at the headquarters of the Russian general Barclay de Tolly. He took part with Kleist in the victory of Kulm, and recovered from a severe wound received at that action in time to be present at the battle of Leipzig. He played a conspicuous part in the campaign of 1814 in France, after which he was made a major-general. In this rank he was appointed quartermaster-general to Field Marshal Prince Blücher, and, after his chief and Gneisenau, Grolmann had the greatest share in directing the Prussian operations of 1815. In the decision, on the 18th of June 1815, to press forward to Wellington's assistance (see WATERLOO CAMPAIGN), Grolmann actively concurred, and as the troops approached the battle-field, he is said to have overcome the momentary hesitation of the commander-in-chief and the chief of staff by himself giving the order to advance. After the peace of 1815, Grolmann occupied important positions in the ministry of war and the general staff. His last public services were rendered in Poland as commander-in-chief, and practically as civil administrator of the province of Posen. He was promoted general of infantry in 1837 and died on the 1st of June 1843, at Posen. His two sons became generals in the Prussian army. The Prussian 18th infantry regiment bears his name.

General von Grolmann supervised and provided much of the material for von Damitz's *Gesch. des Feldzugs 1815* (Berlin, 1837-1838), and *Gesch. des Feldzugs 1814 in Frankreich* (Berlin, 1842-1843).

See v. Conrady, *Leben und Wirken des Generals Karl von Grolmann* (Berlin, 1894-1896).

GROMATICI (from *groma* or *gruma*, a surveyor's pole), or *Agrimensores*, the name for land-surveyors amongst the Romans. The art of surveying was probably at first in the hands of the augurs, by whom it was exercised in all cases where the demarcation of a *templum* (any consecrated space) was necessary. Thus, the boundaries of Rome itself, of colonies and camps, were all marked out in accordance with the rules of augural procedure. The first professional surveyor mentioned is L. Decidius Saxa, who was employed by Antony in the measurement of camps (Cicero, *Philippics*, xi. 12, xiv. 10). During the empire their number and reputation increased. The distribution of land amongst the veterans, the increase in the number of military colonies, the settlement of Italian peasants in the provinces, the general survey of the empire under Augustus, the separation of private and state domains, led to the establishment of a recognized professional corporation of surveyors. During later times they were in receipt of large salaries, and in some cases were even honoured with the title *clarissimus*. Their duties were not merely geometrical or mathematical, but required legal knowledge for consultations or the settlement of disputes. This led to the institution of special schools for the training of surveyors and a special literature, which lasted from the 1st to the 6th century A.D. The earliest of the gromatic writers was Frontinus (*q.v.*), whose *De agrorum qualitate*, dealing with the legal aspect of the art, was the subject of a commentary by Aggenus Urbicus, a Christian schoolmaster. Under Trajan a certain Balbus, who had accompanied the emperor on his Dacian campaign, wrote a still extant manual of geometry for land surveyors (*Expositio et ratio omnium formarum* or *mensurarum*, probably after a Greek original by Hero), dedicated to a certain Celsus who had invented an improvement in a gromatic instrument (perhaps the dioptra, resembling the modern theodolite); for the treatises of Hyginus see that name. Somewhat later than Trajan was Siculus Flaccus (*De condicionibus agrorum*, extant), while the most curious treatise on the subject, written in barbarous Latin and entitled *Casae litterarum* (long a school text-book) is the work of a certain Innocentius (4th-5th century). It is doubtful whether Boëtius is the author of the treatises attributed to him. The *Gromatici veteres* also contains extracts from official registers (probably belonging to the 5th century) of colonial and other land surveys, lists and descriptions of boundary stones, and extracts from the Theodosian Codex. According to Mommsen, the collection had its origin during the 5th century in the office of a vicarius (diocesan governor) of Rome, who had a number of surveyors under him. The surveyors were known by various names: *decempedator* (with reference to the instrument used); *finitor*, *metator* or *mensor castrorum* in republican times; *togati Augustorum* as imperial civil officials; *professor*, *auctor* as professional instructors.

The best edition of the Gromatici is by C. Lachmann and others (1848) with supplementary volume, *Die Schriften der römischen Feldmesser* (1852); see also B. G. Niebuhr, *Roman History*, ii., appendix (Eng. trans.), who first revived interest in the subject; M. Cantor, *Die römischen Agrimensoren* (Leipzig, 1875); P. de Tissot, *La Condition des Agrimensores dans l'ancienne Rome* (1879); G. Rossi, *Groma e squadro* (Turin, 1877); articles by F. Hultsch in Ersch and Gruber's *Allgem. Encyklopädie*, and by G. Humbert in Daremberg and Saglio's *Dictionnaire des antiquités*; Teuffel-Schwabe, *Hist. of Roman Literature*, 58.

GRONINGEN, the most northerly province of Holland, bounded S. by Drente, W. by Friesland and the Lauwers Zee, N. and N.E. by the North Sea and the mouth of the Ems with the Dollart, and on the S.E. by the Prussian province of Hanover. It includes the islands of Boschplaat and Rottumeroog, belonging to the group of Frisian islands (*q.v.*). Area, 887 sq. m.; pop. (1900) 299,602. Groningen is connected with the Drente plateau by the sandy tongue of the Hondsrug which extends almost up to the capital. West, north and north-east of this the province is flat and consists of sea-clay or sand and clay mixed, except where patches of low and high fen occur on the Frisian borders. Low fen predominates to the east of the capital, between the Zuidlardermeer and the Schildmeer or lakes. The south-eastern portion of the province consists of high fen resting on diluvial sand. A large part of this has been reclaimed and the sandy soil laid bare, but on the Drente and Prussian borders areas of fen still remain. The so-called Boertanger Morass on the Prussian border was long considered as the natural protection of the eastern frontier, and with the view of preserving its impassable condition neither agriculture nor cattle-rearing might be practised here until 1824, and it was only in 1868 that the building of houses was sanctioned and the work of reclamation begun. The gradual extension of the seaward boundaries of the province owing to the process of littoral deposits may be easily traced, a triple line of sea-dikes in places marking the successive stages in this advance. The rivers of Groningen descending from the Drente

plateau meet at the capital, whence they are continued by the Reitdiep to the Lauwers Zee (being discharged through a lock), and by the Ems canal (1876) to Delfzyl. The south-eastern corner of the province is traversed by the Westerwolde Aa, which discharges into the Dollart. The railway system belongs to the northern section of the State railways, and affords communication with Germany via Winschoten. Steam-tramways also serve many parts of the province. Agriculture is the main industry. The proportion of landowners is a very large one, and the prosperous condition of the Groningen farmer is attested by the style of his home, his dress and his gig. As a result, however, partly of the usual want of work on the grasslands in certain seasons, there has been a considerable emigration to America. The ancient custom called the *beklem-recht*, or lease-right, doubtless accounts for the extended ownership of the land. By this law a tenant-farmer is able to bequeath his farm, that is to say, he holds his lease in perpetuity.

The chief agricultural products are barley, oats, wheat, and in the north-east flax is also grown, and exported to South Holland and Belgium. On the higher clay grounds cattle-rearing and horse-breeding are also practised, together with butter and cheese making. The cultivation of potatoes on the sandgrounds in the south and the fen colonies along the Stads-Canal invite general comparison with the industries of Drente (*q.v.*). Hoogezand and Sappemeer, Veendam and Wildervank, New and Old Pekela, New and Old Stads-Canal are instances of villages which have extended until they overlap one another and are similar in this respect to the industrial villages of the Zaan Streek in North Holland. The coast fisheries are considerable. Groningen (*q.v.*) is the chief and only large town of the province. Delfzyl, which was formerly an important fortress for the protection of the ancient sluices on the little river Delf (hence its name), has greatly benefited by the construction of the Ems (Eems) ship-canal connecting it with Groningen, and has a good harbour with a considerable import trade in wood. Appingedam and Winschoten are very old towns, having important cattle and horse markets. The pretty wood at Winschoten was laid out by the Society for Public Welfare (*Tot Nut van het Algemeen*) in 1826.

GRONINGEN, a town of Holland, capital of the province of the same name, at the confluence of the two canalized rivers the Drentsche Aa and the Hunse (which are continued to the Lauwers Zee as the Reit Diep), 16 m. N. of Assen and 33 m. E. of Leeuwarden by rail. Pop. (1900) 67,563. Groningen is the centre from which several important canals radiate. Besides the Reit Diep, there are the Ems Canal and the Damster Diep, connecting it with Delfzyl and the Dollart, the Kolonel’s Diep with Leeuwarden, the Nord Willem’s Canal with Assen and the south and the Stads-Canal south-east with the Ems. Hence steamers ply in all directions, and there is a regular service to Emden and the island of Borkum via Delfzyl, and via the Lauwers Zee to the island of Schiermonnikoog. Groningen is the most important town in the north of Holland, with its fine shops and houses and wide clean streets, while brick houses of the 16th and 17th centuries help it to retain a certain old-world air. The ancient part of the town is still surrounded by the former moat, and in the centre lies a group of open places, of which the Groote Markt is one of the largest market-squares in Holland. Pleasant gardens and promenades extend on the north side of the town, together with a botanical garden. The chief church is the Martini-kerk, with a high tower (432 ft.) dating from 1477, and an organ constructed by the famous scholar and musician Rudolph Agricolo, who was born near Groningen in 1443. The Aa church dates from 1465, but was founded in 1253. The Roman Catholic Broederkerk (rebuilt at the end of the 19th century) contains some remarkable pictures of the Passion by L. Hendricx (1865). There is also a Jewish synagogue. The large town hall (in classical style), one of the finest public buildings, was built at the beginning of the 19th century and enlarged in 1873. The provincial government offices also occupy a fine building which received a splendid front in 1871. Other noteworthy buildings are the provincial museum of antiquities, containing interesting Germanic antiquities, as well as medieval and modern collections of porcelain, pictures, &c.; the courts of justice (transformed in the middle of the 18th century); the old Ommelanderhuis, formerly devoted to the administration of the surrounding district, built in 1509 and restored in 1899; the weigh-house (1874); the civil and military prison; the arsenal; the military hospital; and the concert hall.

The university of Groningen, founded in 1614, received its present fine buildings in classical style in 1850. Among its auxiliary establishments are a good natural history museum, an observatory, a laboratory, and a library which contains a copy of Erasmus’ New

Testament with marginal annotations by Luther. Other educational institutions are the deaf and dumb institution founded by Henri Daniel Guyot (d. 1828) in 1790, a gymnasium, and schools of navigation, art and music. There are learned societies for the study of law (1761) and natural science (1830); an academy of fine arts (1830); an archaeological society; and a central bureau for collecting information concerning the province.

As capital of the province, and on account of the advantages of its natural position, Groningen maintains a very considerable trade, chiefly in oil-seed, grain, wood, turf and cattle, with Great Britain, Germany, Scandinavia and Russia. The chief industries are flax-spinning, rope-making, sugar refining, book printing, wool combing and dyeing, and it also manufactures beer, tobacco and cigars, cotton and woollen stuffs, furniture, organs and pianos; besides which there are saw, oil and grain mills, machine works, and numerous goldsmiths and silversmiths.

History.—The town of Groningen belonged originally to the *pagus*, or *gouw*, of Triantha (Drente), the countship of which was bestowed by the emperor Henry II. on the bishop and chapter of Utrecht in 1024. In 1040 Henry III. gave the church of Utrecht the royal domain of Groningen, and in the deed of gift the “villa Cruoninga” is mentioned. Upon this charter the bishops of Utrecht based their claim to the overlordship of the town, a claim which the citizens hotly disputed. At the time of the donation, indeed, the town can hardly be said to have existed, but the royal “villa” rapidly developed into a community which strove to assert the rights of a free imperial city. At first the bishops were too strong for the townsmen; the defences built in 1110 were pulled down by the bishop’s order two years later; and during the 12th and 13th centuries the see of Utrecht, in spite of frequent revolts, succeeded in maintaining its authority. Down to the 15th century an episcopal prefect, or burgrave, had his seat in the city, his authority extending over the neighbouring districts known as the Gorecht. In 1143 Heribert of Bierum, bishop of Utrecht, converted the office into an hereditary fief in favour of his brother Liffert, on the extinction of whose male line it was partitioned between the families of Koevorden (or Coevorden) and van den Hove. Gradually, however, the burghers, aided by the neighbouring Frisians, succeeded in freeing themselves from the episcopal yoke. The city was again walled in 1255; before 1284 it had become a member of the Hanseatic league; and by the end of the 14th century it was practically a powerful independent republic, which exercised an effective control over the Frisian Ommelande between the Ems and the Lauwers Zee. At the close of the 14th century the heirs of the Koevorden and van den Hove families sold their rights, first to the town, and then to the bishop. A struggle followed, in which the city was temporarily worsted; but in 1440 Bishop Dirk II. finally sold to the city the rights of the see of Utrecht over the Gorecht.

