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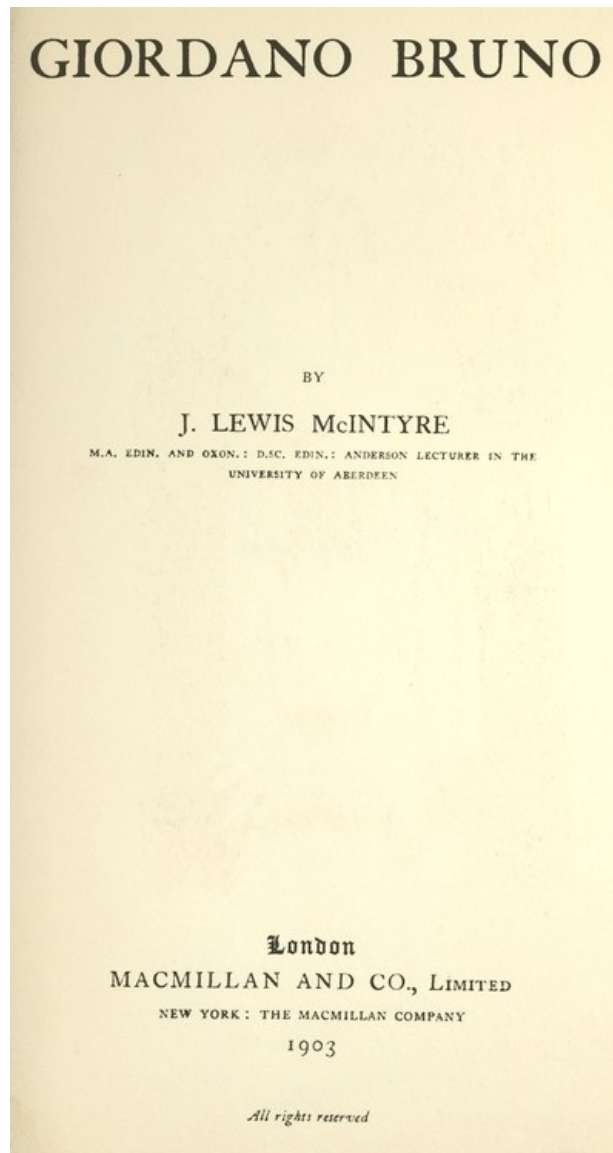
Author: J. Lewis McIntyre

Release date: September 19, 2014 [EBook #46901]

Language: English

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Title Page

GIORDANO BRUNO





Giordano Bruno.
Statue by Ettore Ferracci.

GIORDANO BRUNO

BY

J. LEWIS McINTYRE

M.A. EDIN. AND OXON.: D.SC. EDIN.: ANDERSON LECTURER IN THE
UNIVERSITY OF ABERDEEN

London

MACMILLAN AND CO., LIMITED
NEW YORK: THE MACMILLAN COMPANY

1903

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PREFACE

This volume attempts to do justice to a philosopher who has hardly received in England the consideration he deserves. Apart from the *Life of Giordano Bruno*, by I. Frith (Mrs. Oppenheim), in the English and Foreign Philosophical Library, 1887, there has been no complete work in our language upon the poet, teacher, and martyr of Nola, while his philosophy has been treated only in occasional articles and reviews. Yet he is recognised by the more liberal-minded among Italians as the greatest and most daring thinker their country has produced. The pathos of his life and death has perhaps caused his image to stand out more strongly in the minds of his countrymen than that of any other of their leaders of thought. A movement of popular enthusiasm, begun in 1876, resulted, on 9th June 1889, in the unveiling of a statue in Rome in the Campo dei Fiori, the place on which Bruno was burned. Both in France and in Germany he has been recognised as the prophet, if not as the actual founder, of modern philosophy, and as one of the earliest apostles of freedom of thought and of speech in modern times.

The [first part](#) of the present work—the *Life of Bruno*—is based upon the documents published by Berti, Dufour, and others, and on the personal references in Bruno's own works. I have tried to throw some light on Bruno's life in England, on his relations with the French Ambassador, Mauvissière, and on his share in some of the literary movements of the time. I have, however, been no more successful than others in finding any documents referring directly to Bruno's visit to England.

In the [second part](#)—*The Philosophy of Bruno*—I have sought to give not a systematic outline of Bruno's philosophy as a whole under the various familiar headings, which would prove an almost impossible task, but a sketch, as nearly as possible in Bruno's own words, of the problems which interested this mind of the sixteenth century, and of the solutions offered. The [first chapter](#) points out the sources from which Bruno derived the materials of his thinking. The succeeding chapters are devoted to some of the main works of Bruno,—the *Causa* ([Chapter II.](#)), *Infinito* and *De Immenso* ([Chapters III.](#) and [IV.](#)), *De Minimo* ([Chapter V.](#)), *Spaccio* ([Chapter VI.](#)), and *Heroici Furori* ([Chapter VII.](#)),—and contain as little as possible of either criticism or comment, except in so far as these are implied in the selection and arrangement of the material. I have adopted this method partly because Bruno's works are still comparatively unknown to the English reader, and partly because his style, full as it is of obscurities, redundances, repetitions, lends itself to selection, but not easily to compact exposition. Several phases of Bruno's activity I have left almost untouched—his poetry, his mathematical theories, his art of memory. The [eighth chapter](#) turns upon his philosophy of religion, about which there has been much controversy; while the [last](#) attempts to bring him into relation and comparison with some of the philosophers who succeeded him. I subjoin a [list of works and articles](#) which are of importance for the study of Bruno. Throughout I have referred for Bruno's works to the recent Italian edition of the Latin works, issued at the public expense, 1879 to 1891 (three volumes in eight parts, with introductions, etc.), and to Lagarde's edition of the Italian works—Gotha, 1888. Of the latter there are two volumes, but the paging is continuous from one to the other, page 401 beginning the second volume.

J. LEWIS M'INTYRE.

UNIVERSITY OF ABERDEEN,
16th July 1903.

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PART I

LIFE OF BRUNO

In 1548, at a stormy period of the history of Italy, Bruno was born in the township of Nola, lying within the kingdom of Naples, which at that time was under Spanish rule. His father, Giovanni, was a soldier, probably of good family, and in deference, it may be supposed, to the King of Spain, the son was named Filippo; the more famous name of Giordano was only assumed when he entered a religious order. Through his mother, Fraulissa Savolina, a German or Saxon origin has been claimed for Bruno; there were several inhabitants of Teutonic name in the village of his birth—suggesting a settlement of *Landknechts*,—and the name, Fraulissa, has a German ring;^[1] but Bruno himself nowhere in the addresses or works published in Germany makes any hint of his own connection with the race, while the name was probably a generic term for the wife of a soldier, borrowed from the Swiss or German men-at-arms.^[2]

Birth and Family.

Their home was on the lower slopes of Mount Cicala, which rises above Nola, and amid its laughing gardens Bruno first imbibed a love of nature, which marked him out from so many of his contemporaries. The soil of Nola is among the most fertile of all Italy, and the pleasant plain in which it lies is ringed with hills which lie shadowy under the clear sky; most prominent and most mysterious is Vesuvius, a few miles to the south. But the charms of natural beauty in Nola were surpassed by those of picturesque antiquity: the half-mythical Pelasgians founded it before the walls of Rome were begun; they were followed by the Chalcidians of Cuma, from whom the Nolans inherited a Greek spirit, calm yet quick, eager in the pursuit of wisdom and in the love of beauty, which down even to the 16th century distinguished them above other Italians. There followed a chequered history in which the Samnites, the early Romans, Hannibal, Sulla, and Spartacus, played successive parts. Nola was the death-place of Augustus, and to that fact owed its greatness in Imperial times, when its two great amphitheatres and multitude of beautiful temples topped a great city, shut in by massive walls, with twelve gates that opened to all parts of Italy. Evil times were to come; Alaric, the Saracens, Manfred, and others had their will of Nola, and earthquakes, flood, and plague reduced it by the end of the 15th century to one tenth of its former self. It had its own martyrs, for the old faith and for the new; one of the latter, Pomponio Algerio, suffered during Bruno's lifetime a fate that foreshadowed his own; accused while a student at Padua of contempt for the Christian religion, he was imprisoned in Padua, Venice, and Rome, and finally burnt at the stake. Its sons never lost their love for the mother-town; Bruno speaks of it always with affection, as to him "the garden of Italy"; of a nephew of Ambrogio Leone, the historian of its antiquities, we are told that, on returning to Nola after a few days' absence, seeming ill with longing, he threw himself on the earth and kissed it with unspeakable joy.^[3] Perhaps the suggestion of Bartholmèss is not groundless, that the volcanic soil and air of Nola influenced the character of the people as of the wine. "Hence the delicacy of their senses, vivacity of gesture, mobility of humour, and passionate ardour of spirit."^[4]

Nola.

Of the childhood of Bruno little is to be learned. Cicala, his home, he describes as a "little village of four or five cottages not too magnificent."^[5] In all probability his upbringing was simple, his surroundings homely. We need not go further, and suppose that his surroundings were not only homely, but degraded and vicious.^[6] His father, although a soldier by profession, seems to have been a man of some culture; at least he was a friend of the poet Tansillo, who excited the admiration of the young Bruno, and first turned his mind towards the Muses. Tansillo's poetry, following the taste of the age, was not too refined, but its passion called forth a ready reflection in the ardent nature of the lad. It was perhaps the only door to the higher artistic life of the time which was open to Bruno; the neighbours, if we may judge from satiric references in the Italian Dialogues, were of a rough homely type. Bruno tells, for example,^[7] how Scipio Savolino (perhaps his uncle) used to confess all his sins to Don Paulino, Curé of S. Primma that is in a village near Nola (Cicala), on a Holy Friday, of which "though they were many and great," his boon companion the Curé absolved him without difficulty. Once was enough, however, for in the following years, without many words or circumstances, Scipio would say to Don Paulino, "Father mine, the sins of a year ago to-day, you know them"; and Don Paulino would reply, "Son, thou knowest the absolution of a year ago to-day—go in peace and sin no more!"

Childhood of Bruno.

One incident of Bruno's childhood, which has been thought a promise of extraordinary powers, he himself relates in the *Sigillus Sigillorum*. Describing the different causes of "concentration,"^[8] (*Contractio*), he instances fear among them:—"I myself, when still in swaddling clothes, was once left alone, and saw a great and aged serpent, which had come out of a hole in the wall of the house; I called my father, who was in the next room; he ran with others of the household, sought for a stick, growled at the presence of the serpent, uttering words of vehement anger, while the others expressed their fear for me,—and I understood their words no less clearly, I believe, than I should understand them now. After several years, waking up as if from a dream, I recalled all this to their memory, nothing being further from the minds of my parents; they were greatly astonished."^[9] As well they might be! It is hardly right, however, to see in the story evidence of marvellous faculty showing itself in infancy, beyond that of an impressionable and tenacious mind. No doubt the drama had been repeated many times by the parents for behoof of visitors.^[10]

Superstitious beliefs abounded among Bruno's fellow-countrymen; many of them clung to him through life, were moulded by him into a place in his philosophy, and bore fruit in his later teaching and practice of natural magic. Thus we are told how the spirits of the earth and of the

waters may at times, when the air is pure and calm, become visible to the eye. He himself had seen them on Beech Hill, and on Laurel Hill, and they frequently appeared to the inhabitants of these places, sometimes playing tricks upon them, stealing and hiding their cattle, but afterwards returning the property to their stalls. Other spirits were seen about Nola by the temple of Portus in a solitary place, and even under a certain rock at the roots of Mount Cicala, formerly a cemetery for the plague-stricken; he and many others had suffered the experience when passing at night of being struck with a multitude of stones, which rebounded from the head and other parts of the body with great force, in quick succession, but did no injury either to him or to any of the others.^[11] It was at Nola that Bruno saw what seemed a ball or beam of fire, but was “really” one of the living beings that inhabit the ethereal space; “as it came moving swiftly in a straight line, it almost touched the roofs of the houses and would have struck the face of Mount Cicala, but it sprang up into the air and passed over.”^[12] To understand the mind of Bruno, it is necessary to remember the atmosphere of superstition in which he lived as a child.

One lesson from nature was early implanted which gave body and form to Bruno’s later views: he had seen from Cicala, the fair mount, how Vesuvius looked dark, rugged, bare, barren, and repellent; but when later he stood on the slopes of Vesuvius itself, he discovered that it was a perfect garden, rich in all the fairest forms and colours, and luxurious bounty of fruits, while now it was his own beloved hill, Cicala, that gloomed dim and formless in the distance. He learnt once for all that the divine majesty of nature is everywhere the same, that distance alters the look but never the nature or substance of things, that the earth is everywhere full of life,—and beyond the earth the whole universe, he inferred, must be the same.^[13]

Unity of Nature.

When about eleven years of age, Bruno passed from Nola to Naples in order to receive the higher education of the day—Humanity, Logic, and Dialectic,—attending both public and private courses; and in his fifteenth year (1562 or 1563) he took the habit of St. Dominic, and entered the monastery of that order in Naples. Of his earlier teachers he mentions only two,—“il Sarnese,” who is probably Vincenzo Colle da Sarno, a writer of repute, and Fra Theophilo da Vairano, a favourite exponent of Aristotle, who was afterwards called to lecture in Rome. Much ingenuity has been exercised in attempting to find a reason for Bruno’s choice of a religious life; but the Church was almost the *only* career open to a clever and studious boy, whose parents were neither rich nor powerful. The Dominican Order into which he was taken, although the narrowest, and the most bigoted,^[14] was all-powerful in the kingdom, and directed the machinery of the Inquisition. Naples was governed by Spain with a firm hand, and the Dominican was the chosen order of Spain. Just at this time there were riots against the Inquisition, to which an end was put by the beheading and burning of two of the ringleaders.^[15] The Waldensian persecution was then fiercer and more brutal than it had ever been; on a day of 1561 eighty-eight victims were butchered with the same knife, their bodies quartered, and distributed along the road to Calabria.^[16] Plague, famine, earthquake, the Turks, and the Brigands, under “King” Marconi, swelled the wave of disaster that had come upon the kingdom of Naples. Little wonder then that one whose aim was a life of learning should seek it under the mantle of the strong Dominican order.

Naples.

1563.

The Dominicans.

The cloister stood above Naples, amidst beautiful gardens, and had been the home of St. Thomas Aquinas, whose gentle spirit still breathed within its walls. In its church, amid the masterpieces of Giovanni Merliano of Nola, “the Buonarrotti of Naples,” stood the image of Christ which had spoken with the Angelic Doctor, and had approved his works. Long afterwards, at his trial, Bruno spoke of having the works of St. Thomas always by him, “continually reading, studying and re-studying them, and holding them dear.” On his entry into the order, Bruno laid down, as was customary, the name Filippo, and took that of Giordano, by which, except for a short period, he was thenceforth known. After his year’s probation he took the vows before Ambrosio Pasqua, the Prior, and in due course, probably about 1572, became priest, his first mass being said in Campagna.^[17]

The Cloister.

1572.

It was the age of the counter-reformation which had been inaugurated by Loyola, its course set by the decision of the Council of Trent “to erase with fire and sword the least traces of heresy,” and Bruno early began to feel his fetters, and to suffer from their weight. During his noviciate even, a writing had been drawn up against him, because he had given away some images of the saints, retaining for himself only a crucifix, and again because he had advised a fellow-novice, who was reading *The Seven Delights of the Madonna* to throw it aside and take rather *The Lives of the Fathers* or some such book. But the writing was merely intended to terrify him, and the same day was torn up by the Prior.^[18] In 1576, however, the suspicions of his superiors took a more active turn, and a process was instituted in which the matter of the noviciate was supported by charges of later date, of which Bruno never learned the details. He believed the chief count was an apology for the Arian heresy made by him in the course of a private conversation, and rather on the ground of its scholastically correct form than on that of its truth.^[19] In any case Bruno left Naples while the process was pending, and came to Rome, where he put up in the cloister of Minerva. His accusers did not leave him in peace, however: a third process was threatened at Rome with 130 articles;^[20] and, on learning from a friendly source that some works of St. Chrysostom and St. Hieronymus, with a commentary of the arch-heretic Erasmus, had been discovered—he had, as he supposed, safely disposed of them before leaving Naples,—Bruno yielded to discretion, abandoned his monkly habit, and escaped from Rome. From this time began a life of restless wandering throughout Europe which ended only after sixteen years, when he fell into the power of the Inquisition at Venice.

Processes for heresy.

1576.

Rome.

Bruno, who resumed for the time his baptismal name of Filippo, journeyed first to the picturesque little town of Noli, in the Gulf of Genoa, whither a more famous exile, Dante, had also come. There he lived for four or five months, teaching grammar to boys, and “the Sphere”—that is, astronomy and cosmography, with a dash of metaphysics,—to certain gentlemen. Thence he came to Savona, to Turin,^[21] and to Venice. In Venice six weeks were spent, probably in the vain attempt to find work—the printing offices and the schools were closed on account of the plague which was carrying off thousands of the inhabitants; but the time was utilised in printing the first of his books—no longer extant—on the *Signs of the Times*,^[22] written, like so many other works of other people, to put together a few “danari.” It was shown to a reverend Father Remigio of Florence, therefore was probably orthodox, or its unorthodoxy was veiled. This work may have been the first of Bruno’s writings on the art of memory or on Lully’s art of knowing. Another work belonging to this early period was the *Ark of Noah*. It was probably written before he left Naples, and was dedicated to Pope Pius V., but is not known to have been published: its title is that of a mystical writing of Hugo of St. Victor, but according to the account in the *Cena*,^[23] it was an allegorical and probably satirical work, somewhat after the fashion of Bruno’s *Cabala*:—The animals had assembled to settle a disputed question of rank, and the ass was in great danger of losing his pre-eminent post,—in the poop of the Ark,—because his power lay in hoofs rather than in horns; when we consider Bruno’s frequent and bitter invocations of Asinity, we can hardly avoid seeing in the work an allusion to the credulity and ignorance of the monkhood.