The medieval constitution of Groningen, unlike that of Utrecht, was aristocratic. Merchant gild there was none; and the craft gilds were without direct influence on the city government, which held them in subjection. Membership of the governing council, which selected from its own body the four *rationales* or burgomasters, was confined to men of approved “wisdom,” and wisdom was measured in terms of money. This *Raad* of wealthy burghers gradually monopolized all power. The bishop’s bailiff (*schout*), with his nominated assessors (*scabini*), continued to exercise jurisdiction, but members of the Raad sat on the bench with him, and an appeal lay from his court to the Raad itself. The council was, in fact, supreme in the city, and not in the city only. In 1439 it decreed that no one might trade in all the district between the Ems and the Lauwers Zee except burghers, and those who had purchased the *burwal* (right of residence in the city) and the freedom of the gilds. Maximilian I. assigned Groningen to Albert of Saxony, hereditary podestat of Friesland, but the citizens preferred to accept the protection of the bishop of Utrecht; and when Albert’s son George attempted in 1505 to seize the town, they recognized the lordship of Edzart of East Frisia. On George’s renewal of hostilities they transferred their allegiance to Duke Charles of Gelderland, in 1515. In 1536 the city passed into the hands of Charles V., and in the great wars of the 16th century suffered all the miseries of siege and military occupation. From 1581 onwards, Groningen still held by the Spaniards, was constantly at war with the “Ommelanden” which had declared against the king of Spain. This feud continued, in spite of the capture of the city in 1594 by Maurice of Nassau, and of a decree of the States in 1597 which was intended to set them at rest. In 1672 the town was besieged by the bishop of Münster, but it was successfully defended, and in 1698 its fortifications were improved under Coehoorn’s direction. The French Republicans planted their tree of liberty in the Great Market on the 14th of February 1795, and they continued in authority till the 16th of November 1814. The fortifications of the city were doomed to destruction by the law of the 18th of April 1874.

See C. Hegel, *Städte und Gilden* (Leipzig, 1891); Stokvis, *Manuel d’histoire*, iii. 496 (Leiden, 1890-1893); also s.v. in Chevalier, *Répertoire des sources hist. du moyen âge* (*Topo-bibliographie*).

GRONLUND, LAURENCE (1846-1899), American socialist, was born in Copenhagen, Denmark, on the 13th of July 1846. He graduated from the university of Copenhagen in 1865, began the study of law, removed to the United States in 1867, taught German in Milwaukee, was admitted to the bar in 1869, and practised in Chicago. He became a writer and lecturer on socialism and was closely connected with the work of the Socialist Labor party from 1874 to 1884, then devoted himself almost exclusively to lecturing until his appointment to a post in the bureau of labour statistics. He again returned to the lecture field, and was an editorial writer for the New York and Chicago *American* from 1898 until his death in New York City on the 15th of October 1899. His principal works are: *The Coming Revolution* (1880); *The Co-operative Commonwealth in its Outlines, An Exposition of Modern Socialism* (1884); *Ça Ira, or Danton in the French Revolution* (1888), a rehabilitation of Danton; *Our Destiny, The Influence of Socialism on Morals and Religion* (1890); and *The New Economy* (1898).

GRONOVIUS (the latinized form of GRONOV), **JOHANN FRIEDRICH** (1611-1671), German classical scholar and critic, was born at Hamburg on the 8th of September 1611. Having studied at several universities, he travelled in England, France and Italy. In 1643 he was appointed professor of rhetoric and history at Deventer, and in 1658 to the Greek chair at Leiden, where he died on the 28th of December 1671. (See also FABRETTI, RAPHAEL.) Besides editing, with notes, Statius, Plautus, Livy, Tacitus, Aulus Gellius and Seneca's tragedies, Gronovius was the author, amongst numerous other works, of *Commentarius de sestertiis* (1643) and of an edition of Hugo Grotius' De jure belli et pacis (1660). His *Observationes* contain a number of brilliant emendations. His son, JAKOB GRONOVIUS (1645-1716), is chiefly known as the editor of the *Thesaurus antiquitatum Graecarum* (1697-1702, in 13 volumes).

See J. E. Sandys, *Hist. of Class. Schol.* ii. (1908); F. A. Eckstein in Ersch and Gruber's *Allgemeine Encyklopädie*.

GROOM, in modern usage a male servant attached to the stables, whose duties are to attend to the cleaning, feeding, currying and care generally of horses. The earliest meaning of the word appears to be that of a boy, and in 16th and 17th century literature it frequently occurs, in pastorals, for a shepherd lover. Later it is used for any male attendant, and thus survives in the name for several officials in the royal household, such as the grooms-in-waiting, and the grooms of the great chamber. The groom-porter, whose office was abolished by George III., saw to the preparation of the sovereign's apartment, and, during the 16th and 17th centuries, provided cards and dice for playing, and was the authority to whom were submitted all questions of gaming within the court. The origin of the word is obscure. The O. Fr. *gromet*, shop boy, is taken by French etymologists to be derived from the English. From the application of this word to a wine-taster in a wine merchant's shop, is derived *gourmet*, an epicure. According to the *New English Dictionary*, though there are no instances of groom in other Teutonic languages, the word may be ultimately connected with the root of "to grow." In "bridegroom," a newly married man, "grom" in the 16th century took the place of an older *gome*, a common old Teutonic word meaning "man," and connected with the Latin *homo*. The Old English word was *brydguma*, later *bridegome*. The word survives in the German *Bräutigam*.

GROOT, GERHARD (1340-1384), otherwise Gerrit or Geert Groet, in Latin Gerardus

Magnus, a preacher and founder of the society of Brothers of Common Life (*q.v.*), was born in 1340 at Deventer in the diocese of Utrecht, where his father held a good civic position. He went to the university of Paris when only fifteen. Here he studied scholastic philosophy and theology under a pupil of Occam's, from whom he imbibed the nominalist conception of philosophy; in addition he studied canon law, medicine, astronomy and even magic, and apparently some Hebrew. After a brilliant course he graduated in 1358, and possibly became master in 1363. He pursued his studies still further in Cologne, and perhaps in Prague. In 1366 he visited the papal court at Avignon. About this time he was appointed to a canonry in Utrecht and to another in Aix-la-Chapelle, and the life of the brilliant young scholar was rapidly becoming luxurious, secular and selfish, when a great spiritual change passed over him which resulted in a final renunciation of every worldly enjoyment. This conversion, which took place In 1374, appears to have been due partly to the effects of a dangerous illness and partly to the influence of Henry de Calcar, the learned and pious prior of the Carthusian monastery at Munnikhuizen near Arnhem, who had remonstrated with him on the vanity of his life. About 1376 Gerhard retired to this monastery and there spent three years in meditation, prayer and study, without, however, becoming a Carthusian. In 1379, having received ordination as a deacon, he became missionary preacher throughout the diocese of Utrecht. The success which followed his labours not only in the town of Utrecht, but also in Zwolle, Deventer, Kampen, Amsterdam, Haarlem, Gouda, Leiden, Delft, Zütphen and elsewhere, was immense; according to Thomas à Kempis the people left their business and their meals to hear his sermons, so that the churches could not hold the crowds that flocked together wherever he came. The bishop of Utrecht supported him warmly, and got him to preach against concubinage in the presence of the clergy assembled in synod. The impartiality of his censures, which he directed not only against the prevailing sins of the laity, but also against heresy, simony, avarice, and impurity among the secular and regular clergy, provoked the hostility of the clergy, and accusations of heterodoxy were brought against him. It was in vain that Groot emitted a *Publica Protestatio*, in which he declared that Jesus Christ was the great subject of his discourses, that in all of them he believed himself to be in harmony with Catholic doctrine, and that he willingly subjected them to the candid judgment of the Roman Church. The bishop was induced to issue an edict which prohibited from preaching all who were not in priest's orders, and an appeal to Urban VI. was without effect. There is a difficulty as to the date of this prohibition; either it was only a few months before Groot's death, or else it must have been removed by the bishop, for Groot seems to have preached in public in the last year of his life. At some period (perhaps 1381, perhaps earlier) he paid a visit of some days' duration to the famous mystic Johann Ruysbroeck, prior of the Augustinian canons at Groenendael near Brussels; at this visit was formed Groot's attraction for the rule and life of the Augustinian canons which was destined to bear such notable fruit. At the close of his life he was asked by some of the clerics who attached themselves to him to form them into a religious order, and Groot resolved that they should be canons regular of St Augustine. No time was lost in the effort to carry out the project, but Groot died before a foundation could be made. In 1387, however, a site was secured at Windesheim, some 20 m. north of Deventer, and here was established the monastery that became the cradle of the Windesheim congregation of canons regular, embracing in course of time nearly one hundred houses, and leading the way in the series of reforms undertaken during the 15th century by all the religious orders in Germany. The initiation of this movement was the great achievement of Groot's life; he lived to preside over the birth and first days of his other creation, the society of Brothers of Common Life. He died of the plague at Deventer in 1384, at the age of 44.

The chief authority for Groot's life is Thomas à Kempis, *Vita Gerardi Magni* (translated into English by J. P. Arthur, *The Founders of the New Devotion*, 1905); also the *Chronicon Windeshemense* of Johann Busch (ed. K. Grube, 1886). An account, based on these sources, will be found in S. Kettlewell, *Thomas à Kempis and the Brothers of Common Life* (1882). i. c. 5; and a shorter account in F. R. Cruise, *Thomas à Kempis*, 1887, pt. ii. An excellent sketch, with an account of Groot's writings, is given by L. Schulze in Herzog-Hauck, *Realencyklopädie* (ed. 3); he insists on the fact that Groot's theological and ecclesiastical ideas were those commonly current in his day, and that the attempts to make him "a reformer before the Reformation" are unhistorical.

(E. C. B.)

GROOVE-TOOTHED SQUIRREL, a large and brilliantly coloured Bornean squirrel,

Rhithrosciurus macrotis, representing a genus by itself distinguished from all other members of the family *Sciuridae* by having numerous longitudinal grooves on the front surface of the incisor teeth; the molars being of a simpler type than in other members of the family. The tail is large and fox-like, and the ears are tufted and the flanks marked by black and white bands.

GROS, ANTOINE JEAN, Baron (1771-1835), French painter, was born at Paris in 1771. His father, who was a miniature painter, began to teach him to draw at the age of six, and showed himself from the first an exacting master. Towards the close of 1785 Gros, by his own choice, entered the studio of David, which he frequented assiduously, continuing at the same time to follow the classes of the Collège Mazarin. The death of his father, whose circumstances had been embarrassed by the Revolution, threw Gros, in 1791, upon his own resources. He now devoted himself wholly to his profession, and competed in 1792 for the *grand prix*, but unsuccessfully. About this time, however, on the recommendation of the École des Beaux Arts, he was employed on the execution of portraits of the members of the Convention, and when—disturbed by the development of the Revolution—Gros in 1793 left France for Italy, he supported himself at Genoa by the same means, producing a great quantity of miniatures and *fixés*. He visited Florence, but returning to Genoa made the acquaintance of Josephine, and followed her to Milan, where he was well received by her husband. On November 15, 1796, Gros was present with the army near Arcola when Bonaparte planted the tricolor on the bridge. Gros seized on this incident, and showed by his treatment of it that he had found his vocation. Bonaparte at once gave him the post of "inspecteur aux revues," which enabled him to follow the army, and in 1797 nominated him on the commission charged to select the spoils which should enrich the Louvre. In 1799, having escaped from the besieged city of Genoa, Gros made his way to Paris, and in the beginning of 1801 took up his quarters in the Capucins. His "esquisse" (Musée de Nantes) of the "Battle of Nazareth" gained the prize offered in 1802 by the consuls, but was not carried out, owing it is said to the jealousy of Junot felt by Napoleon; but he indemnified Gros by commissioning him to paint his own visit to the pest-house of Jaffa. "Les Pestiférés de Jaffa" (Louvre) was followed by the "Battle of Aboukir" 1806 (Versailles), and the "Battle of Eylau," 1808 (Louvre). These three subjects—the popular leader facing the pestilence unmoved, challenging the splendid instant of victory, heart-sick with the bitter cost of a hard-won field—gave to Gros his chief title to fame. As long as the military element remained bound up with French national life, Gros received from it a fresh and energetic inspiration which carried him to the very heart of the events which he depicted; but as the army and its general separated from the people, Gros, called on to illustrate episodes representative only of the fulfilment of personal ambition, ceased to find the nourishment necessary to his genius, and the defect of his artistic position became evident. Trained in the sect of the Classicists, he was shackled by their rules, even when—by his naturalistic treatment of types, and appeal to picturesque effect in colour and tone—he seemed to run counter to them. In 1810 his "Madrid" and "Napoleon at the Pyramids" (Versailles) show that his star had deserted him. His "Francis I." and "Charles V.," 1812 (Louvre), had considerable success; but the decoration of the dome of St Geneviève (begun in 1811 and completed in 1824) is the only work of Gros's later years which shows his early force and vigour, as well as his skill. The "Departure of Louis XVIII." (Versailles), the "Embarkation of Madame d'Angoulême" (Bordeaux), the plafond of the Egyptian room in the Louvre, and finally his "Hercules and Diomedes," exhibited in 1835, testify only that Gros's efforts—in accordance with the frequent counsels of his old master David—to stem the rising tide of Romanticism, served but to damage his once brilliant reputation. Exasperated by criticism and the consciousness of failure, Gros sought refuge in the grosser pleasures of life. On the 25th of June 1835 he was found drowned on the shores of the Seine near Sèvres. From a paper which he had placed in his hat it became known that "las de la vie, et trahi par les dernières facultés qui la lui rendaient supportable, il avait résolu de s'en défaire." The number of Gros's pupils was very great, and was considerably augmented when, in 1815, David quitted Paris and made over his own classes to him. Gros was decorated and named baron of the empire by Napoleon, after the Salon of 1808, at which he had exhibited the "Battle of Eylau." Under the Restoration he became a member of the Institute, professor at the École des Beaux Arts, and was named chevalier of the order of St Michel.

M. Delécluze gives a brief notice of his life in *Louis David et son temps*, and Julius Meyer's *Geschichte der modernen französischen Malerei* contains an excellent criticism on his works.

GROSART, ALEXANDER BALLOCH (1827-1899), Scottish divine and literary editor, the son of a building contractor, was born at Stirling on the 18th of June 1827. He was educated at Edinburgh University, and in 1856 became a Presbyterian minister at Kinross. In 1865 he went to Liverpool, and three years later to Blackburn. He resigned from the ministry in 1892, and died at Dublin on the 16th of March 1899. Dr Grosart is chiefly remembered for his exertions in reprinting much rare Elizabethan literature, a work which he undertook in the first instance from his strong interest in Puritan theology. Among the first writers whose works he edited were the Puritan divines, Richard Sibbes, Thomas Brooks and Herbert Palmer. Editions of Michael Bruce's *Poems* (1865) and Richard Gilpin's *Demonologia sacra* (1867) followed. In 1868 he brought out a bibliography of the writings of Richard Baxter, and from that year until 1876 he was occupied in reproducing for private subscribers the "Fuller Worthies Library," a series of thirty-nine volumes which included the works of Thomas Fuller, Sir John Davies, Fulke Greville, Henry Vaughan, Andrew Marvell, George Herbert, Richard Crashaw, John Donne and Sir Philip Sidney. The last four volumes of the series were devoted to the works of many little known and otherwise inaccessible authors. His *Occasional Issues of Unique and Very Rare Books* (1875-1881) is of the utmost interest to the book-lover. It included among other things the *Annalia Dubrensia* of Robert Dover. In 1876 still another series, known as the "Chertsey Worthies Library," was begun. It included editions of the works of Nicholas Breton, Francis Quarles, Dr Joseph Beaumont, Abraham Cowley, Henry More and John Davies of Hereford. Grosart was untiring in his enthusiasm and energy for this kind of work. The two last-named series were being produced simultaneously until 1881, and no sooner had they been completed than Grosart began the "Huth Library," so called from the bibliophile Henry Huth, who possessed the originals of many of the reprints. It included the works of Robert Greene, Thomas Nash, Gabriel Harvey, and the prose tracts of Thomas Dekker. He also edited the complete works of Edmund Spenser and Samuel Daniel. From the Townley Hall collection he reprinted several MSS. and edited Sir John Eliot's works, Sir Richard Boyle's *Lismore Papers*, and various publications for the Chetham Society, the Camden Society and the Roxburghe Club. Dr Grosart's faults of style and occasional inaccuracy do not seriously detract from the immense value of his work. He was unwearied in searching for rare books, and he brought to light much interesting literature, formerly almost inaccessible.

GROSBEAK (Fr. *Grosbec*), a name very indefinitely applied to many birds belonging to the families *Fringillidae* and *Ploceidae* of modern ornithologists, and perhaps to some members of the *Emberizidae* and *Tanagridae*, but always to birds distinguished by the great size of their bill. Taken alone it is commonly a synonym of hawfinch (*q.v.*), but a prefix is usually added to indicate the species, as pine-grosbeak, cardinal-grosbeak and the like. By early writers the word was generally given as an equivalent of the Linnaean *Loxia*, but that genus has been found to include many forms not now placed in the same family.

The Pine-grosbeak (*Pinicola enucleator*) inhabits the conifer-zone of both the Old and the New Worlds, seeking, in Europe and probably elsewhere, a lower latitude as winter approaches—often journeying in large flocks; stragglers have occasionally reached the British Islands (Yarrell, *Br. Birds*, ed. 4, ii. 177-179). In structure and some of its habits much resembling a bullfinch, but much exceeding that bird in size, it has the plumage of a crossbill and appears to undergo the same changes as do the members of the restricted genus *Loxia*—the young being of a dull greenish-grey streaked with brownish-black, the adult hens tinged with golden-green, and the cocks glowing with crimson-red on nearly all the body-feathers, this last colour being replaced after moulting in confinement by bright yellow. Nests of this species were found in 1821 by Johana Wilhelm Zetterstedt near Juckasjärwi in Swedish Lapland, but little was known concerning its nidification until 1855, when John Wolley, after two years' ineffectual search, succeeded in obtaining near the Finnish village Muonioniska, on the Swedish frontier, well-authenticated specimens with the eggs, both of which are like exaggerated bullfinches'. The food of this species seems to consist of the seeds and buds of many sorts of trees, though the staple may very possibly be those of some kind of pine.

Allied to the pine-grosbeak are a number of species of smaller size, but its equals in beauty of plumage.[1] They have been referred to several genera, such as *Carpodacus*, *Propasser*, *Bycanetes*, *Uragus* and others; but possibly *Carpodacus* is sufficient to contain all. Most of them are natives of the Old World, and chiefly of its eastern division, but several inhabit the western portion of North America, and one, *C. githagineus* (of which there seem to be at least two local races), is an especial native of the deserts, or their borders, of Arabia and North Africa, extending even to some of the Canary Islands—a singular modification in the *habitat* of a form which one would be apt to associate exclusively with forest trees, and especially conifers.

The cardinal grosbeak, or Virginian nightingale, *Cardinalis virginianus*, claims notice here, though doubts may be entertained as to the family to which it really belongs. It is no less remarkable for its bright carmine attire, and an elongated crest of the same colour, than for its fine song. Its ready adaptation to confinement has made it a popular cage-bird on both sides of the Atlantic. The hen is not so good a songster as the cock bird. Her plumage, with exception of the wings and tail, which are of a dull red, is light-olive above and brownish-yellow beneath. This species inhabits the eastern parts of the United States southward of 40° N. lat., and also occurs in the Bermudas. It is represented in the south-west of North America by other forms that by some writers are deemed species, and in the northern parts of South America by the *C. phoeniceus*, which would really seem entitled to distinction. Another kindred bird placed from its short and broad bill in a different genus, and known as *Pyrrhuloxia sinuata* or the Texan cardinal, is found on the southern borders of the United States and in Mexico; while among North American "grosbeaks" must also be named the birds belonging to the genera *Guiraca* and *Hedymeles*—the former especially exemplified by the beautiful blue *G. caerulea*, and the latter by the brilliant rose-breasted *H. ludovicianus*, which last extends its range into Canada.

The species of the Old World which, though commonly called "grosbeaks," certainly belong to the family *Ploceidae*, are treated under Weaver-bird.

(A. N.)

1 Many of them are described and illustrated in the *Monographie des loxiens* of Prince C. L. Bonaparte and Professor Schlegel (1850), though it excludes many birds which an English writer would call "grosbeaks."

GROSE, FRANCIS (*c.* 1730-1791), English antiquary, was born at Greenford in Middlesex, about the year 1730. His father was a wealthy Swiss jeweller, settled at Richmond, Surrey. Grose early showed an interest in heraldry and antiquities, and his father procured him a position in the Heralds' College. In 1763, being then Richmond Herald, he sold his tabard, and shortly afterwards became adjutant and paymaster of the Hampshire militia, where, as he himself humorously observed, the only account-books he kept were his right and left pockets, into the one of which he received, and from the other of which he paid. This carelessness exposed him to serious financial difficulties; and after a vain attempt to repair them by accepting a captaincy in the Surrey militia, the fortune left him by his father being squandered, he began to turn to account his excellent education and his powers as a draughtsman. In 1757 he had been elected fellow of the Society of Antiquaries. In 1773 he began to publish his *Antiquities of England and Wales*, a work which brought him money as well as fame. This, with its supplementary parts relating to the Channel Islands, was not completed till 1787. In 1789 he set out on an antiquarian tour through Scotland, and in the course of this journey met Burns, who composed in his honour the famous song beginning "Ken ye aught o' Captain Grose," and in that other poem, still more famous, "Hear, land o' cakes, and brither Scots," warned all Scotsmen of this "chield amang them taking notes." In 1790 he began to publish the results of what Burns called "his peregrinations through Scotland;" but he had not finished the work when he bethought himself of going over to Ireland and doing for that country what he had already done for Great Britain. About a month after his arrival, while in Dublin, he died in an apoplectic fit at the dinner-table of a friend, on the 12th of June 1791.

Grose was a sort of antiquarian Falstaff—at least he possessed in a striking degree the knight's physical peculiarities; but he was a man of true honour and charity, a valuable friend, "overlooking little faults and seeking out greater virtues," and an inimitable boon

companion. His humour, his varied knowledge and his good nature were all eminently calculated to make him a favourite in society. As Burns says of him—

"But wad ye see him in his glee,
For meikle glee and fun has he,
Then set him down, and twa or three
Gude fellows wi' him;
And *port, O port!* shine thou a wee,
And THEN ye'll see him!"

Grose's works include *The Antiquities of England and Wales* (6 vols., 1773-1787); *Advice to the Officers of the British Army* (1782), a satire in the manner of Swift's *Directions to Servants; A Guide to Health, Beauty, Riches and Honour* (1783), a collection of advertisements of the period, with characteristic satiric preface; *A Classical Dictionary of the Vulgar Tongue* (1785); *A Treatise on Ancient Armour and Weapons* (1785-1789); Darrell's *History of Dover* (1786); *Military Antiquities* (2 vols., 1786-1788); *A Provincial Glossary* (1787); *Rules for Drawing Caricatures* (1788); *The Antiquities of Scotland* (2 vols., 1789-1791); *Antiquities of Ireland* (2 vols., 1791), edited and partly written by Ledwich. *The Grumbler*, sixteen humerous essays, appeared in 1791 after his death; and in 1793 *The Olio*, a collection of essays, jests and small pieces of poetry, highly characteristic of Grose, though certainly not all by him, was put together from his papers by his publisher, who was also his executor.

A capital full-length portrait of Grose by N. Dance is in the first volume of the *Antiquities of England and Wales*, and another is among Kay's *Portraits*. A versified sketch of him appeared in the *Gentleman's Magazine*, lxi. 660. See *Gentleman's Magazine*, lxi. 498, 582; Noble's *Hist. of the College of Arms*, p. 434; *Notes and Queries*, 1st ser., ix. 350; 3rd ser., i. 64, x. 280-281; 5th ser., xii. 148; 6th ser., ii. 47, 257, 291; Hone, *Every-day Book*, i. 655.

GROSS, properly thick, bulky, the meaning of the Late Lat. *grossus*. The Latin word has usually been taken as cognate with *crassus*, thick, but this is now doubted. It also appears not to be connected with the Ger. *gross*, a Teutonic word represented in English by "great." Apart from its direct meaning, and such figurative senses as coarse, vulgar or flagrant, the 617
chief uses are whole, entire, without deduction, as opposed to "net," or as applied to that which is sold in bulk as opposed to "retail" (cf. "grocer" and "engrossing"). As a unit of tale, "gross" equals 12 dozen, 144, sometimes known as "small gross," in contrast with "great gross," *i.e.* 12 gross, 144 dozen. As a technical expression in English common law, "in gross" is applied to an incorporeal hereditament attached to the person of an owner, in contradistinction to one which is appendant or appurtenant, that is, attached to the ownership of land (see COMMONS).

GROSSE, JULIUS WALDEMAR (1828-1902), German poet, the son of a military chaplain, was born at Erfurt on the 25th of April 1828. He received his early education at the gymnasium in Magdeburg, and on leaving school and showing disinclination for the ministry, entered an architect's office. But his mind was bent upon literature, and in 1849 he entered the university of Halle, where, although inscribed as a student of law, he devoted himself almost exclusively to letters. His first poetical essay was with the tragedy *Cola di Rienzi* (1851), followed in the same year by a comedy, *Eine Nachtpartie Shakespeares*, which was at once produced on the stage. The success of these first two pieces encouraged him to follow literature as a profession, and proceeding in 1852 to Munich, he joined the circle of young poets of whom Paul Heyse (*q.v.*) and Hermann Lingg (1820-1905) were the chief. For six years (1855-1861) he was dramatic critic of the *Neue Münchener Zeitung*, and was then for a while on the staff of the *Leipziger Illustrierte Zeitung*, but in 1862 he returned to Munich as editor of the *Bayrische Zeitung*, a post he retained until the paper ceased to exist in 1867. In 1869 Grosse was appointed secretary of the *Schiller-Stiftung*, and lived for the next few years alternately in Weimar, Dresden and Munich, until, in 1890, he took up his permanent

residence in Weimar. He was made grand-ducal *Hofrat* and had the title of “professor.” He died at Torbole on the Lago di Garda on the 9th of May 1902.

Grosse was a most prolific writer of novels, dramas and poems. As a lyric poet, especially in *Gedichte* (1857) and *Aus bewegten Tagen*, a volume of poems (1869), he showed himself more to advantage than in his novels, of which latter, however, *Untreu aus Mitleid* (2 vols., 1868); *Vox populi, vox dei* (1869); *Maria Mancini* (1871); *Neue Erzählungen* (1875); *Sophie Monnier* (1876), and *Ein Frauenlos* (1888) are remarkable for a certain elegance of style. His tragedies, *Die Ynglinger* (1858); *Tiberius* (1876); *Johann von Schwaben*; and the comedy *Die steinerne Braut*, had considerable success on the stage.

Grosse’s *Gesammelte dramatische Werke* appeared in 7 vols. in Leipzig (1870), while his *Erzählende Dichtungen* were published at Berlin (6 vols., 1871-1873). An edition of his selected works by A. Bartels is in preparation. See also his autobiography, *Literarische Ursachen und Wirkungen* (1896); R. Prutz, *Die Literatur der Gegenwart* (1859); J. Ethé, *J. Grosse als epischer Dichter* (1872).

GROSSENHAIN, a town In the kingdom of Saxony, 20 m. N. from Dresden, on the main line of railway (via Elsterwerda) to Berlin and at the junction of lines to Priestewitz and Frankfort-on-Oder. Pop. (1905) 12,015. It has an Evangelical church, a modern and a commercial school, a library and an extensive public park. The industries are very important, and embrace manufactures of woollen and cotton stuffs, buckskin, leather, glass and machinery. Grossenhain was originally a Sorb settlement. It was for a time occupied by the Bohemians, by whom it was strongly fortified. It afterwards came into the possession of the margraves of Meissen, from whom it was taken in 1312 by the margraves of Brandenburg. It suffered considerably in all the great German wars, and in 1744 was nearly destroyed by fire. On the 16th of May 1813, a battle took place here between the French and the Russians.

See G. W. Schuberth, *Chronik der Stadt Grossenhain* (Grossenhain, 1887-1892).