Noli.

1576?

Savona. Turin.
Venice.

“From Venice,”^[24] Bruno tells us, “I went to Padua, where I found some fathers of the order of St. Dominic, whom I knew; they persuaded me to resume the habit, even though I should not wish to return to the order, as it was more convenient for travel: with this idea I went to Bergamo, and had a robe made of cheap white cloth, placing over it the *scapular* which I kept when I left Rome.” On his way to Bergamo he seems to have touched at Brescia and Milan, at the former place curing, “with vinegar and polypod,” a monk who claimed to have the spirit of prophecy.^[25] At Milan he first heard of his future patron and friend, Sir Philip Sidney.^[26] From Bergamo he was making for Lyons, but at Chambéry was warned that he would meet with little sympathy there, and turned accordingly towards Geneva, the home of exiled reformers of all nationalities, but especially of Italians. It is uncertain how the time was distributed among these places,—possibly Bruno spent a winter, as Berti suggests, at Chambéry, having crossed the Alps the previous autumn;—what *is* certain is, that he arrived at Geneva in April or May of 1579. Under the date May 22, of that year, in the book of the Rector of the Academy at Geneva, is inscribed the name *Philippus Brunus*, in his own hand. On his arrival at the hostelry in Geneva, he was called upon by a distinguished exile and reformer, the Marquis of Vico, a Neapolitan. To the court at Venice, Bruno gave the following account of this visit and of his life in Geneva:—“He asked me who I was, and whether I had come to stay there and to profess the religion of the city, to which, after I had given an account of myself and of my reasons for abandoning the Order, I said that I had no intention of professing the religion of the city, not knowing what it was, and that therefore I wished rather to remain living in freedom and security, than in any other manner. I was persuaded, in any case, to lay aside the habit I wore; so I had made for myself from the cloth a pair of trows and other things, while the Marquis himself, with other Italians, gave me a sword, hat, cape, and other necessaries of clothing, and enabled me to support myself so far by correcting proofs. I stayed about two months, and attended at times the preachings and discussions, both of Italians and Frenchmen who lectured and preached in the city; among others, I heard several times Nicolo Balbani of Lucca, who read on the epistles of St. Paul, and preached the Gospels; but having been told that I could not remain there long if I did not make up my mind to adopt the religion of the city, for if not I should receive no assistance, I resolved to leave.”^[27] When the inscription of Bruno’s name in the book of the Rector of the Academy was found, a doubt appeared to be thrown upon the truth or frankness of this evidence about himself. The regulations of 1559 had made it necessary for intending members to accept and sign the Calvinist confession of faith; but from 1576 onward, it was only required that they should belong to the community, a condition Bruno fulfilled by attending the ministrations of Nicolo Balbani at the Italian Church; this would account also for his name being in the list of the Protestant refugees. The real cause of his departure from Geneva has, however, been revealed by the documents which Dufour published in 1884.^[28] On Thursday August 6, 1579, “one Philippe Jordan called Brunus, an Italian,” was brought before the Council, for having “caused to be printed certain replies and invectives against M. de la Faye, enumerating twenty errors made by the latter in one of his lectures.” De la Faye was then Professor of Philosophy in the Academy, of which in 1580 he became Rector, resigning that post for the theological chair a few years later. His one title to fame is, that he was the biographer of Béza, and he was in no sense a strong man; all the more bitter and intense was his anger at the intruding Italian who criticised his views, and—a far graver crime—disparaged his learning. Bruno, heard before a body of councillors, and having confessed his fault, was to be set free on giving thanks to God and an apology to M. de la Faye, admitting his fault before the

Padua.

Brescia.

Milan.

Bergamo.

Chambéry.

Geneva.

May 1579.

Did Bruno adopt
Calvinism?

Freedom of speech.

De la Faye.

Consistory (the governing body of the Church in Geneva), and tearing up the defamatory libel.^[29] But when he did appear, on August 13, the philosopher adopted a different tone:—"Philippe Brun appeared before the Consistory—to admit his fault, in so far as he had erred in doctrine, and called the ministers of the Church of Geneva '*pedagogues*,' asserting that he neither would excuse nor condemn himself in that, for it had not been reported truly, although he understood that one, Anthony de la Faye, had made such a report. Inquired whom he had called pedagogues, he replied with many excuses and assertions that he had been persecuted, making many conjectures and numerous other accusations."—Finally, "it was decided that he be duly admonished, that he have to admit his fault, and that, should he refuse to do so, he be forbidden communion, and sent back again to the Council, who are prayed not to endure such a person, a disturber of the school; and in the meantime he shall have to admit his fault. He replied that he repented of having committed the fault, for which he would make amends by a better conversation, and further confessed that he had uttered calumny against De la Faye. The admonitions and exclusions from the communion were carried out, and he was sent back with admonitions."^[30] Apparently these steps were effective; the required apology was made, and on August 27 Bruno was absolved from the form of excommunication passed upon him. No doubt, however, life in Geneva was made less easy for him, and he left soon after. The sentence of excommunication passed by the Consistory—the only one within its power—does not prove that Bruno was a full member of the Protestant community, nor that he partook of the communion, which at his trial in Venice he absolutely denied ever having done; but formal excommunication must have entailed many unpleasantnesses, so that his appeal for remission is quite comprehensible. His unfortunate experiences in Geneva account, however, for the extreme dislike of Calvinism which his writings express. Of the two reformed schools, Lutheranism was by far the more tolerant, and gave him, later, the more cordial welcome. Calvin, we must remember, whose spirit continued in Theodore Béza, had written a pamphlet on Servetus, a "faithful exposition of the errors of Michael Servetus, a short refutation of the same, in which it is shown to be lawful to coerce heretics by the sword." It was more probably, however, Bruno's attitude towards the Aristotelian philosophy which brought him into conflict with the authorities: Geneva was as thoroughly convinced of the all-wisdom of Aristotle as Rome.^[31] Béza had written to Ramus that they had decided once for all, *ne tantillum ab Aristotelis sententiâ deflectere*, and Arminius, when a youth of twenty-two, was expelled from Geneva for teaching the Dialectic of Ramus.

IV

After a short stay in Lyons, where “he could not make enough to keep him alive,” Bruno passed to Toulouse, which boasted then of one of the most flourishing universities in the world. In his account of his life before the Venetian tribunal, he gives two years and a half to Toulouse, but he must have left it before the end of 1581, so that his actual stay was only two years. While he was holding private classes on the Sphere, and other philosophical subjects, a chair at the University fell vacant. Bruno was persuaded to become a candidate; to that end he took a Doctorate (in Theology), and was allowed to compete. By the free election of the students, as the custom was, he was chosen for the chair, and thereafter for two sessions lectured on Aristotle’s *De Anima* and on other matters. Part of these lectures is perhaps given to us in the works published afterwards at Paris. It was fortunate that the University did not require of its ordinary professors that they should attend mass, as was the case, for example, at the Sorbonne. Bruno could not have done so owing to his excommunication, but that he was unconscious of any want of sympathy towards the Catholic Church is shown by his visit in Toulouse to the confessional of a Jesuit.

Lyons.
Toulouse.
1579–81

The city was not generally favourable to heretics, and in 1616 Lucilio Vanini was burnt there for his opinions. A cancelled phrase in the evidence suggests that Bruno’s departure from Toulouse was owing to disputes and difficulties regarding his doctrine, but his alleged reason was the civil war that was then raging in the south of France, with Henry of Navarre in the field. While at Toulouse, Bruno seems to have completed a work in more than one volume, the *Clavis Magna*, or “Great Key,” a general, and as Bruno thought, a final textbook on the art of memory:—“All the ideas of the older writers on this subject (so far as we are able to make out from the books that have come to our hands), their doctrines and methods, have their fitting place in our invention, which is a superlatively pregnant one, and has appropriated to it the book of the Great Key.”^[32] One volume only, it appears, was published by Bruno, and that in England, the *Sigillus Sigillorum*.