GROSSETESTE, ROBERT (*c.* 1175-1253), English statesman, theologian and bishop of Lincoln, was born of humble parents at Stradbrook in Suffolk. He received his education at Oxford where he became proficient in law, medicine and the natural sciences. Giraldus Cambrensis, whose acquaintance he had made, introduced him, before 1199, to William de Vere, bishop of Hereford. Grosseteste aspired to a post in the bishop’s household, but being deprived by death of this patron betook himself to the study of theology. It is possible that he visited Paris for this purpose, but he finally settled in Oxford as a teacher. His first preferment of importance was the chancellorship of the university. He gained considerable distinction as a lecturer, and was the first rector of the school which the Franciscans established in Oxford about 1224. Grosseteste’s learning is highly praised by Roger Bacon, who was a severe critic. According to Bacon, Grosseteste knew little Greek or Hebrew and paid slight attention to the works of Aristotle, but was pre-eminent among his contemporaries for his knowledge of the natural sciences. Between 1214 and 1231 Grosseteste held in succession the archdeaconries of Chester, Northampton and Leicester. In 1232, after a severe illness, he resigned all his benefices and preferments except one prebend which he held at Lincoln. His intention was to spend the rest of his life in contemplative piety. But he retained the office of chancellor, and in 1235 accepted the bishopric of Lincoln. He undertook without delay the reformation of morals and clerical discipline throughout his vast diocese. This scheme brought him into conflict with more than one privileged corporation, but in particular with his own chapter, who vigorously disputed his claim to exercise the right of visitation over their community. The dispute raged hotly from 1239 to 1245. It was conducted on both sides with unseemly violence, and those who most approved of Grosseteste’s main purpose thought it needful to warn him against the mistake of over-zeal. But in 1245, by a personal visit to the papal court at Lyons, he secured a favourable verdict. In ecclesiastical politics the bishop belonged to the school of Becket. His zeal for reform led him to advance, on behalf of the courts-Christian, pretensions which it was impossible that the secular power

should admit. He twice incurred a well-merited rebuke from Henry III. upon this subject; although it was left for Edward I. to settle the question of principle in favour of the state. The devotion of Grosseteste to the hierarchical theories of his age is attested by his correspondence with his chapter and the king. Against the former he upheld the prerogative of the bishops; against the latter he asserted that it was impossible for a bishop to disregard the commands of the Holy See. Where the liberties of the national church came into conflict with the pretensions of Rome he stood by his own countrymen. Thus in 1238 he demanded that the king should release certain Oxford scholars who had assaulted the legate Otho. But at least up to the year 1247 he submitted patiently to papal encroachments, contenting himself with the protection (by a special papal privilege) of his own diocese from alien clerks. Of royal exactions he was more impatient; and after the retirement of Archbishop Saint Edmund (*q.v.*) constituted himself the spokesman of the clerical estate in the Great Council. In 1244 he sat on a committee which was empanelled to consider a demand for a subsidy. The committee rejected the demand, and Grosseteste foiled an attempt on the king's part to separate the clergy from the baronage. "It is written," the bishop said, "that united we stand and divided we fall."

It was, however, soon made clear that the king and pope were in alliance to crush the independence of the English clergy; and from 1250 onwards Grosseteste openly criticized the new financial expedients to which Innocent IV. had been driven by his desperate conflict with the Empire. In the course of a visit which he made to Innocent in this year, the bishop laid before the pope and cardinals a written memorial in which he ascribed all the evils of the Church to the malignant influence of the Curia. It produced no effect, although the cardinals felt that Grosseteste was too influential to be punished for his audacity. Much discouraged by his failure the bishop thought of resigning. In the end, however, he decided to continue the unequal struggle. In 1251 he protested against a papal mandate enjoining the English clergy to pay Henry III. one-tenth of their revenues for a crusade; and called attention to the fact that, under the system of provisions, a sum of 70,000 marks was annually drawn from England by the alien nominees of Rome. In 1253, upon being commanded to provide in his own diocese for a papal nephew, he wrote a letter of expostulation and refusal, not to the pope himself but to the commissioner, Master Innocent, through whom he received the mandate. The text of the remonstrance, as given in the *Burton Annals* and in Matthew Paris, has possibly been altered by a forger who had less respect than Grosseteste for the papacy. The language is more violent than that which the bishop elsewhere employs. But the general argument, that the papacy may command obedience only so far as its commands are consonant with the teaching of Christ and the apostles, is only what should be expected from an ecclesiastical reformer of Grosseteste's time. There is much more reason for suspecting the letter addressed "to the nobles of England, the citizens of London, and the community of the whole realm," in which Grosseteste is represented as denouncing in unmeasured terms papal finance in all its branches. But even in this case allowance must be made for the difference between modern and medieval standards of decorum.

Grosseteste numbered among his most intimate friends the Franciscan teacher, Adam Marsh (*q.v.*). Through Adam he came into close relations with Simon de Montfort. From the Franciscan's letters it appears that the earl had studied a political tract by Grosseteste on the difference between a monarchy and a tyranny; and that he embraced with enthusiasm the bishop's projects of ecclesiastical reform. Their alliance began as early as 1239, when Grosseteste exerted himself to bring about a reconciliation between the king and the earl. But there is no reason to suppose that the political ideas of Montfort had matured before the death of Grosseteste; nor did Grosseteste busy himself overmuch with secular politics, except in so far as they touched the interest of the Church. Grosseteste realized that the misrule of Henry III. and his unprincipled compact with the papacy largely accounted for the degeneracy of the English hierarchy and the laxity of ecclesiastical discipline. But he can hardly be termed a constitutionalist.

Grosseteste died on the 9th of October 1253. He must then have been between seventy and eighty years of age. He was already an elderly man, with a firmly established reputation, when he became a bishop. As an ecclesiastical statesman he showed the same fiery zeal and versatility of which he had given proof in his academical career; but the general tendency of modern writers has been to exaggerate his political and ecclesiastical services, and to neglect his performances as a scientist and scholar. The opinion of his own age, as expressed by Matthew Paris and Roger Bacon, was very different. His contemporaries, while admitting the excellence of his intentions as a statesman, lay stress upon his defects of temper and discretion. But they see in him the pioneer of a literary and scientific movement; not merely a great ecclesiastic who patronized learning in his leisure hours, but the first mathematician and physicist of his age. It is certainly true that he anticipated, in these fields of thought,

some of the most striking ideas to which Roger Bacon subsequently gave a wider currency.

See the *Epistolae Roberti Grosseteste* (Rolls Series, 1861) edited with a valuable introduction by H. R. Luard. Grosseteste's famous memorial to the pope is printed in the appendix to E. Brown's *Fasciculus rerum expetendarum et fugiendarum* (1690). A tract *De phisicis, lineis, angulis et figuris* was printed at Nuremberg in 1503, A French poem, *Le Chastel d'amour*, sometimes attributed to him, has been printed by the Caxton Society. Two curious tracts, the "De moribus pueri ad mensam" (printed by Wynkyn de Worde) and the "Statuta familiae Roberti Grosseteste" (printed by J. S. Brewer in *Monumenta Franciscana*, i. 582), may be from his pen; but the editor of the latter work ascribes it to Adam de Marsh. There is less doubt respecting the *Reules Seynt Robert*, a tract giving advice for the management of the household of the countess of Lincoln. For Grosseteste's life and work see Roger Bacon's *Opus majus* (ed. J. H. Bridges, 1897, 2 vols.) and *Opera quaedam inedita* (ed. J. S. Brewer, Rolls Series, 1859); M. Paris's *Chronica majora* (ed. H. R. Luard, Rolls Series, 1872-1883, 5 vols.); and the *Lives* by S. Pegge (1793) and F. S. Stevenson (1899).

(H. W. C. D.)

GROSSETO, a town and episcopal see of Tuscany, capital of the province of Grosseto, 90 m. S.S.E. of Pisa by rail. Pop. (1901) 5856 (town), 8843 (commune). It is 38 ft. above sea-level, and is almost circular in shape; it is surrounded by fortifications, constructed by Francis I. (1574-1587) and Ferdinand I. (1587-1609), which form a hexagonal enceinte with projecting bastions, with two gates only. The small cathedral, begun in 1294, is built of red and white marble alternating, in the Italian Gothic style; it was restored in 1855. The citadel was built in 1311 by the Sienese. Grosseto is on the main line from Pisa to Rome, and is also the starting-point (Montepescali, 8 m. to the N., is the exact point of divergence) of a branch line to Asciano and Siena.

The town dates from the middle ages. In 1138 the episcopal see was transferred thither from Rusellae. In 1230 it, with the rest of the Maremma, of which it is the capital, came under the dominion of Siena. By the peace of 1559, however, it passed to Cosimo I. of Tuscany. In 1745 the malaria had grown to such an extent, owing to the neglect of the drainage works, that Grosseto had only 648 inhabitants, though in 1224 it had 3000 men who bore arms. Leopold I. renewed drainage operations, and by 1836 the population had risen to 2392. The malaria is not yet entirely conquered, however, and the official headquarters of the province are in summer transferred to Scansano (1837 ft.), 20 m. to the S.E. by road.

GROSSI, GIOVANNI FRANCESCO (?-1699), one of the greatest Italian singers of the age of *bel canto*, better known as Siface, was born at Pescia in Tuscany about the middle of the 17th century. He entered the papal chapel in 1675, and later sang at Venice. He derived his nickname of Siface from his impersonation of that character in an opera of Cavalli. It has generally been said that he appeared as Siface in Alessandro Scarlatti's *Mitridate*, but the confusion is due to his having sung the part of Mitridate in Scarlatti's *Pompeo* at Naples in 1683. In 1687 he was sent to London by the duke of Modena, to become a member of the chapel of James II. He probably did much for the introduction of Italian music into England, but soon left the country on account of the climate. Among Purcell's harpsichord music is an air entitled "Sefauchi's Farewell." He was murdered in 1699 on the road between Bologna and Ferrara, probably by the agents of a nobleman with whose wife he had a *liaison*.

See Corrado Ricci's *Vita Barocca* (Milan, 1904).

GROSSI, TOMMASO (1791-1853), Lombard poet and novelist, was born at Bellano, on the Lake of Como, on the 20th of January 1791. He took his degree in law at Pavia in 1810, and

proceeded thence to Milan to exercise his profession; but the Austrian government, suspecting his loyalty, interfered with his prospects, and in consequence Grossi was a simple notary all his life. That the suspicion was well grounded he soon showed by writing in the Milanese dialect the battle poem *La Prineide*, in which he described with vivid colours the tragical death of Prina, chief treasurer during the empire, whom the people of Milan, instigated by Austrian agitators, had torn to pieces and dragged through the streets of the town (1814). The poem, being anonymous, was first attributed to the celebrated Porta, but Grossi of his own accord acknowledged himself the author. In 1816 he published other two poems, written likewise in Milanese—*The Golden Rain* (La Pioggia d'oro) and *The Fugitive* (La Fuggitiva). These compositions secured him the friendship of Porta and Manzoni, and the three poets came to form a sort of romantic literary triumvirate. Grossi took advantage of the popularity of his Milanese poems to try Italian verse, into which he sought to introduce the moving realism which had given such satisfaction in his earliest compositions; and in this he was entirely successful with his poem *Ildegonda* (1814). He next wrote an epic poem, entitled *The Lombards in the First Crusade*, a work of which Manzoni makes honourable mention in *I Promessi Sposi*. This composition, which was published by subscription (1826), attained a success unequalled by that of any other Italian poem within the century. The example of Manzoni induced Grossi to write an historical novel entitled *Marco Visconti* (1834)—a work which contains passages of fine description and deep pathos. A little later Grossi published a tale in verse, *Ulrico and Lida*, but with this publication his poetical activity ceased. After his marriage in 1838 he continued to employ himself as a notary in Milan till his death on the 10th of December 1853.

His *Life* by Cantu appeared at Milan in 1854.

GROSSMITH, GEORGE (1847-), English comedian, was born on the 9th of December 1847, the son of a law reporter and entertainer of the same name. After some years of journalistic work he started about 1870 as a public entertainer, with songs and recitations; but in 1877 he began a long connexion with the Gilbert and Sullivan operas at the Savoy Theatre, London, in *The Sorcerer*. For twelve years he had the leading part, his capacity for "patter-songs," and his humorous acting, dancing and singing marking his creations of the chief characters in the Gilbert and Sullivan operas as the expression of a highly original individuality. In 1889 he left the Savoy, and again set up as an entertainer, visiting all the cities of Great Britain and the United States, but retiring in 1901. Among other books he wrote *The Reminiscences of a Society Clown* (1888); and, with his brother Weedon, *The Diary of a Nobody* (1894). His humorous songs and sketches numbered over six hundred. His younger brother, Weedon Grossmith, who was educated as a painter and exhibited at the Academy, also took to the stage, his first notable success being in the *Pantomime Rehearsal*; in 1894 he went into management on his own account, and had much success as a comedian. George Grossmith's two sons, Laurence Grossmith and George Grossmith, jun., were both actors, the latter becoming a well-known figure in the musical comedies at the Gaiety Theatre, London.

GROS VENTRES (Fr. for "Great Bellies"), or Atsina, a tribe of North American Indians of Algonquian stock. The name is said to have reference to the greediness of the people, but more probably originated from their prominent tattooing. They are settled at Fort Belknap agency, Montana. The name has also been given to other tribes, *e.g.* the Hidatsa or Minitari, now at Fort Berthold, North Dakota.

GROTE, GEORGE (1794-1871), English historian of Greece, was born on the 17th of

November 1794, at Clay Hill near Beckenham in Kent. His grandfather, Andreas, originally a Bremen merchant, was one of the founders (1st of January 1766) of the banking-house of Grote, Prescott & Company in Threadneedle Street, London (the name of Grote did not disappear from the firm till 1879). His father, also George, married (1793) Selina, daughter of Henry Peckwell (1747-1787), minister of the countess of Huntingdon's chapel in Westminster (descended from a Huguenot family, the de Blossets, who had left Touraine on the revocation of the Edict of Nantes), and had one daughter and ten sons, of whom the historian was the eldest. Educated at first by his mother, George Grote was sent to the Sevenoaks grammar school (1800-1804) and afterwards to Charterhouse (1804-1810), where he studied under Dr Raine in company with Connop Thirlwall, George and Horace Waddington and Henry Havelock. In spite of Grote's school successes, his father refused to send him to the university and put him in the bank in 1810. He spent all his spare time in the study of classics, history, metaphysics and political economy, and in learning German, French and Italian. Driven by his mother's Puritanism and his father's contempt for academic learning to outside society, he became intimate with Charles Hay Cameron, who strengthened him in his love of philosophy, and George W. Norman, through whom he met his wife, Miss Harriet Lewin (see below). After various difficulties the marriage took place on the 5th of March 1820, and was in all respects a happy union.

In the meanwhile Grote had finally decided his philosophic and political attitude. In 1817 he came under the influence of David Ricardo, and through him of James Mill and Jeremy Bentham. He settled in 1820 in a house attached to the bank in Threadneedle Street, where his only child died a week after its birth. During Mrs Grote's slow convalescence at Hampstead, he wrote his first published work, the *Statement of the Question of Parliamentary Reform* (1821), in reply to Sir James Mackintosh's article in the *Edinburgh Review*, advocating popular representation, vote by ballot and short parliaments. In 1822 he published in the *Morning Chronicle* (April) a letter against Canning's attack on Lord John Russell, and edited, or rather re-wrote, some discursive papers of Bentham, which he published under the title *Analysis of the Influence of Natural Religion on the Temporal Happiness of Mankind by Philip Beauchamp* (1822). The book was published in the name of Richard Carlile, then in gaol at Dorchester. Though not a member of J. S. Mill's Utilitarian Society (1822-1823). he took a great interest in a society for reading and discussion, which met (from 1823) in a room at the bank before business hours twice a week. From the *Posthumous Papers* (pp. 22, 24) it is clear that Mrs Grote was wrong in asserting that she first in 1823 (autumn) suggested the *History of Greece*; the book was already in preparation in 1822, though what was then written was subsequently reconstructed. In 1826 Grote published in the *Westminster Review* (April) a criticism of Mitford's *History of Greece*, which shows that his ideas were already in order. From 1826 to 1830 he was hard at work with J. S. Mill and Henry Brougham in the organization of the new "university" in Gower Street. He was a member of the council which organized the faculties and the curriculum; but in 1830, owing to a difference with Mill as to an appointment to one of the philosophical chairs, he resigned his position.

In 1830 he went abroad, and, attracted by the political crisis, spent some months in Paris in the society of the Liberal leaders. Recalled by his father's death (6th of July), he not only became manager of the bank, but took a leading position among the city Radicals. In 1831 he published his important *Essentials of Parliamentary Reform* (an elaboration of his previous *Statement*), and, after refusing to stand as parliamentary candidate for the city in 1831, changed his mind and was elected head of the poll, with three other Liberals, in December 1832. After serving in three parliaments, he resigned in 1841, by which time his party ("the philosophic Radicals") had dwindled away. During these years of active public life, his interest in Greek history and philosophy had increased, and after a trip to Italy in 1842, he severed his connexion with the bank and devoted himself to literature. In 1846 the first two volumes of the *History* appeared, and the remaining ten between 1847 and the spring of 1856. In 1845 with Molesworth and Raikes Currie he gave monetary assistance to Auguste Comte (*q.v.*), then in financial difficulties. The formation of the Sonderbund (20th of July 1847) led him to visit Switzerland and study for himself a condition of things in some sense analogous to that of the ancient Greek states. This visit resulted in the publication in the *Spectator* of seven weekly letters, collected in book form at the end of 1847 (see a letter to de Tocqueville in Mrs Grote's reprint of the *Seven Letters*, 1876).

In 1856 Grote began to prepare his works on Plato and Aristotle. *Plato and the Other Companions of Sokrates* (3 vols.) appeared in 1865, but the work on Aristotle he was not destined to complete. He had finished the *Organon* and was about to deal with the metaphysical and physical treatises when he died on the 18th of June 1871, and was buried in Westminster Abbey. He was a man of strong character and self-control, unfailing courtesy

and unswerving devotion to what he considered the best interests of the nation. To colleagues and subordinates alike, he was considerate and tolerant; he was unassuming, trustworthy in the smallest detail, accurate and comprehensive in thought, energetic and conscientious in action. Yet, hidden under his calm exterior there was a burning enthusiasm and a depth of passion of which only his intimate friends were aware.

His work may best be considered under the following heads:

1. *Grote's Services to Education.*—He took, as already stated, an important part in the foundation and organization of the original university of London, which began its public work in Gower Street on the 28th of October 1828, and in 1836, on the incorporation of the university of London proper, became known as University College. In 1849 he was re-elected to the council, in 1860 he became treasurer, and on the death of Brougham (1868) president. He took a keen interest in all the work of the college, presented to it the *Marmor Homericum*, and finally bequeathed the reversion of £6000 for the endowment of a chair of philosophy of mind and logic. The emoluments of this sum were, however, to be held over and added to the principal if at any time the holder of the chair should be "a minister of the Church of England or of any other religious persuasion." In 1850 the senate of the university was reconstituted, and Grote was one of seven eminent men who were added to it. Eventually he became the strongest advocate for open examinations, for the claims not only of philosophy and classics but also of natural science, and, as vice-chancellor in 1862, for the admission of women to examinations. This latter reform was carried in 1868. He succeeded his friend Henry Hallam as a trustee of the British Museum in 1859, and took part in the reorganization of the departments of antiquities and natural science.

The honours which he received in recognition of these services were as follows: D.C.L. of Oxford (1853); LL.D. Cambridge (1861); F.R.S. (1857); honorary professor of ancient history in the Royal Academy (1859). By the French Academy of Moral and Political Sciences he was made correspondent (1857) and foreign associate (the first Englishman since Macaulay) (1864). In 1869 he refused Gladstone's offer of a peerage.

2. *Political Career.*—In politics Grote belonged to the "philosophic Radicals" of the school of J. S. Mill and Bentham, whose chief principles were representative government, vote by ballot, the abolition of a state church, frequent elections. He adhered to these principles throughout, and refused to countenance any reforms which were incompatible with them. By this uncompromising attitude, he gradually lost all his supporters save a few men of like rigidity. As a speaker, he was clear, logical and impressive, and on select committees his common sense was most valuable. For his speeches see A. Bain in the *Minor Works*; see also Ballot.

3. *The History of Greece.*—It is on this work that Grote's reputation mainly rests. Though half a century has passed since its production, it is still in some sense the text-book. It consists of two parts, the "Legendary" and the "Historical" Greece. The former, owing to the development of comparative mythology, is now of little authority, and portions of part ii. are obsolete owing partly to the immense accumulations of epigraphic and archaeological research, partly to the subsequent discovery of the Aristotelian *Constitution of Athens*, and partly also to the more careful weighing of evidence which Grote himself misinterpreted. The interest of the work is twofold. In the first place it contains a wonderful mass of information carefully collected from all sources, arranged on a simple plan, and expressed in direct forcible language. It is in this respect one of the few great comprehensive histories in our possession, great in scope, conception and accomplishment. But more than this it is interesting as among the first works in which Greek history became a separate study, based on real evidence and governed by the criteria of modern historical science. Further Grote, a practical man, a rationalist and an enthusiast for democracy, was the first to consider Greek political development with a sympathetic interest (see Greece: *History, Ancient*, section "Authorities"), in opposition to the Tory attitude of John Gillies and Mitford, who had written under the influence of horror at the French Revolution. On the whole his work was done with impartiality, and more recent study has only confirmed his general conclusions. Much has been made of his defective accounts of the tyrants and the Macedonian empire, and his opinion that Greek history ceased to be interesting or instructive after Chaeronea. It is true that he confined his interest to the fortunes of the city state and neglected the wider diffusion of the Greek culture, but this is after all merely a criticism of the title of the book. The value of the *History* consists to-day primarily in its examination of the Athenian democracy, its growth and decline, an examination which is still the most inspiring, and in general the most instructive, in any language. In the description of battles and military operations generally Grote was handicapped by the lack of personal knowledge of the country. In this respect he is inferior to men like Ernst Curtius and G. B. Grundy.

4. *In Philosophy* Grote was a follower of the Mills and Bentham. J. S. Mill paid a tribute to him in the preface to the third edition of his *Examination of Sir Wm. Hamilton's Philosophy*, and there is no doubt that the empirical school owed a great deal to his sound, accurate thinking, untrammelled by any reverence for authority, technique and convention. In dealing with Plato he was handicapped by this very common sense, which prevented him from appreciating the theory of ideas in its widest relations. His *Plato* is important in that it emphasizes the generally neglected passages of Plato in which he seems to indulge in mere Socratic dialectic rather than to seek knowledge; it is, therefore, to be read as a corrective to the ordinary criticism of Plato. The more congenial study of Aristotle, though incomplete, is more valuable in the positive sense, and has not received the attention it deserves. Perhaps Grote's most distinctive contribution to the study of Greek philosophy is his chapter in the *History of Greece* on the Sophists, of whom he took a view somewhat more favourable than has been accepted before or since.

His wife, Harriet Lewin (1792-1878), was the daughter of Thomas Lewin, a retired Indian civilian, settled in Southampton. After her marriage with Grote in 1820 she devoted herself to the subjects in which he was interested and was a prominent figure in the literary, political and philosophical circle in which he lived. She carefully read the proofs of his work and relieved him of anxiety in connexion with his property. Among her writings are: *Memoir of Ary Scheffer* (1860); *Collected Papers* (1862); and her biography of her husband (1873). Another publication, *The Philosophical Radicals of 1832* (privately circulated in 1866), is interesting for the light it throws on the Reform movement of 1832 to 1842, especially on Molesworth.

Bibliography.—*The History of Greece* passed through five editions the fifth (10 vols., 1888) being final. An edition covering the period from Solon to 403, with new notes and excursuses, was published by J. M. Mitchell and M. O. B. Caspari in 1907. The *Plato* was finally edited by Alexander Bain in 4 vols. See Mrs Grote's *Personal Life of George Grote*, and article in *Dict. Nat. Biog.* by G. Croom Robertson.

(J. M. M.)

GROTEFEND, GEORG FRIEDRICH (1775-1853), German epigraphist, was born at Münden in Hanover on the 9th of June 1775. He was educated partly in his native town, partly at Ilfeld, where he remained till 1795, when he entered the university of Göttingen, and there became the friend of Heyne, Tychsen and Heeren. Heyne's recommendation procured for him an assistant mastership in the Göttingen gymnasium in 1797. While there he published his work *De pasigraphia sive scriptura universali* (1799), which led to his appointment in 1803 as prorector of the gymnasium of Frankfort-on-Main, and shortly afterwards as conrector. Grotefend was best known during his lifetime as a Latin and Italian philologist, though the attention he paid to his own language is shown by his *Anfangsgründe der deutschen Poesie*, published in 1815, and his foundation of a society for investigating the German tongue in 1817. In 1821 he became director of the gymnasium at Hanover, a post which he retained till his retirement in 1849. In 1823-1824 appeared his revised edition of Wenck's Latin grammar, in two volumes, followed by a smaller grammar for the use of schools in 1826; in 1835-1838 a systematic attempt to explain the fragmentary remains of the Umbrian dialect, entitled *Rudimenta linguae Umbricae ex inscriptionibus antiquis enodata* (in eight parts); and in 1839 a work of similar character upon Oscan (*Rudimenta linguae Oscae*). In the same year he published an important memoir on the coins of Bactria, under the name of *Die Münzen der griechischen, parthischen, und indoskythischen Könige von Bactrien und den Ländern am Indus*. He soon, however, returned to his favourite subject, and brought out a work in five parts, *Zur Geographie und Geschichte von Altitalien* (1840-1842). Previously, in 1836, he had written a preface to Wagenfeld's translation of the spurious *Sanchoniathon* of Philo Byblius, which was alleged to have been discovered in the preceding year in the Portuguese convent of Santa Maria de Merinhao. But it was in the East rather than in the West that Grotefend did his greatest work. The cuneiform inscriptions of Persia had for some time been attracting attention in Europe; exact copies of them had been published by the elder Niebuhr, who lost his eyesight over the work; and Grotefend's friend, Tychsen of Rostock, believed that he had ascertained the characters in the column, now known to be Persian, to be alphabetic. At this point Grotefend took the matter up. His first discovery was communicated to the Royal Society of Göttingen in 1800, and reviewed by Tychsen two years afterwards. In 1815 he gave an account of it in Heeren's great work on ancient history, and

in 1837 published his *Neue Beiträge zur Erläuterung der persepolitanischen Keilschrift*. Three years later appeared his *Neue Beiträge zur Erläuterung der babylonischen Keilschrift*. His discovery may be summed up as follows: (1) that the Persian inscriptions contain three different forms of cuneiform writing, so that the decipherment of the one would give the key to the decipherment of the others; (2) that the characters of the Persian column are alphabetic and not syllabic; (3) that they must be read from left to right; (4) that the alphabet consists of forty letters, including signs for long and short vowels; and (5) that the Persepolitan inscriptions are written in Zend (which, however, is not the case), and must be ascribed to the age of the Achaemenian princes. The process whereby Grotefend arrived at these conclusions is a prominent illustration of persevering genius (see CUNEIFORM). A solid basis had thus been laid for the interpretation of the Persian inscriptions, and all that remained was to work out the results of Grotefend's brilliant discovery, a task ably performed by Burnouf, Lassen and Rawlinson. Grotefend died on the 15th of December 1853.