To Paris Bruno came about the close of 1581, and almost at once sprang into fame. A course of thirty lectures on “The thirty divine attributes” (as given by Thomas Aquinas) brought him the offer of an ordinary professorship, but this he could not take, being unable to attend mass. However, his fame reached the ears of the king, Henry the Third, who summoned him to his presence, to know among other things “whether the memory Bruno had, and the art of memory he professed, were natural or due to magic.” Bruno proved to him that a powerful memory was a natural product, and dedicated to him a book on the Art of Memory. Henry III. was the son of an Italian mother, and had a keen, if uncritical and dilettante, love of learning. At the time Bruno arrived in Paris philosophy was one of the king’s chief hobbies, and the fact had a great influence on Bruno’s future. During his stay in Paris Bruno published several works, of which the first perhaps was the “Shadows of Ideas” (*De Umbris Idearum*), 1582, dedicated to Henry III., along with which, but without a separate frontispiece, was the *Art of Memory (Ars Memoriae Jordani Brunii)*; there followed “The Incantation of Circe” (*Cantus Circæus*), 1582, dedicated to Prince Henry of Angoulême, and edited by Regnault. The *De Umbris* gives the metaphysical basis of the art of memory, the *Ars Memoriae* a psychological analysis of the faculty, and an account of the theory of the art itself, while the *Cantus Circæus* offers first a practical application, and secondly a more elementary account of the theory and practice of the system.

Works published in Paris.
<i>De Umbris.</i>
<i>Ars Memoriae.</i>
<i>Cantus Circæus.</i>

Obscurity was, in those days of pedantry, one of the safest ways of securing a hearing: there is nothing of value in Bruno’s art except the philosophy by which he sought to support it—a renovated Neoplatonism. It has been pointed out, however, “that the art was a convenient means of introducing Bruno to strange universities, gaining him favour with the great, or helping him out of pressing money troubles. It was his exoteric philosophy with which he could carefully drape his philosophy of religion hostile to the Church, and ride as a hobby horse in his unfruitful humours.”^[33] There can be no question of Bruno’s own belief in it; it was not, for example, a cipher language by which he covered his real thoughts: the Copernican theory is not, as Berti says, absent from the Parisian writings, rather it is forced obtrusively into them.^[34]

In Paris was published also the “Compendious Architecture” (*De Compendiosâ Architecturâ et Complemento Artis Lullii*), 1582, dedicated to Giovanni Moro, the Venetian Ambassador in Paris. It is the earliest of the Lullian works in which Bruno expounds or comments upon the art of Raymond Lully, a logical calculus and mnemonic scheme in one, that attracted many imitators up to and after Bruno’s time. In the same year appeared a work of a very different stamp, *Il Candelaio*, or “The Torchbearer,” “a comedy by Bruno of Nola, *Accademico di nulla academia, detto il fastidito: In tristitia hilaris, hilaritate tristis.*” It is a satire upon some of the chief vices of the age—in the forefront pedantry, superstition, and sordid love. Without great dramatic power—the characters are personified types, not individuals—it has been judged to be second to none of the comedies of the time, in spirit, wit, and pert comedy. It certainly excels in many respects the *Cortegiana* of Aretino, to which it is similar in character. It is equally realistic in the sense that it “calls a spade a spade,” and does not shrink from representing vice as speaking in its own language. Bruno is not, however, to be blamed for an obscenity which was *de rigueur* in the literature of the time. But although the humour is broad and occasionally amusing, there is no grace, no lighter touch; the

<i>De Compendiosâ Architecturâ, etc.</i>
<i>Il Candelaio.</i>

picture is all dark. The attack upon the pedant, however, strikes a keynote of Bruno's life; in him he saw the greatest enemy his teaching had to face, and therefore he struck at him whenever the opportunity offered.

Owing perhaps to some of these works, Bruno was granted an Extraordinary Readership at the university. There were, however, two universities in Paris, and it is uncertain at which Bruno taught: they were the Sorbonne, catholic and conservative, the censorship of which must have passed his Parisian works, and the College of France—following the liberal policy of its founder, Francis II., declaring war against pedantry in general, and the Jesuit Society in particular.^[35] As has been said, Bruno was at this time eager to be taken back into the fold of the Church, and turned to the Jesuits for assistance, so that the latter college could hardly have been his habitation; on the other hand, his revolutionary teaching could not fail in the end to excite the indignation of the Sorbonne pupils: Aristotle was, here as elsewhere, "divine." Yet when Bruno returned to Paris in 1585, and when he was on the eve of a second departure, he recalled with pleasure the humanity and kindness shown to him by rectors and professors on his first visit. They had honoured him by "the continued presence of the more learned at his lectures both public and private, so that any title rather than that of stranger was befitting him with this kindly parent of letters."^[36] And Nostitz, one of Bruno's pupils, remembered with admiration, thirty-three years later, the skill and versatility of his teacher: "He was able to discourse impromptu on any subject suggested, to speak without preparation extensively and eloquently, and he attracted many pupils and admirers in Paris."^[37]

The University.

But Bruno's evil genius would not allow him rest; whether on account, as he himself says, of "tumults,"—which may mean either the civil war^[38] or an active resistance to his own teaching on the part of the youth of Paris,—or because of the attraction of a less bigoted country, he was drawn in 1583 to exchange Paris for London.

England under Elizabeth was renowned for its tolerance; all manner of religious refugees found there a place of safety: to Italians its welcome was particularly cordial, their language was the favoured one of the court, and Elizabeth herself eagerly saw and spoke with them in their own tongue. Florio—an Italian in spite of having had London for his birthplace, the friend of Shakespeare, of Spenser and Ben Jonson—was constantly at court; two of Elizabeth’s physicians were Italian, as were several of the teachers of the universities. Perhaps the happiest days of Bruno’s troubled life were spent here; he had access to the most brilliant literary society of the time; he was able to speak, write, and publish in his own tongue, and in consequence gave all the most polished and brilliant of his works to the world during this period.

England, 1583.

In April, May, and June of 1583 Bruno was in Oxford, although the university and college records make no mention of his name. He must have known it as a stronghold of Aristotelianism; on its statutes stood “that Bachelors and Masters who did not follow Aristotle faithfully were liable to a fine of five shillings for every point of divergence, and for every fault committed against the Logic of the Organon”; and that this was no dead law had been proved a few years before when one Barebones was degraded and expelled because of an attack on Aristotle from the standpoint of Ramus. The only living subject of teaching was theology, there was no real science, and no real scholarship. This peaceful school was not likely to be gratified by the letter which Bruno wrote asking permission to lecture at Oxford; it is printed in the *Explicatio Triginta Sigillorum*:^[39] “To the most excellent the Vice-Chancellor of the University of Oxford, its most famous Doctors and celebrated Masters—Salutation from Philotheus Jordanus Brunus of Nola, Doctor of a more scientific theology, professor of a purer and less harmful learning, known in the chief universities of Europe, a philosopher approved and honourably received, a stranger with none but the uncivilised and ignoble, a wakener of sleeping minds, tamer of presumptuous and obstinate ignorance, who in all respects professes a general love of man, and cares not for the Italian more than for the Briton, male more than female, the mitre more than the crown, the toga more than the coat of mail, the cowed more than the uncowed; but loves him who in intercourse is the more peaceable, polite, friendly and useful—(Brunus) whom only propagators of folly and hypocrites detest, whom the honourable and studious love, whom noble minds applaud.” The epistle which so begins is the preface to a work on the art of discovering, arranging, and remembering facts of knowledge, by which Bruno hoped to commend himself to the English, as he had succeeded in commending himself to the French universities. He attempted to disarm prejudice by sheltering under the twofold truth—“if this writing appears to conflict with the common and approved faith, understand that it is put forward by me *not as absolutely true*, but as more consonant with our senses and our reason, or at least less dissonant than the other side of the antithesis. And remember, that we are not so much eager to show our own knowledge, as moved by the desire of showing the weakness of the common philosophy, which thrusts forward what is mere opinion as if demonstratively proved, and of making it clear by our discussion (if the gods grant it) how much in harmony with regulated sense, in consonance with the truth of the substance of things, is that which the garrulous multitude of plebeian philosophers ridicule as foreign to sense.”

Oxford, 1583.

The University and Aristotle.

He was coldly received, however; in common-sense England his new art could evoke no enthusiasm, and his real and vital doctrines met with nothing but opposition at the old university —“the widow of true science,” Bruno calls it. From the 10th to the 13th June the Polish prince, Alasco, was in Oxford, and disputations were held in his honour as well as banquets. Among others, Bruno disputed publicly in presence of the prince and some of the English nobility.^[40] Alasco appears to have caused some excitement to the Elizabethan court. According to Mr. Faunt (of the secretary’s office) he had been General in more than forty fought battles, spoke Latin and Italian well, and was of great revenues. Mauvissière grumbled in a letter to the French king, that the Palatine Lasque and a Scottish ambassador seemed to be governing the court.^[41] The real object of the visit was apparently political, to prevent the traffic in arms between England and Muscovy.^[42] Whether Alasco succeeded in this design or not, he seems to have found life in England too fast for his purse—“A learned man of graceful figure, with a very long beard, in decorous and beautiful attire, who was received kindly by the Queen, with great honour and praise by the nobles, by the university of Oxford with erudite delectations (*oblectationibus*) and varied spectacles; but after four months, being harassed for debt, he withdrew secretly.”^[43] The arrival of this tragic-comic figure in Oxford appears to have gratified the city and university; he was most hospitably received, and put up at Christ Church. On the following day there was a dinner at All Souls, at which “he was solemnly satisfied with scholarlike exercises and courtly fare.” That evening was performed a “pleasant comedie,” the *Rivales*, and on the following night a “statelie tragedie,” *Dido*,^[44] and there were in the intervals shows, disputations in philosophy, physics, and divinity, in all of which, we are glad to know, “these learned opponents, respondents, and moderators, acquitted themselves like themselves, sharplie and soundlie.” Let us hope that Bruno too, who took part in one of these disputations, made this impression. According to his own account the protagonist put forward by the university could not reply to one of his arguments, and was left fifteen times by as many syllogisms, “like a hen in the stubble,” resorting accordingly to incivility and abuse, in face of the patience and humanity of the Neapolitan “reared under a kinder sky.” The result was unfortunate for Bruno; it put an end to the public lectures, which he was giving at the time, on the

Alasco of Poland.

The disputation.

Immortality of the Soul and on the "Five-fold Sphere." The same month he returned to London, and shortly after published the *Cena* (Ash-Wednesday Supper), in which he ridiculed the Oxford Doctors. *Inter alia*, he thought they knew a good deal more of beer than of Greek.^[45] The impression this attack produced in his London circle was apparently not that which he desired, for in the following dialogue, the *Causa*, he was much more judicious.^[46] He admitted much in the university that was well instituted from the beginning: "the fine arrangement of studies, the gravity of the ceremonies, careful ordering of the exercises, seemliness of the habits worn, and many other circumstances that made for the requirements and adornment of a university; without doubt every one must admit it to be the first in Europe, and consequently in all the world—nay, more, in gentleness of spirit and acuteness of mind, such as are naturally brought out in both parts of Britain, it equals perhaps the most excellent of the universities. Nor is it to be forgotten that before speculative philosophy was taught in any other part of Europe it flourished here, and through its princes in metaphysics (although barbarians in speech and of the profession of the cowl) the splendour of one of the noblest and rarest spheres of philosophy, in our times almost extinct, was diffused to all other academies in civilised countries." What Bruno condemned in Oxford was the undue attention it gave to language and words, to the ability to speak in Ciceronian Latin and in eloquent-phrase, neglecting the realities of which the words were signs. As for the knowledge of Aristotle and of philosophy generally that was demanded for the degree of Master or Doctor, Bruno suggests an evasion that probably had its origin in the undergraduate wit of the time. The statute read "*nisi potaverit e fonte Aristotelis*," but there were three springs in the town, the *Fons Aristotelis*, *Fons Pythagorae*, *Fons Platonis*, and "as the water for the beer and cider was taken from these springs, one could not be three days in Oxford without imbibing not merely of the spring of Aristotle, but of those of Pythagoras and of Plato as well." Doctors were easily created and doctorates easily bought. There were of course exceptions, men renowned for eloquence and doctrine like Tobias Matthew^[47] and Culpepper,^[48] but as a rule the nobility and best men generally refused to avail themselves of the "honour," and preferred the substance of learning to its shadow.

The *Cena*.

The *Causa*.

It was after his return from Oxford that the pleasant and busy life in London literary society began—the period of Bruno’s greatest productiveness. In the house of the enlightened and cultured Mauvissière he found, for the first time since leaving Nola, a home.^[49] Bruno’s position in London has given rise to great difference of opinion; none of the ordinary contemporary records make mention of him, or the slightest allusion to his presence in England. At his trial he professed to have brought letters to the French Ambassador from the King of France, to have stayed at the house of the former continuously, to have gone constantly to the Court with the Ambassador, and to have known Elizabeth; and in his works he claims intimacy with Sidney and Greville. It was consequently thought that he moved in the highest English society of the time, and from the *Cena* that he belonged to a literary coterie, or club, of which Sidney, Greville, Dyer, Temple, and others were members. Lagarde, believing Bruno (but on ludicrous grounds)^[50] to have sprung from the lowest of Italian society, could hardly accept this familiar legend of Bruno-biographies, and more recently, the *Quarterly Review* has questioned both the friendship with Sidney and Greville, and the existence of the supposed Society. As to the last, there was certainly at one time a literary society, Sidney’s *Areopagus*, to which Spenser belonged in 1579, but which concerned itself chiefly with artificial rules of versification, and the merits of various metres; the habit of meeting may have very well persisted for a few years, after the first flush of enthusiasm had passed, and the Ash Wednesday supper may have represented one of these meetings to which Bruno—the defender of the Copernican theory—may have been invited as Protagonist. As for Bruno’s position, it must have been that of a secretary or tutor, perhaps both, in Mauvissière’s employment. The French Ambassador was constantly in want of funds, and could not very well afford to support any casual stranger whom the King of France recommended to him. In November 1584 he complained of absolute penury, of being unable to obtain money due to him from the King of France (the King paid him by occasional doles only), of being hard pressed by London and Italian bankers, while his wife was in ill health. He was not greatly respected either by the Court, who, with good grounds, believed him to have no influence with the French King, or by Mary of Scotland and the English Catholics, partly because of his supposed Huguenot leanings, and partly because of their distrust of Henry III., or by the French King himself. Mauvissière had been sent to England as one who could be trusted not to err by way of undue zeal. Henry had no desire to see the unfortunate Queen of Scots liberated, although he put out all his diplomatic power to save her life; the *status quo* in England suited his policy only too well; there was no need for active interference. It was Mary of Guise that spurred on Mauvissière to act as energetically as he did for Queen Mary. We may assume then that Bruno, when Oxford rejected him, entered the French Embassy as an unofficial secretary. The words he employed at the Venetian inquiry quite harmonise with this supposition: “In his house I stayed as his gentleman, nothing more,” not as friend or guest, but as “*his* gentleman.”^[51] That he went constantly to Court with the Ambassador, and was introduced to Queen Elizabeth, would be natural in the case of a secretary—it would be curious in the case of a mere guest, or of any servant lower than a secretary. Finally, in the *Infinito*^[52] the grateful remark that Mauvissière entertained Bruno within his family, “not as one who was of service to him (Mauvissière), but as one whom he could serve on the many occasions in which aid was required by the Nolan,” obviously suggests that services *were* rendered by Bruno to the Ambassador. A man who was prepared to make a living by teaching children as readily as by lecturing to students, by setting books in print as readily as by writing them, was not likely to be an expensive secretary, and it must have been pleasant to Bruno to escape from the turmoil of scholastic strife and its bitter antagonisms to the quiet haven of the Embassy. His host was a well-meaning, kindly, but unfortunate man, unequal to the great issues that were being decided around him. Although it was a Catholic family, and mass was frequently said in the house, Bruno’s religious freedom was respected. He attended neither mass nor any of the preachings, on account of his excommunication. If one may judge from Bruno’s enthusiasm, the wife and daughter of Mauvissière must have been charming companions, the one “endowed with no mean beauty of form, both veiling and clothing the spirit within, and also with the threefold blessing of a discreet judgment, a pleasing modesty, and a kind courtesy, holding in an indissoluble tie the mind of her consort, and captivating all who come to know her”; the other, “who has scarcely seen six summers, and from her speech you could not tell whether she be of Italy, of France, or of England; from her musical play, whether she is of corporeal or incorporeal substance; from the ripe sweetness of her manners, whether she is descended from heaven or risen from earth.”^[53] For Mauvissière himself, to whom the three most important of the Italian dialogues are dedicated, no words that Bruno can invent are too high praise. In the dedication of the *Causa*, after comparing his persevering zeal and delicate diplomatic powers to the dropping of water upon hard stone, and his steadfast support of Bruno in face of detractions of the ignorant and the mercenary, of sophists, hypocrites, barbarians, and plebeians, to the strength of the rock against seething waves, the philosopher adds, “I, whom the foolish hate, the ignoble despise, whom the wise love, the learned admire, the great honour—I, for the great favours enjoyed from you, food and shelter, freedom, safety, harbourage, who through you have escaped so terrible and fierce a storm, to you consecrate this anchor, these shrouds and slackened sails, this merchandise so dear to me, more precious still to the future world, to the end that through your favour they may not fall a prey to the ocean of injustice, turbulence, and hostility.” The merchandise of which Bruno thought so highly was the Dialogue itself; we must of course allow for the grandiloquence of the dedications of the time, and of Bruno’s especially, but a real gratitude shines through the words.