GROTESQUE, strictly a form of decorative art, in painting or sculpture, consisting of fantastic shapes of human beings, animals and the like, joined together by wreaths of flowers, garlands or arabesques. The word is also applied to any whimsical design or decorative style, if characterized by unnatural distortion, and, generally, to anything ludicrous or extravagantly fanciful. "Grotesque" comes through the French from the Ital. *grottesco*, an adjective formed from *grotta*, which has been corrupted in English to "grotto." The commonly accepted explanation of the special use of the term "grotesque" is that this particular form of decorative art was most frequently found in the excavated ancient Roman and Greek dwellings found in Italy, to which was applied the name *grotte*. The derivation of *grotta* is through popular Lat. *crupta* or *grupta* (cf. "crypt"), from Gr. κρύπτη, a vault, κρύπτειν, to hide. Such a term would be applicable both to the buried dwellings of ancient Italy, and to a cavern, artificial or natural, the ordinary sense of the word. An interesting parallel with this origin of the word is found in that of "antic," now meaning a freak, a jest, absurd fancy, &c. This word is the same as "antique," and was, like "grotesque," first applied to the fanciful decorations of ancient art.

GROTH, KLAUS (1819-1899), Low German poet, was born at Heide in Schleswig-Holstein, on the 24th of April 1819. After studying at the seminary in Tondern (1838-1841), he became a teacher at the girls' school in his native village, but in 1847 went to Kiel to qualify for a higher educational post. Ill-health interrupted his studies and it was not until 1853 that he was able to resume them at Kiel. In 1856 he took the degree of doctor of philosophy at Bonn, and in 1858 settled as *privatdocent* in German literature and languages at Kiel, where, in 1866, he was made professor, and where he lived until his death on the 1st of June 1899. In his Low German (*Plattdeutsch*) lyric and epic poems, which reflect the influence of Johann Peter Hebel (*q.v.*), Groth gives poetic expression to the country life of his northern home; and though his descriptions may not always reflect the peculiar characteristics of the peasantry of Holstein as faithfully as those of F. Reuter (*q.v.*), yet Groth is a lyric poet of genuine inspiration. His chief works are *Quickborn, Volksleben in plattdeutschen Gedichten Ditmarscher Mundart* (1852; 25th ed. 1900; and in High German translations, notably by M. J. Berchem, Krefeld, 1896); and two volumes of stories, *Vertelln* (1855-1859, 3rd ed. 1881); also *Voer de Goern* (1858) and *Ut min Jungsparadies* (1875).

Groth's *Gesammelte Werke* appeared in 4 vols. (1893). His *Lebenserinnerungen* were edited by E. Wolff in 1891; see also K. Eggers, *K. Groth und die plattdeutsche Dichtung* (1885); and biographies by A. Bartels (1899) and H. Siercks (1899.)

GROTH, PAUL HEINRICH VON (1843-), German mineralogist, was born at Magdeburg on the 23rd of June 1843. He was educated at Freiberg, Dresden and Berlin, and took the degree of Ph.D. in 1868. After holding from 1872 the chair of mineralogy at Strasburg, he was in 1883 appointed professor of mineralogy and curator of minerals in the state museum at Munich. He carried on extensive researches on crystals and minerals, and also on rocks; and published *Tabellarische Übersicht der einfachen Mineralien* (1874-1898), and *Physikalische Krystallographie* (1876-1895, ed. 4, 1905). He edited for some years the *Zeitschrift für Krystallographie und Mineralogie*.

GROTIUS, HUGO (1583-1645), in his native country Huig van Groot, but known to the rest of Europe by the latinized form of the name, Dutch publicist and statesman, was born at Delft on Easter day, the 10th of April 1583. The Groots were a branch of a family of distinction, which had been noble in France, but had removed to the Low Countries more than a century before. Their French name was de Cornets, and this cadet branch had taken the name of Groot on the marriage of Hugo's great-grandfather with a Dutch heiress. The father of Hugo was a lawyer in considerable practice, who had four times served the office of burgomaster of Leiden, and was one of the three curators of the university of that place.

In the annals of precocious genius there is no greater prodigy on record than Hugo Grotius, who was able to make good Latin verses at nine, was ripe for the university at twelve, and at fifteen edited the encyclopaedic work of Martianus Capella. At Leiden he was much noticed by J. J. Scaliger, whose habit it was to engage his young friends in the editing of some classical text. At fifteen Grotius accompanied Count Justin of Nassau, and the grand pensionary J. van Olden Barneveldt on their special embassy to the court of France. After a year spent in acquiring the language and making acquaintance with the leading men of France, Grotius returned home. He took the degree of doctor of law at Leiden, and entered on practice as an advocate.

Notwithstanding his successes in his profession, his inclination was to literature. In 1600 he edited the remains of Aratus, with the versions of Cicero, Germanicus and Avienus. Of the *Germanicus* Scaliger says—"A better text than that which Grotius has given, it is impossible to give"; but it is probable that Scaliger had himself been the reviser. Grotius vied with the Latinists of his day in the composition of Latin verses. Some lines on the siege of Ostend spread his fame beyond the circle of the learned. He wrote three dramas in Latin:—*Christus patiens; Sophomphaneas*, on the story of Joseph and his brethren; and *Adamus exul*, a production still remembered as having given hints to Milton. The *Sophomphaneas* was translated into Dutch by Vondel, and into English by Francis Goldsmith (1652); the *Christus patiens* into English by George Sandys (1640).

In 1603 the United Provinces, desiring to transmit to posterity some account of their struggle with Spain, determined to appoint a historiographer. The choice of the states fell upon Grotius, though he was but twenty years of age, and had not offered himself for the post. There was some talk at this time in Paris of calling Grotius to be librarian of the royal library. But it was a ruse of the Jesuit party, who wished to persuade the public that the opposition to the appointment of Isaac Casaubon did not proceed from theological motives, since they were ready to appoint a Protestant in the person of Grotius.

His next preferment was that of advocate-general of the fisc for the provinces of Holland and Zeeland. This was followed by his marriage, in 1608, to Marie Reigersberg, a lady of family in Zeeland, a woman of great capacity and noble disposition.

Grotius had already passed from occupation with the classics to studies more immediately connected with his profession. In the winter of 1604 he composed (but did not publish) a treatise entitled *De jure praedae*. The MS. remained unknown till 1868, when it was brought to light, and printed at the Hague under the auspices of Professor Fruin. It shows that the principles and the plan of the celebrated *De jure belli*, which was not composed till 1625, more than twenty years after, had already been conceived by a youth of twenty-one. It has always been a question what it was that determined Grotius, when an exile in Paris in 1625, to that particular subject, and various explanations have been offered; among others a casual suggestion of Peiresc in a letter of early date. The discovery of the MS. of the *De jure praedae* discloses the whole history of Grotius's ideas, and shows that from youth upwards he had steadily read and meditated in one direction, that, namely, of which the famous *De jure*

belli was the mature product. In the *De jure praedae* of 1604 there is much more than the germ of the later treatise *De jure belli*. Its main principles, and the whole system of thought implied in the later, are anticipated in the earlier work. The arrangement even is the same. The chief difference between the two treatises is one which twenty years' experience in affairs could not but bring—the substitution of more cautious and guarded language, less dogmatic affirmation, more allowance for exceptions and deviations. The *Jus pacis* was an addition introduced first in the later work, an insertion which is the cause of not a little of the confused arrangement which has been found fault with in the *De jure belli*.

The *De jure praedae* further demonstrates that Grotius was originally determined to this subject, not by any speculative intellectual interest, but by a special occasion presented by his professional engagements. He was retained by the Dutch East India Company as their advocate. One of their captains, Heemskirk, had captured a rich Portuguese galleon in the Straits of Malacca. The right of a private company to make prizes was hotly contested in Holland, and denied by the stricter religionists, especially the Mennonites, who considered all war unlawful. Grotius undertook to prove that Heemskirk's prize had been lawfully captured. In doing this he was led to investigate the grounds of the lawfulness of war in general. Such was the casual origin of a book which long enjoyed such celebrity that it used to be said, with some exaggeration indeed, that it had founded a new science.

A short treatise which was printed in 1609, Grotius says without his permission, under the title of *Mare liberum*, is nothing more than a chapter—the 12th—of the *De jure praedae*. It was necessary to Grotius's defence of Heemskirk that he should show that the Portuguese pretence that Eastern waters were their private property was untenable. Grotius maintains that the ocean is free to all nations. The occasional character of this piece explains the fact that at the time of its appearance it made no sensation. It was not till many years afterwards that the jealousies between England and Holland gave importance to the novel doctrine broached in the tract by Grotius, a doctrine which Selden set himself to refute in his *Mare clausum* (1632).

Equally due to the circumstances of the time was his small contribution to constitutional history entitled *De antiquitate reipublicae Batavae* (1610). In this he vindicates, on grounds of right, prescriptive and natural, the revolt of the United Provinces against the sovereignty of Spain.

Grotius, when he was only thirty, was made pensionary of the city of Rotterdam. In 1613 he formed one of a deputation to England, in an attempt to adjust those differences which gave rise afterwards to a naval struggle disastrous to Holland. He was received by James with every mark of distinction. He also cultivated the acquaintance of the Anglican ecclesiastics John Overall and L. Andrewes, and was much in the society of the celebrated scholar Isaac Casaubon, with whom he had been in correspondence by letter for many years. Though the mediating views in the great religious conflict between Catholic and Protestant, by which Grotius was afterwards known, had been arrived at by him by independent reflection, yet it could not but be that he would be confirmed in them by finding in England a developed school of thought of the same character already in existence. How highly Casaubon esteemed Grotius appears from a letter of his to Daniel Heinsius, dated London, 13th of April 1613. "I cannot say how happy I esteem myself in having seen so much of one so truly great as Grotius. A wonderful man! This I knew him to be before I had seen him; but the rare excellence of that divine genius no one can sufficiently feel who does not see his face, and hear him speak. Probity is stamped on his features; his conversation savours of true piety and profound learning. It is not only upon me that he has made this impression; all the pious and learned to whom he has been here introduced have felt the same towards him; the king especially so!"

After Grotius's return from England the exasperation of theological parties in Holland rose to such a pitch that it became clear that an appeal to force would be made. Grotius sought to find some mean term in which the two hostile parties of Remonstrants and Anti-remonstrants, or as they were subsequently called Arminians and Gomarists (see Remonstrants), might agree. A form of edict drawn by Grotius was published by the states, recommending mutual toleration, and forbidding ministers in the pulpit from handling the disputed dogmas. To the orthodox Calvinists the word toleration was insupportable. They had the populace on their side. This fact determined the stadtholder, Maurice of Nassau, to support the orthodox party—a party to which he inclined the more readily that Olden Barneveldt, the grand pensionary, the man whose uprightness and abilities he most dreaded, sided with the Remonstrants.

In 1618 Prince Maurice set out on a sort of pacific campaign, disbanding the civic guards in the various cities of Guelders, Holland and Zeeland, and occupying the places with troops on

whom he could rely. The states of Holland sent a commission, of which Grotius was chairman, to Utrecht, with the view of strengthening the hands of their friends, the Remonstrant party, in that city. Feeble plans were formed, but not carried into effect, for shutting the gates upon the stadtholder, who entered the city with troops on the night of the 26th of July 1618. There were conferences in which Grotius met Prince Maurice, and taught him that Olden Barneveldt was not the only man of capacity in the ranks of the Remonstrants whom he had to fear. On the early morning of the 31st of July the prince's *coup d'état* against the liberties of Utrecht and of Holland was carried out; the civic guard was disarmed—Grotius and his colleagues saving themselves by a precipitate flight. But it was only a reprieve. The grand pensionary, Olden Barneveldt, the leader of the Remonstrant party, Grotius and Hoogerbeets were arrested, brought to trial, and condemned—Olden Barneveldt to death, and Grotius to imprisonment for life and confiscation of his property. In June 1619 he was immured in the fortress of Louvestein near Gorcum. His confinement was rigorous, but after a time his wife obtained permission to share his captivity, on the condition that if she came out, she should not be suffered to return.

Grotius had now before him, at thirty-six, no prospect but that of a life-long captivity. He did not abandon himself to despair, but sought refuge in returning to the classical pursuits of his youth. Several of his translations (into Latin) from the Greek tragedians and other writers, made at this time, have been printed. "The Muses," he writes to Voss, "were now his consolation, and appeared more amiable than ever."

The ingenuity of Madame Grotius at length devised a mode of escape. It had grown into a custom to send the books which he had done with in a chest along with his linen to be washed at Gorcum. After a time the warders began to let the chest pass without opening it. Madame Grotius, perceiving this, prevailed on her husband to allow himself to be shut up in it at the usual time. The two soldiers who carried the chest out complained that it was so heavy "there must be an Arminian in it." "There are indeed," said Madame Grotius, "Arminian books in it." The chest was carried to the house of a friend, where Grotius was released. He was then dressed like a mason with hod and trowel, and so conveyed over the frontier. His first place of refuge was Antwerp, from which he proceeded to Paris, where he arrived in April 1621. In October he was joined by his wife. There he was presented to the king, Louis XIII., and a pension of 3000 livres conferred upon him. French pensions were easily granted, all the more so as they were never paid. Grotius was now reduced to great straits. He looked about for any opening through which he might earn a living. There was talk of something in Denmark; or he would settle in Spires, and practise in the court there. Some little relief he got through the intervention of Étienne d'Aligre, the chancellor, who procured a royal mandate which enabled Grotius to draw, not all, but a large part of his pension. In 1623 the president Henri de Même lent him his château of Balagni near Senlis (dep. Oise), and there Grotius passed the spring and summer of that year. De Thou gave him facilities to borrow books from the superb library formed by his father.