His account of the Queen must be taken much less seriously, although his praise of her formed one of the many counts against him in Venice. "That most singular and rare of ladies, who from this cold clime, near to the Arctic parallel, sheds a bright light upon all the terrestrial globe. Elizabeth, a Queen in title and in dignity, inferior to no King in all the world. For her judgment, counsel, and government, not easily second to any other that bears a sceptre in the earth. In her familiarity with the arts, knowledge of the sciences, understanding and practice of all languages spoken in Europe by the people or by the learned, I leave the whole world to judge what rank she should hold among princes."^[54] In a satirical passage of the *Causa*, where Bruno is proving that all vices, defects, crimes are masculine, all virtues, excellences, goodnesses, feminine, Elizabeth is given as a crowning example:—"than whom no man is more worthy in the whole kingdom, among the nobles no one more heroic, among the long robed no one more learned, among the councillors no one more wise."^[55] Exaggerated as the language is, it is not more so than was common with the writers who adorned Elizabeth's Court; and it was one of his errors which Bruno could easily regret before his judges. "In my book on 'the Cause, Principle, and One,' I praise the Queen of England and call her 'divine,' not as a term of worship, but as an epithet such as the ancients used to apply to their princes, and in England where I then was, and where I composed this book, the title 'divine' is usually given to the Queen. I was the more inclined to call her so, that she knew me, as I went continually with the Ambassador to Court; but I know I erred in praising this lady, she being a heretic, and in calling her 'divine.'" Through Mauvissière, Bruno made acquaintance with Bernardino di Mendocça, Spanish Ambassador to England from 1578 to 1584, a much stronger man as well as a more unscrupulous servant of his king than Mauvissière could be. Bruno says definitely that Mendocça was known by him at the English Court. So well was he known that Bruno approached the Ambassador in Paris on the delicate subject of his own relations with the Catholic Church, and was introduced by him to the Papal Nuncio. There is absolutely no reason for doubting these statements, and if true, they are quite compatible with acquaintance, if not friendship, between Bruno and Sir Philip Sidney, or the others whom he mentions. Mendocça was not, however a *persona grata* at Court: he was a thorough-going supporter of the Scottish Queen, and seems to have had a finger in almost every conspiracy that was planned or formed by the English Catholics. He became unbearable to Queen Elizabeth; his recall was demanded and refused; but in January of 1584 he was compelled to leave England, and a formal rupture with Spain was the consequence, which became actual war four years afterwards. Philip of Spain did not desert his champion, in whom he had the highest confidence. In October of 1584 Mendocça became Ambassador to France, and there in 1855 Bruno renewed acquaintance with him.

Queen Elizabeth.

Mendocça.

Like all his contemporaries, Bruno came under the spell of Sir Philip Sidney's charm. He had already heard in Milan and in France of that "most illustrious and excellent cavalier, one of the rarest and brightest spirits in the world." To Sir Philip are dedicated the two chief ethical writings of Bruno, the *Spaccio*, and the *Heroici Furori*, with the expressed assurance that the author is not presenting a lyre to a deaf man, nor a mirror to a blind. "The Italian reasons with one who can understand his speech; his verses are under the censure and the protection of a poet. Philosophy displays her form unveiled to so clear an eye as yours. The way of heroism is pointed out to a heroic and generous spirit." Sidney was one of the first to take an interest in the Italian on his arrival in England, and when the *Spaccio* was published, on the eve, as Bruno thought, of his departure from England towards the close of 1584,^[56] Bruno could not turn his back upon Sidney's "beautiful, fortunate, and chivalrous country, without saluting him with a mark of recognition, along with the generous and humane spirit, Sir Fulke Greville." There was some disagreement, however, between Greville and Bruno, "the invidious Erinnyes of vile, malignant, ignoble, interested persons, had spread its poison" between them, in Bruno's emphatic words. What the ground of division was we do not know; possibly the tone in which the *Cena* spoke of Oxford men, and of English scholars generally, had offended Greville, and this may have called out the partial retractation in the *Causa*. As is well known the friendship of the two men, Sidney and Greville (with whom Edward Dyer was closely associated), was of the noblest type. Greville died in 1628 in the fullness of years and of honours, but had retained the impress of his young friendship fresh to the end.^[57] It may be added that he became an intimate of Francis Bacon, who may through him have been introduced to Bruno's works. It must have been in some such way also that Spenser knew of Bruno, as it is probable that the Cantos on Mutability (first published posthumously in 1609, but written probably after his visit to England in 1596) were "suggested" by Bruno's *Spaccio*.^[58] The "new poet" certainly could not have met Bruno, for he was in Ireland continuously, as secretary, from 1580 till 1589, when he came over to publish the first three books of the *Faerie Queen*.

Sidney.

Greville.

Spenser.

It is possible, on the other hand, that Bruno met Bacon, who was a rising young barrister and member of Parliament when he arrived in England, and had already achieved some fame as a critic of Aristotle. The idea, however, that he knew and influenced Shakespeare, is entirely fanciful. Richard Field, a friend of Shakespeare, had come to London in 1579, and served his apprenticeship with Thomas Vautrollier; and Field was Shakespeare's first publisher, having set up for himself by 1587. It has been suggested that before this time Shakespeare worked in Vautrollier's printing office. On the other hand, it has been universally received that Vautrollier was Bruno's publisher in England, and Bruno usually corrected his own proofs. Hence the two may have met, Shakespeare and Bruno, in a grimy printer's den. The idea is charming, but it has to yield before the light of fact. Shakespeare did

Bacon.

Shakespeare.

not come to London until 1586, and there is no proof that he worked with Vautrollier. Bruno had left England by the end of 1585, and there is no proof that Vautrollier was his printer. The suggested analogies between one or two ideas in Hamlet and Bruno's conceptions of transmigration, of the relativity of evil, and the rest, are of the shallowest.^[59] Thomas Vautrollier, a French printer who came to London some years before, and set up a press in Blackfriars, was said (by Thomas Baker) to have gained an undesired notoriety as Bruno's printer, and to have been compelled to leave England for a period, which he spent in Edinburgh, to the advantage of Scottish printing. The *Triginta Sigilli* and all the Italian Dialogues of Bruno were certainly published in England, although Venice or Paris was set down as their place of publication. According to Bruno, this was "that they might sell more easily, and have the greater success, for if they had been marked as printed in England, they would have sold with greater difficulty in those parts." It is doubtful, however, whether Vautrollier was really the printer; in any case it was not on that account that he went to Edinburgh.^[60]

Of the Italians in England during Elizabeth's reign the most familiar to us is Florio, whose father had been preacher to the Protestant Italians in London. Florio had been at Oxford, from which university he dedicated his "First Fruits" to Leicester in 1578, so that he was already well known as a scholar when Bruno came to England and made his acquaintance. This may have occurred through Sidney; or *vice versa*, Sidney's attention may have been called to Bruno by Florio. The latter was described by Cornwallis as one who looked "more like a good fellow than a wise man," yet was "wise beyond his fortune or his education." It was long after Bruno's departure that Florio devoted himself to the charming translation of Montaigne (published in 1603), of which a copy has been found bearing Shakespeare's name, while to Shakespeare is attributed a sonnet in praise of Florio. Curiously, we find him in his translation acknowledging assistance from one with whom Bruno also has casually connected him in the *Cena*, viz. Matthew Gwinne. Of Bruno's more intimate acquaintance in England we know little: there are two whose names occur in the dialogues, "Smith" in the *Cena*, and Dicson in the *Causa*, both sympathetic listeners and adherents of *Theophilo*, who is Bruno's representative. The former it is naturally difficult to place: he may however have been the poet William Smith, a disciple of Spenser, who published a pastoral poem "Chloris, or the Complaint of the Passionate Despised Shepherd." Of Dicson,—“learned, honourable, lovable, well-born faithful friend Alexander Dicson, whom the Nolan loves as his own eyes,”^[61] a little more can be told. He was the author of a *De Umbra Rationis*, (1583), obviously inspired by Bruno's *De Umbris Idearum*, and on the same basis of Neoplatonism. The work is extremely sketchy, occasionally diffuse, and of little value even were there anything of value in the Art of Memory which it teaches. But it seems from a reply it called forth (*Antidicsonus*) to have had some vogue, and to have been backed by a vigorous and aggressive school in which Bruno, who is joined in condemnation with Dicson, may have had a place.^[62] The poet Thomas Watson has also connected Bruno with Dicson in his *Compendium Memorix Localis*, published in 1585 or 1586. Watson also published a translation of Tasso's *Aminta*, in Latin hexameters,—in 1585, *i.e.* in the year following the appearance of Bruno's *Spaccio*, with its satire on Tasso's *Age of Gold*.^[63] Watson had been in Paris in 1581, when he met Walsingham, and he may of course have met Bruno also: he was a scholarly poet, although his work lay more in the direction of translation and imitation of foreign writers, than in that of original verse, but during his lifetime he ranked as the equal of Spenser and Sidney. The *Compendium of Local Memory* is in clear, simple, classical Latin, in strong contrast with the corresponding works of Dicson and of Bruno; but the principles of the Art which it describes are those of Bruno, or Ravenna, or of some common source, more skilfully arranged and more aptly expressed.

Florio.

Alexander Dicson.

Antidicsonus.

Watson.