In these circumstances the *De jure belli et pacis* was composed. That a work of such immense reading, consisting in great part of quotation, should have been written in little more than a year was a source of astonishment to his biographers. The achievement would have been impossible, but for the fact that Grotius had with him the first draft of the work made in 1604. He had also got his brother William, when reading his classics, to mark down all the passages which touched upon law, public or private. In March 1625 the printing of the *De jure belli*, which had taken four months, was completed, and the edition despatched to the fair at Frankfort. His own honorarium as author consisted of 200 copies, of which, however, he had to give away many to friends, to the king, the principal courtiers, the papal nuncio, &c. What remained he sold for his own profit at the price of a crown each, but the sale did not recoup him his outlay. But though his book brought him no profit it brought him reputation, so widely spread, and of such long endurance, as no other legal treatise has ever enjoyed.

Grotius hoped that his fame would soften the hostility of his foes, and that his country would recall him to her service. Theological rancour, however, prevailed over all other sentiments, and, after fruitless attempts to re-establish himself in Holland, Grotius accepted service under Sweden, in the capacity of ambassador to France. He was not very successful in negotiating the treaty on behalf of the Protestant interest in Germany, Richelieu having a special dislike to him. He never enjoyed the confidence of the court to which he was accredited, and frittered away his influence in disputes about precedence. In 1645 he demanded and obtained his recall. He was honourably received at Stockholm, but neither the climate nor the tone of the court suited him, and he asked permission to leave. He was driven by a storm on the coast near Dantzig. He got as far as Rostock, where he found himself very ill. Stockman, a Scottish physician who was sent for, thought it was only weakness, and that

rest would restore the patient. But Grotius sank rapidly, and died on the 29th of August 1645.

Grotius combined a wide circle of general knowledge with a profound study of one branch of law. History, theology, jurisprudence, politics, classics, poetry,—all these fields he cultivated. His commentaries on the Scriptures were the first application on an extensive scale of the principle affirmed by Scaliger, that, namely, of interpretation by the rules of grammar without dogmatic assumptions. Grotius's philological skill, however, was not sufficient to enable him to work up to this ideal.

As in many other points Grotius inevitably recalls Erasmus, so he does in his attitude towards the great schism. Grotius was, however, animated by an ardent desire for peace and concord. He thought that a basis for reconciliation of Protestant and Catholic might be found in a common piety, combined with reticence upon discrepancies of doctrinal statement. His *De veritate religionis Christianae* (1627), a presentment of the evidences, is so written as to form a code of common Christianity, irrespective of sect. The little treatise became widely popular, gaining rather than losing popularity in the 18th century. It became the classical manual of apologetics in Protestant colleges, and was translated for missionary purposes into Arabic (by Pococke, 1660), Persian, Chinese, &c. His *Via et votum ad pacem ecclesiasticam* (1642) was a detailed proposal of a scheme of accommodation. Like all men of moderate and mediating views, he was charged by both sides with vacillation. An Amsterdam minister, James Laurent, published his *Grotius papizans* (1642), and it was continually being announced from Paris that Grotius had "gone over." Hallam, who has collected all the passages from Grotius's letters in which the prejudices and narrow tenets of the Reformed clergy are condemned, thought he had a "bias towards popery" (*Lit. of Europe*, ii. 312). The true interpretation of Grotius's mind appears to be an indifference to dogmatic propositions, produced by a profound sentiment of piety. He approached parties as a statesman approaches them, as facts which have to be dealt with, and governed, not suppressed in the interests of some one of their number.

His editions and translations of the classics were either juvenile exercises prescribed by Scaliger, or "lusus poetici," the amusement of vacant hours. Grotius read the classics as a humanist, for the sake of their contents, not as a professional scholar.

His *Annals of the Low Countries* was begun as an official duty while he held the appointment of historiographer, and was being continued and retouched by him to the last. It was not published till 1657, by his sons Peter and Cornelius.

Grotius was a great jurist, and his *De jure belli et pacis* (Paris, 1625), though not the first attempt in modern times to ascertain the principles of jurisprudence, went far more fundamentally into the discussion than any one had done before him. The title of the work was so far misleading that the *jus belli* was a very small part of his comprehensive scheme. In his treatment of this narrower question he had the works of Alberico Gentili and Ayala before him, and has acknowledged his obligations to them. But it is in the larger questions to which he opened the way that the merit of Grotius consists. His was the first attempt to obtain a principle of right, and a basis for society and government, outside the church or the Bible. The distinction between religion on the one hand and law and morality on the other is not indeed clearly conceived by Grotius, but he wrestles with it in such a way as to make it easy for those who followed him to seize it. The law of nature is unalterable; God Himself cannot alter it any more than He can alter a mathematical axiom. This law has its source in the nature of man as a social being; it would be valid even were there no God, or if God did not interfere in the government of the world. These positions, though Grotius's religious temper did not allow him to rely unreservedly upon them, yet, even in the partial application they find in his book, entitle him to the honour of being held the founder of the modern science of the law of nature and nations. The *De jure* exerted little influence on the practice of belligerents, yet its publication was an epoch in the science. De Quincey has said that the book is equally divided between "empty truisms and time-serving Dutch falsehoods." For a saner judgment and a brief abstract of the contents of the *De jure*, consult J. K. Bluntschli, *Geschichte des allgemeinen Staatsrechts* (Munich, 1864). A fuller analysis, and some notice of the predecessors of Grotius, will be found in Hély, *Étude sur le droit de la guerre de Grotius* (Paris, 1875). The writer, however, had never heard of the *De jure praedae*, published in 1868. Hallam, *Lit. of Europe*, ii. p. 543, has an abstract done with his usual conscientious pains. Dugald Stewart (*Collected Works*, i. 370) has dwelt upon the confusion and defects of Grotius's theory. Sir James Mackintosh (*Miscell. Works*, p. 166) has defended Grotius, affirming that his work "is perhaps the most complete that the world has yet owed, at so early a stage in the progress of any science, to the genius and learning of one man."

The chief writings of Grotius have been named. For a complete bibliography of his works, see Lehmann, *Hugonis Grotii manes vindicati* (Delft, 1727), which also contains a full

biography. Of this Latin life De Burigny published a réchauffée in French (2 vols., 8vo, Paris, 1752). Other lives are: Van Brandt, *Historie van het Leven H. de Groot* (2 vols., 8vo, Dordrecht, 1727); Von Luden, *Hugo Grotius nach seinen Schicksalen und Schriften dargestellt* (8vo, Berlin, 1806); *Life of Hugo Grotius*, by Charles Butler of Lincoln's Inn (8vo, London, 1826). The work of the Abbé Hély contains a life of Grotius. See also *Hugo Grotius*, by L. Neumann (Berlin, 1884); *Opinions of Grotius*, by D. P. de Bruyn (London, 1894).

Grotius's theological works were collected in 3 vols. fol. at Amsterdam (1644-1646; reprinted London, 1660; Amsterdam, 1679; and again Amsterdam, 1698). His letters were printed first in a selection, *Epistolae ad Gallos* (12mo, Leiden, 1648), abounding, though an Elzevir, in errors of the press. They were collected in *H. Grotii epistolae quotquot reperiri poluerunt* (fol., Amsterdam, 1687). A few may be found scattered in other collections of *Epistolae*. Supplements to the large collection of 1687 were published at Haarlem, 1806; Leiden, 1809; and Haarlem, 1829. The *De jure belli* was translated into English by Whewell (3 vols., 8vo, Cambridge, 1853); into French by Barbeyrac (2 vols. 4to, Amsterdam, 1724); into German in Kirchmann's *Philosophische Bibliothek* (3 vols. 12mo, Leipzig, 1879).

(M. P.)

GROTTAFERRATA, a village of Italy, in the province of Rome, from which it is 13 m. S.E. by electric tramway, and 2½ m. S. of Frascati, 1080 ft. above sea-level, in the Alban Hills. Pop. (1901) 2645. It is noticeable for the Greek monastery of Basilians founded by S. Nilus in 1002 under the Emperor Otho III., and which occupies the site of a large Roman villa, possibly that of Cicero. It was fortified at the end of the 15th century by Cardinal Giuliano della Rovere (afterwards Pope Julius II.), whose arms may be seen about it. The massive towers added by him give it a picturesque appearance. The church belongs to the 12th century, and the original portal, with a mosaic over it, is still preserved; the interior was restored in 1574 and in 1754, but there are some remains of frescoes of the 13th century. The chapel of S. Nilus contains frescoes by Domenico Zampieri (Domenichino) of 1610, illustrating the life of the saint, which are among his most important works. The abbot's palace has a fine Renaissance portico, and contains an interesting museum of local antiquities. The library contains valuable MSS., among them one from the hand of S. Nilus (965); and a palaeographical school, for the copying of MSS. in the ancient style, is maintained. An *omophorion* of the 11th or 12th century, with scenes from the Gospel in needlework, and a chalice of the 15th century with enamels, given by Cardinal Bessarion, the predecessor of Giuliano della Rovere as commendatory of the abbey, are among its treasures. An important exhibition of Italo-Byzantine art was held here in 1905-1906.

See A. Rocchi, *La Badia di Grottaferrata* (Rome, 1884); A. Muñoz, *L'Art byzantin à l'exposition de Grottaferrata* (Rome, 1905); T. Ashby in *Papers of the British School at Rome*, iv. (1907).

(T. As.)

GROUCHY, EMMANUEL, Marquis de (1766-1847), marshal of France, was born in Paris on the 23rd of October 1766. He entered the French artillery in 1779, transferred to the cavalry in 1782, and to the *Gardes du corps* in 1786. In spite of his aristocratic birth and his connexions with the court, he was a convinced supporter of the principles of the Revolution, and had in consequence to leave the Guards. About the time of the outbreak of war in 1792 he became colonel of a cavalry regiment, and soon afterwards, as a *maréchal de camp*, he was sent to serve on the south-eastern frontier. In 1793 he distinguished himself in La Vendée, and was promoted general of division. Grouchy was shortly afterwards deprived of his rank as being of noble birth, but in 1795 he was again placed on the active list. He served on the staff of the Army of Ireland (1796-1797), and took a conspicuous part in the Irish expedition. In 1798 he administered the civil and military government of Piedmont at the time of the abdication of the king of Sardinia, and in 1799 he distinguished himself greatly as a divisional commander in the campaign against the Austrians and Russians. In covering the retreat of the French after the defeat of Novi, Grouchy received fourteen wounds and was taken prisoner. On his release he returned to France. In spite of his having protested against

the *coup d'état* of the 18th of Brumaire he was at once re-employed by the First Consul, and distinguished himself again at Hohenlinden. It was not long before he accepted the new régime in France, and from 1801 onwards he was employed by Napoleon in military and political positions of importance. He served in Austria in 1805, in Prussia in 1806, Poland in 1807, Spain in 1808, and commanded the cavalry of the Army of Italy in 1809 in the Viceroy Eugène's advance to Vienna. In 1812 he was made commander of one of the four cavalry corps of the Grand Army, and during the retreat from Moscow Napoleon appointed him to command the escort squadron, which was composed entirely of picked officers. His almost continuous service with the cavalry led Napoleon to decline in 1813 to place Grouchy at the head of an army corps, and Grouchy thereupon retired to France. In 1814, however, he hastened to take part in the defensive campaign in France, and he was severely wounded at Craonne. At the Restoration he was deprived of the post of colonel-general of *chasseurs à cheval* and retired. He joined Napoleon on his return from Elba, and was made marshal and peer of France. In the campaign of Waterloo he commanded the reserve cavalry of the army, and after Ligny he was appointed to command the right wing to pursue the Prussians. The march on Wavre, its influence on the result of the campaign, and the controversy to which Grouchy's conduct on the day of Waterloo has given rise, are dealt with briefly in the article Waterloo Campaign, and at length in nearly every work on the campaign of 1815. Here it is only necessary to say that on the 17th Grouchy was unable to close with the Prussians, and on the 18th, though urged to march towards the sound of the guns of Waterloo, he permitted himself, from whatever cause, to be held up by a Prussian rearguard while the Prussians and English united to crush Napoleon. On the 19th Grouchy won a smart victory over the Prussians at Wavre, but it was then too late. So far as resistance was possible after the great disaster, Grouchy made it. He gathered up the wrecks of Napoleon's army, and retired, swiftly and unbroken, to Paris, where, after interposing his reorganized forces between the enemy and the capital, he resigned his command into the hands of Marshal Davout. The rest of his life was spent in defending himself. An attempt to have him condemned to death by a court-martial failed, but he was exiled and lived in America till amnestied in 1821. On his return to France he was reinstated as general, but not as marshal nor as peer of France. For many years thereafter he was equally an object of aversion to the court party, as a member of their own caste who had followed the Revolution and Napoleon, and to his comrades of the Grand Army as the supposed betrayer of Napoleon. In 1830 Louis Philippe gave him back the marshal's bâton and restored him to the Chamber of Peers. He died at St-Étienne on the 29th of May 1847.

See Marquis de Grouchy, *Mémoires du maréchal Marquis de Grouchy* (Paris, 1873-1874); General Marquis de Grouchy, *Le Général Grouchy en Irlande* (Paris, 1866), and *Le Maréchal Grouchy du 16 au 18 juin, 1815* (Paris, 1864); *Appel à l'histoire sur les faites de l'aile droite de l'armée française* (Paris, n.d.); *Sévère Justice sur les faits ... du 28 juin au 3 juillet, 1815* (Paris, 1866); and the literature of the Waterloo campaign. Marshal Grouchy himself wrote the following: *Observations sur la relation de la campagne de 1815 par le général de Gourgaud* (Philadelphia and Paris, 1818); *Réfutation de quelques articles des mémoires de M. le Duc de Rovigo* (Paris, 1829); *Fragments historiques relatifs à la campagne et à la bataille de Waterloo* (Paris, 1829-1830, in reply to Barthélemy and Méry, and to Marshal Gérard); *Réclamation du maréchal de Grouchy* (Paris, 1834); *Plainte contre le général Baron Berthezène* (Berthezène, formerly a divisional commander under Gérard, stated in reply to this defence that he had no intention of accusing Grouchy of ill faith).