No fewer than seven works from Bruno's facile pen were published in England; the first of these was the *Thirty Seals*, and the *Seal of Seals* (1583) *Explicatio Triginta Sigillorum, quibus adjectus est Sigillus*^[64] *Sigillorum*. It was dedicated to Mauvissière, but the introductory epistle was addressed to the Vice-Chancellor of Oxford. Bound along with it, in front, was a *Modern and Complete Art of Remembering* which is merely a reprint of the last part of the *Cantus Circæus*. The work belongs to the mnemonic and psychological writings of Bruno; the thirty seals are hints "for the acquiring, arranging, and recollecting of all sciences and arts," the *Seal of Seals* "for comparing and explaining all operations of the mind. And it may be called *Art of Arts*; for here you will easily find all that is theoretically enquired into by logic, metaphysics, the cabala, natural magic, arts great and small." (The part called *Sigillus Sigillorum* was a volume of Bruno's *Clavis Magna*, perhaps the only volume published.) It was followed by an Italian dialogue, "the Ash Wednesday Supper," *La Cena de le Ceneri*, also dedicated to Mauvissière. Written in praise of the Copernican theory, it goes beyond Copernicus himself in its intuition of the infinity of the universe, of the identity of matter in the earth with the matter of the planets and stars, and of the possibility that such living beings inhabit them as inhabit the earth: earth and stars themselves are also said to be living organisms: so there are not seven planets or wandering stars only, but innumerable such; for every world, whether of the sun-type or of the earth-type, is in motion, its motion proceeding from the spirit within it. Finally, this philosophy is shown to be in complete accord with all true religion, to conflict only with the false. After the "Ash-Wednesday Supper" came "Cause, Principle, and Unity" (*De la causa, principio et Uno*), 1584; again dedicated to Mauvissière.^[65] The first of its dialogues is an apology for the *Cena*, which, as we have seen, had caused considerable feeling in Bruno's circle of readers, for the severity and irony of its strictures upon Oxford, and England generally. In the others the immanence or spirituality of all causation; the eternity of matter; its divinity as the potentiality of all life; its realisation in the universe as a whole (as a "formed" thing); the infinite whole and the innumerable parts, as different aspects of the same: the origin of evil and of death: the coincidence of matter and form in the One: the source of all individual and finite forms in the one material substance: the coincidence in the One of the possible and the real, the century and the moment, the solid and the point: the universe all centre and all circumference: diversity and difference as nothing but diverse and different aspects of one and the same substance: the coincidence of contraries:—these are among the chief topics of this, the freshest and most brilliant of Bruno's philosophical writings: "a dialogue worthy of Plato," Moritz Carrière has said. In the same year appeared *The Infinite Universe and its worlds* (*De l' infinito universo et Mondi*), dedicated to Mauvissière.^[66] It contained a masterly array of reasons, physical and metaphysical, for the belief that the universe is infinite, and is full of innumerable worlds of living creatures; sense and imagination are shown to be at once the source and the limit of human knowledge. Yet the argument is mainly *a priori*: the infinite power of the Efficient Cause cannot be ineffective, the divine goodness cannot withhold the good of *life* from any *possible* being; the divine will is one with the divine intelligence and with the divine action: all *possible* existence falls within the sphere of the divine intelligence, therefore is willed; but whatever is willed is realised, for the power is infinite; and whatever is good, for it is willed by the infinitely good. Whatever really is, is a substance, and therefore immortal. The substance of us is immutable, only the outward face or form of it changes, passes away; in the whole all things are good; where things appear evil or defective, it is because we look at the part or the present, not at the whole or the eternal.

The Thirty Seals.

Cena de le Ceneri.

*De la causa,
principio et Uno,
1584.*

*De l' infinito
universo et Mondi.*

"The Expulsion of the Triumphant Beast," *Spaccio de la bestia trionfante*, 1584,^[67] was dedicated to Sir Philip Sidney. In form an allegorical, satirical prose poem, it is in fact an introduction to a new ethical system. A repentant Jupiter resolves to drive out the numerous beasts that occupy his heavenly firmament—the constellations—and to replace them by the virtues, with Truth as their crown. He calls a council of the gods to consider this plan, and in the discussion that follows numberless topics are touched upon—the history of religions, the contrast between natural and positive religion, and the fundamental forms of morality. The *Spaccio* is, however, preparatory to a future work, in which moral philosophy shall be treated "by the inner light which the divine intellectual sun has irradiated into my soul," says Bruno;^[68] in it, and other dialogues, the whole structure of the philosophy is to be completed, of which the *Bestia* is merely a tentative sketch.^[69] Jupiter represents the human spirit; and the constellations, the Bear, the Scorpion, etc., are the vices of the age, which are to be driven out by Bruno's hierarchy of virtues. The work, which is rich in both moral and religious suggestion, was early regarded as an attack on the Pope or the Church, the supposed "Triumphant Beast." Gaspar Schopp, for example, writes to that effect after witnessing Bruno's death. It is really an attack upon all religions of mere credulity as opposed to religions of truth and of deeds. The "Cabala" (*Cabala del Cavallo Pegaseo, con l' Aggiunta dell' Asino Cillenico*) was published in 1585.^[70] It is dedicated to an imaginary Bishop of Casamarciano, who represents the spirit of backwardness, ignorant simplicity, and was not a real person, as some biographers supposed. It is a still more biting, a merciless satire on Asinity (*i.e.* ignorance, credulity, and unenquiring faith in religion). In a later work^[71] there is a remark on the *Asinus Cillenicus*, "the image and figure of the animal are well known, many have written on it, we among the rest, in a particular fashion; but as it displeased the vulgar, and failed to please the wise, for its sinister meaning, the work

*Spaccio de la bestia
trionfante.*

The Cabala, 1585.

was suppressed.” Whether this refers to the whole *Cabala*, or to the last part of it, is not known.

The “Enthusiasms of the Noble” (*De gl’ heroici furori*), 1585,^[72] dedicated to Sir Philip Sidney, consists of sonnets, with prose illustrations, after the model of Dante’s *Vita Nuova*. Its theme is that of the *Phædrus* and *Symposium*, the rising of the love for spiritual beauty out of that for sensible beauty, reaching its height in the divine *furor*—an ecstatic unity with the divine life, in which all the miseries and misfortunes of the merely earthly life disappear. Many of the sonnets are of extreme beauty, although Brunnhofer goes too far when he speaks of them as surpassing Petrarca’s, except in smoothness of form, and as equalling Shakespeare’s.

Heroici Furori,
1585.

It may not be amiss to give from these works some illustrations of life in England as Bruno found it.

The women of
England.

England, as in the days of Erasmus, was renowned on the continent for its beautiful women, and Bruno's passionate and enthusiastic nature could not but feel the attraction of "the fair and gracious nymphs of England." In the *Cena* he appeals to the muses of England, "gracious and gentle, soft and tender, young, fair and delicate, blond-haired, white of chin, pink of cheek, of enticing lips, eyes divine, breasts of ivory, and hearts of adamant: how many thoughts do I weave for you in my mind, how many emotions besiege my spirit, how many passions fill my life, how many tears pour from my eyes, sighs burst from my breast, fires sparkle from my heart?"^[73] Nature was taking its revenge indeed for the long years of suppression in the Church. If this dark, slender, "interesting" Italian found favour with the fair and cultured inhabitants of England, he was the less successful with the people in general, the *Plebs*, then as now uncompromisingly opposed to the "foreigner." In his belief England "could boast of a Plebs which for want of respect, rudeness, roughness, rusticity, savagery, ill training, was second to none in the world."^[74] No doubt he writes from experience when he describes the greater part of them as "appearing like so many wolves and bears, when they see a foreigner—one part of them, the artisans, shopkeepers, knowing you as some kind of foreigner, screw their noses at you, call you dog! traitor! stranger! which is with them a term of high abuse, and renders its object liable to all the injuries in the world, no matter what manner of man he is, young or old, in gown or in uniform, noble or gentleman. They will come upon you with a rustic fury, careless of the who or why, where, or how, not referring to one another, but every one, giving vent to the natural hatred he has for the foreigner, will try with his own hand and his own rod to take the measure of your doublet, and if you are not careful to save yourself, of the hair of your head;—and when at length you think you may be allowed to go to the barber's, and to rest your wearied, ill-handled body, behold them so many executioners and tipstiffs;—if they can pretend that you touched any one of them, you will have your back and legs as sore as if you had the heels of Mercury, or were mounted upon the Pegasean Horse, or bestrode the steed of Perseus, the Hippogriff of Astolfo, the dromedary of Madian, or had trotting under you one of the giraffes of the three Magicians: by force of blows they will make you run, helping you forward with their heavy fists,—better for you were they hoofs of ox, ass, or mule: and will not let you go till they have you fast in a prison,—and there I take my leave of you." In the second dialogue of the *Cena*, there occurs incidentally, a characteristic account of the state of Elizabethan London. Fulke Greville had agreed with Bruno to have a discussion in his house on the Copernican theory, on the evening of Ash Wednesday. When the day came, no further message arriving, Bruno concluded that the meeting had been postponed, and after dinner went out to visit some Italian friends. Returning after sunset, he found Florio and Guin (Gwynne), impatiently awaiting him: a number of cavaliers, gentlemen, and doctors, had met to hear the discussion, but the chief character of the play was awanting. They hurried him off, in the dark, and thinking to shorten the road, left the straight way and made for the Thames to get a boat to take them to the Palace. "Arrived at the bridge of Lord Buckhurst's Palace, we shouted and cried for 'oares'—'*id est Gondolieri*'—and wasted as much time as would easily have sufficed to take us by land to our destination, and to have done some business on the way. At last from afar two boatmen replied, and slowly, slowly drew up to the shore; after many interrogations and replies as to the whence, whither, why, and how much, they rested the bow on the last step of the bridge. Then one of the two, that appeared like the ancient boatman of the Tartarean world, gave his hand to the Nolan, while the other, who I think was his son, although his years were five and sixty or so, received the rest of us. Although there was no Hercules or Aeneas or Rhadamanth, king of Sarza, still

... Gemuit sub pondere cimba
Sutilis, et multam accepit limosa paludem....