GROUND-ICE,[1] ice formed at the bottom of streams while the temperature of the water is above freezing-point. Everything points to radiation as the prime cause of the formation of ground-ice. It is formed only under a clear sky, never in cloudy weather; it is most readily formed on dark rocks, and never under any covering such as a bridge, and rarely under surface-ice. Professor Howard T. Barnes of McGill University concludes that the radiation from a river bed in cold and clear nights goes through the water in long rays that penetrate much more easily from below upwards than the sun's heat rays from above downwards, which are mostly absorbed by the first few feet of water. On a cold clear night, therefore, the radiation from the bottom is excessive, and loosely-grown spongy masses of anchor-ice form on the bottom, which on the following bright sunny day receive just sufficient heat from the sun to detach the mass of ice, which rises to the surface with considerable force. It is probable that owing to surface tension a thin film of stationary water rests upon the boulders and sand over which a stream flows, and that this, becoming frozen owing to radiation, forms

the foundation for the anchor-ice and produces a surface upon which the descending frazil-ice (see below) can lodge. The theory of radiation from the boulders is supported by the fact that as the ice is formed upon them in response to a sudden fall in the air temperature, it is only released under the influence of a strong rise of temperature during the morning. It may not rise for several days, but the advent of bright sunlight is followed by the appearance on the surface of masses of ground-ice. This ice has a spongy texture and frequently carries gravel with it when it rises. It is said that the bottom of Lake Erie is strewn with gravel that has been floated down in this way. This “anchor-ice,” as it was called by Canadian trappers, frequently forms dams across narrow portions of the river where the floating masses are caught. Dr H. Landor pointed out that the Mackenzie and Mississippi rivers, which rise in the same region and flow in opposite directions, carry ground-ice from their head-waters for a considerable distance down stream, and suggested that here and in Siberia many forms of vegetable and animal life may be distributed from a centre by this agency, since the material carried by the floating ice would contain the seeds and eggs or larvae of many forms.

Besides ground-ice and anchor-ice this formation is called also bottom-ice, ground-gru and lappered ice, the two last names being Scottish. In France it is called *glace du fond*, in Germany *Grundeis*, and in French Canada *moutonne* from the appearance of sheep at rest, since the ice formed at the bottom grows in woolly, spongy masses upon boulders or other projections.

“Frazil-ice” is a Canadian term from the French for “forge-cinders.” It is surface ice formed in spicules and carried downwards in water agitated by winds or rapids. The frazil-ice may render swiftly moving water turbid with ice crystals, it may be swirled downwards and accumulated upon the ground ice, or it may be swept under the sheet of surface-ice, coating the under surface of the sheet to a thickness as great as 80 ft. of loose spicular ice.

See W. G. Thompson, in *Nature*, i. 555 (1870); H. Landor, in *Geological Magazine*, decade II., vol. iii., p. 459 (1876); H. T. Barnes, *Ice Formation with special Reference to Anchor-ice and Frazil* (1906).

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1 The O. Eng. word *grund*, ground, is common to Teutonic languages, cf. Du. *grond*, Ger. *Grund*, but has no cognates outside Teutonic. The suggestion that the origin is to be found in “grind,” to crush small, reduce to powder, is plausible, but the primary meaning seems to be the lowest part or bottom of anything rather than grit, sand or gravel. The main branches in sense appear to be, first, bottom, as of the sea or a river, cf. the use, in the plural, for dregs; second, base or foundation, actual, as of the first or main surface of a painting, fabric, &c., or figurative, as of a principle or reason; third, the surface of the earth, or a particular part of that surface.

GROUND NUT (Earth Nut, Pistache de Terre, Monkey Nut, Pea Nut, Manilla Nut), in botany, the fruit or pod of *Arachis hypogaea* (nat. ord. Leguminosae). The plant is an annual of diffuse habit, with hairy stem, and two-paired, abruptly pinnate leaflets. The pods or legumes are stalked, oblong, cylindrical, about 1 in. in length, the thin reticulated shell containing one or two irregularly ovoid seeds. After the flower withers, the stalk of the ovary has the peculiarity of elongating and bending down, forcing the young pod underground, and thus the seeds become matured at some distance below the surface. Hence the specific and vernacular names of the plant. Originally a native of South America, it is extensively cultivated in all tropical and subtropical countries. The plant affects a light sandy soil, and is very prolific, yielding in some instances 30 to 38 bushels of nuts per acre. The pods when ripe are dug up and dried. The seeds when fresh are largely eaten in tropical countries, and in taste are almost equal to almonds; when roasted they are used as a substitute for chocolate. In America they are consumed in large quantities as the “pea-nut”; but are not much appreciated in England except by the poorer children, who know them as “monkey-nuts.” By expression the seeds yield a large quantity of oil, which is used by natives for lamps, as a fish or curry oil and for medicinal purposes. The leaves form an excellent food for cattle, being very like clover.

Large quantities of seeds are imported to Europe, chiefly to Marseilles, London and Hamburg, for the sake of their contained oil. The seeds yield from 42 to 50% of oil by cold expression, but a larger quantity is obtained by heat, although of an inferior quality. The seeds being soft facilitate mechanical expression, and where bisulphide of carbon or other solvent is used, a very pure oil is obtained.

The expressed oil is limpid, of a light yellowish or straw colour, having a faint smell and bland taste; it forms an excellent substitute for olive oil, although in a slight degree more prone to rancidity than the latter. Its specific gravity is 0.916 to 0.918; it becomes turbid at 3° C., concretes at +3° to −4° C., and hardens at +7° C. It is a non-drying oil. Ground nut oil consists of (1) oleic acid ($C_{18}H_{34}O_2$); (2) hypogaeic acid ($C_{16}H_{30}O_2$), by some supposed to be identical with a fatty acid found in whale oil; (3) palmitic acid ($C_{16}H_{32}O_2$); and (4) arachic acid ($C_{20}H_{40}O_2$). The oil is used in the adulteration of gingelly oil.

GROUND-PEARL, the glassy secretion forming the pupacase of coccid insects of the genus *Margarodes*, belonging to the homopterous division of the Hemiptera.

GROUND RENT. In Roman law, ground rent (*solarium*) was an annual rent payable by the lessee of a *superficies* or perpetual lease of building land. In English law, it appears that the term was at one time popularly used for the houses and lands out of which ground rents issue as well as for the rents themselves (cf. *Maundy* v. *Maundy*, 2 Strange, 1020); and Lord Eldon observed in 1815 that the context in which the term occurred may materially vary its meaning (*Stewart* v. *Alliston*, 1 Mer. 26). But at the present time the accepted meaning of ground rent is the rent at which land is let for the purpose of improvement by building, *i.e.* a rent charged in respect of the land only and not in respect of the buildings to be placed thereon. It thus conveys the idea of something lower than a rack rent (see RENT); and accordingly if a vendor described property as property for which he paid a "ground rent," without any further explanation of the term, a purchaser would not be obliged to accept the property if it turned out to be held at a rack rent. But while a rack rent is generally higher in amount than a ground rent, the latter is usually better secured, as it carries with it the reversionary interest in buildings and improvements put on the ground *after* the date at which the ground rent was fixed, and accordingly ground rents have been regarded as a good investment. Trustees empowered to invest money on the security of freehold or copyhold hereditaments, may invest upon freehold ground rents reserved out of house property. In estimating the amount that may be so invested, account may be taken of the value of the houses, as, if the ground rents are not paid, the landlord can re-enter. Again, where a settlement authorizes trustees to purchase lands or hereditaments in fee-simple or possession, a purchase of freehold ground rents has been held to be proper. A devise of "ground rent" carries not only the rent but the reversion. Where a tenant is compelled, in order to protect himself in the enjoyment of the land in respect of which his rent is payable, to pay ground rent to a superior landlord (who is of course in a position to distrain on him for it), he is considered as having been authorized by his immediate landlord to apply his rent, due or accruing due, in this manner, and the payment of the ground rent will be held to be payment of the rent itself or part of it. A lodger should make any payment of this character under the Law of Distress Amendment Act 1908 (s. 3; and see RENT). Ground rents are apportionable (see APPORTIONMENT).

In Scots law, the term "ground rent" is not employed, but its place is taken, for practical purposes, by the "ground-annual," which bears a double meaning. (i.) At the time of the Reformation in Scotland, the lands of the Church were parcelled out by the crown into various lordships—the grantees being called Lords of Erection. In the 17th century these Lords of Erection resigned their superiorities to the crown, with the exception of the feu-duties, which were to be retained till a price agreed upon for their redemption had been paid. This reserved power of redemption was, however, resigned by the crown on the eve of the Union and the feu-duties became payable in perpetuity to the Lords of Erection as a "ground-annual." (ii.) Speculators in building ground usually grant sub-feus to builders at a high feu-duty. But where sub-feus are prohibited—as they might be, prior to the Conveyancing (Scotland) Act 1874—and there is much demand for building ground, the feuars frequently stipulate for an annual rent from the builders rather than for a price payable at once. This annual rent is called a "ground-annual." Interest is not due on arrears of ground-annuals. Like other real burdens, ground-annuals may now be freely assigned and conveyed (Conveyancing (Scotland) Act 1874, s. 30).

The term “ground rent” in the English sense does not seem to be generally used in the United States, but is applied in Pennsylvania to a kind of tenure, created by a grant in fee simple, the grantor reserving to himself and his heirs a certain rent, which is the interest of the money value of the land. These “ground rents” are real estate, and, in cases of intestacy, go to the heir. They are rent services and not rent charges—the statute *Quia Emptores* never having been in force in Pennsylvania, and are subject to all the incidents of such rents (see RENT). The grantee of such a “ground rent” may mortgage, sell, or otherwise dispose of the grant as he pleases; and while the rent is paid the land cannot be sold or the value of the improvements lost.

A ground rent being a freehold estate, created by deed and perpetual in duration, no presumption could, at common law, arise from lapse of time, that it had been released. But now, by statute (Act of 27th of April 1855, s. 7), a presumption of release or extinguishment is created where no payment, claim or demand has been made for the rent, nor any declaration or acknowledgment of its existence made or given by the owner of the premises subject to it, for the period of 21 years. Ground rents were formerly irredeemable after a certain time. But the creation of irredeemable ground rents is now forbidden (Pennsylvania Act 7 Assembly, 22nd of April 1850).

For English Law see Foa, *Landlord and Tenant* (3rd ed., London, 1901); Scots Law, Bell’s *Principles* (10th ed., Edinburgh, 1899); American Law, Bouvier, *Law Dict.* (Boston and London, 1897).

(A. W. R.)

GROUNDSEL (Ger. *Kreuzkraut*; Fr. *seneçon*), *Senecio vulgaris*, an annual, glabrous, or more or less woolly plant of the natural order Compositae, having a branched succulent stem 6 to 15 in. in height, pinnatifid irregularly and coarsely-toothed leaves, and small cylindrical heads of yellow tubular florets enveloped in an involucre of numerous narrow bracts; the ribbed fruit bears a soft, feathery, hoary tuft of hairs (*pappus*). The plant is indigenous to Europe, whence it has been introduced into all temperate climates. It is a troublesome weed, flowering throughout the year, and propagating itself rapidly by means of its light feathery fruits; it has its use, however, as a food for cage-birds. *Senecio Jacobaea*, ragwort, is a showy plant with heads of bright yellow flowers, common in pastures and by roadsides. The genus *Senecio* is a very large one, widely distributed in temperate and cold climates. The British species are all herbs, but the genus also includes shrubs and even arborescent forms, which are characteristic features of the vegetation of the higher levels on the mountains of tropical Africa. Many species of the genus are handsome florists’ plants. The groundsel tree, *Baccharis halimifolia*, a native of the North American sea-coast from Massachusetts southward, is a Composite shrub, attaining 6 to 12 ft. in height, and having angular branches, obovate or oblong-cuneate, somewhat scurfy leaves, and flowers larger than but similar to those of common groundsel. The long white pappus of the female plant renders it a conspicuous object in autumn. The groundsel tree has been cultivated in British gardens since 1683.

The Old English word, represented by “groundsel,” appears in two forms, *grundeswylige* and *gundæswelgiæ*; of the first form the accepted derivation is from *grund*, ground, and *swelgau*, to swallow; a weed of such rapid growth would not inaptly be styled a “ground-swallower.” If the form without the *r* be genuine, the word might mean “pus-absorber” (O.E. *gund*, filth, matter), with reference to its use in poultices for abscesses and the like.

GROUND-SQUIRREL, one of the names for a group of (chiefly) North American striped terrestrial squirrel-like rodents, more generally known as chipmunks. They are closely allied to squirrels, from which they are distinguished by the possession of cheek-pouches for the storage of food. The sides, or the sides and back, are marked with light stripes bordered by dark bands; the ears are small, and without tufts; and the tail is relatively short. With the exception of one Siberian species (*Tamias asiaticus*), ground-squirrels are confined to North America, where they are represented by a large number of species and races, all referable to

the genus *Tamias*. In North America ground-squirrels are migratory, and may be abundant in a district one year, and absent the next. They feed on nuts, beechmast, corn and roots, and also on grubs. With the assistance of their cheek-pouches they accumulate large supplies of food for the winter, during which season they lie dormant in holes. Although generally keeping to the ground, when hunted they take to trees, which they climb in search of food. One of the longest known American species is *T. striatus*.

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