"The sweet harmony (of its creaking and whistling) like love, invited us to forget our misfortunes, the times and the seasons, and to accompany the sounds with song. Florio (recalling his days of love) sang *Dove senza me dolce mia vita*, and the Nolan replied with *Saracin dolente* or *Femenil ingegno*, and the like; and so little by little we advanced as the barque permitted. Although worms and age had reduced it to something like cork, it seemed from its *festina lente* all of lead, and the arms of the two ancients worn out. So with much time we made little way, and before we had covered a third of the distance—a little beyond the place they call the Temple—our old fathers, instead of hurrying, ran their prow alongside the shore. To the Nolan asking if they wished a little breathing time, they answered that they were not going any further, for this was their stance. In conclusion, they would not budge for us, and when we had paid them and thanked them (there is nothing else to do when you suffer a wrong from one of these *canaille*), they showed us the direct road for getting on to the street. Now, oh for your help, Maphelina, muse of Merlin! That was a road which commenced in a black mud, from which there was no escape even by good luck. The Nolan, who had studied and practised in the schools more than we, bade us follow him through a passage, that he thought to see, filthy though it was. But he had not ceased speaking when he was planted in the mire so firmly that he could not drag out his limbs, and so with mutual help we went through the midst of it, hoping that the purgatory would be of short duration; but by unjust and hard fate he and we found ourselves engulfed in a slimy passage, that, just as if it were the 'field of jealousy' or the 'garden of delights,' was bounded on

this side and on that by good walls, and because there was no light to guide us we could not distinguish between the way we had come and the way we ought to go, hoping at every step for the end." ... "Higher up the street we found a lava which on one side left a stony place where we could walk dry; step by step we stumbled like drunk men—and not without danger of breaking a head or a leg. To make a long story short at last the Elysian fields appeared, viz. the broad, ordinary street—and then from the houses we discovered we were about twenty steps from the place where we had set out to find the boatman, and not far from the Nolan's rooms!" The temptation to give up the expedition was overcome, and after sundry adventures with apprentices, servitors, and bravos of the gentle class, they arrived safely at Fulke Greville's, where supper was already in progress.

In the Italian dialogues the personal note of complaint sounds more highly than in Bruno's other works, and we may imagine that Bruno himself felt neglected in England more than in other countries, while English hostility to his teaching was probably more contemptuous, therefore more galling and more difficult to overcome. He might repeat as he did, the bold saying that "to the true philosopher every country is fatherland," or call himself with Socrates a citizen of the world; but a touch of despair sounds through the words:—"a citizen and servant of the world, son of Father Sol and Mother Earth; because he loves the world too much, he must be hated, cursed, persecuted, and rejected by it. Meanwhile let him not be idle, nor ill-occupied while awaiting death, transmigration, change."^[75] Elsewhere there is almost a savage stoicism; he cries that he is attacked not by one but by many, almost by all, and the reason is that he hates the people, cares not for the multitude, adores one thing only:—"That through which he in subjection is free, in pain content, in necessity rich, in death living, and through which he envies not those who in freedom are slaves, in pleasure pained, in riches poor, in life dead, because in the body they have a chain that binds them, in the spirit an *inferno* that depresses them, in the soul error that weakens them, and in the mind lethargy that slays, etc."^[76] Yet the climate of England seems to have pleased Bruno: "there more than in any other region the climate is temperate; for the excessive rigour of the snows is driven out by the earth beneath, and the superfluous fervour of the sun blesses it with a continuous, a perpetual spring, as is testified by the ever green and flowery land."^[77] From the *Spaccio*, it appears that he was struck in England, *inter alia*, with the multitude of crows, the richness of the sheep and the sleekness of the cattle, the stern game-laws, and the land-hunger of the people.^[78]

Hostility in
England.

When Mauvissière was recalled, Bruno in all probability sailed with him. It had been decided, unjustly, as Mauvissière thought, to recall him to France in 1584; but owing to his wife's health and perhaps his claims on the French treasury, he secured a postponement till the following year, on condition he should do his best for Queen Mary and her son with Elizabeth, "but not mix himself up with any of the plots against Elizabeth." In October 2, 1585, he was still in London, for he wrote to his friend Archibald Douglas, the Scottish Ambassador, from London on that date; the following letter, however, was from Paris (Nov. 3, 1585) and told a pathetic story.^[79] On his way across (Bruno with him, we may suppose) he had been "robbed of all he had in England, down to his shirt, of the handsome presents given him by the Queen, and of his silver plate: nothing was left, either to him or to his wife and children, so that they resembled those exiled Irish who solicit alms in England, with their children by their side." He had lent money also to the Queen of Scots, and was in great trouble concerning it, "for neither her officers nor her treasurer possessed a *sou*, nor did they speak of repayment." The unfortunate ambassador had fallen upon evil days: he was accused of having spoken ill of his successor, Chateauneuf, and had to write, as the report went, to Elizabeth, to unsay his insinuations. In December 1586, he wrote to Archibald Douglas of his wife—the Maria de Bochetel, whom Bruno praises—having died in childbirth. It would be interesting to know how Bruno fared in the robbery of Mauvissière's goods. At least we may assume that he arrived in Paris with very little worldly goods, but with part of the manuscript of a great work on the Universe (the *De Immenso*) in his possession, during the month of October 1585.

Return to France,
October 1585.

“In Paris I spent another year in the house of gentlemen of my acquaintance, but at my own expense the greater part of the time: because of the tumults I left Paris, and went from there to Germany.”^[80] So Bruno told the tribunal at Venice; but the duration of his second visit to Paris was from October 1585 to June 1586. One of his first steps was to make further efforts towards reconciliation with the Church: he presented himself for confession to a Jesuit father, while consulting with the Bishop of Bergamo (the Papal Nuncio), but they were unable to absolve him, as he was an apostate. What Bruno wished was that he might be received into the Church without being compelled to return again to the priesthood, and he begged the Nuncio to write to the Pope Sixtus V. on his behalf. The Bishop, however, had no hope of the favour being granted, and declined to write unless Bruno agreed to return to his order. To the same effect was the advice of the Jesuit father Alfonso Spagnolo to whom he was referred; to obtain absolution from the Pope he must return to the order—to his bonds, in other words; and without absolution he could not enjoy the privileges either of mass or of the confessional.^[81] This idea Bruno could by no means entertain, and therefore he resigned himself to his position as an alien to the Catholic Church. He had no intention of remaining in Paris, where perhaps his Italian writings had made him no longer acceptable, but he desired not to leave it without some recognition of the favour shown him there in the past. The means he adopted was a public disputation, to be held in the Royal Hall of the university at Pentecost of the year 1586. These disputations of the learned were a delight to the youth of the time, and drew audiences comparable in our own time only to great football or cricket matches.^[82] He drew up one hundred and twenty theses against the Peripatetic Philosophy, which still formed the substance of the teaching at the Sorbonne; and his side was taken up by the rival, more modern, college of Cambrai (afterwards the College of France), of which he appears now to have become an associate.^[83] It was the custom of the real propounder of the theses to preside at the debate, leaving it to another to act as protagonist, and intervening only when the latter’s discomfiture was imminent. In this case Bruno chose a young Parisian nobleman of his own following—John Hennequin, a Master of Arts—but we may well imagine that he did not long keep silent himself. We have no knowledge of how the debate went, but it cannot have been too favourable to Bruno, for he left Paris immediately afterwards. Its date was the 25th of May; Bruno, therefore, left Paris probably in early June 1586.

Paris: Oct. 1585-
June 1586.

The Church.

The 120 Theses.

The articles, with a note of explanation attached to each, and an introduction to the whole—(*Excubitor*, the Awakener)—being the address of Hennequin at the beginning of the disputation, but written by Bruno himself—were published in Paris and again at Wittenberg.^[84] They contain a temperate but powerful criticism of the Aristotelians, by the words of Aristotle himself, and of Aristotle from the standpoint of Bruno’s own physical theory, which he believed to be that of the Pythagoreans and Platonists. The right to criticise the “divine” Aristotle, Bruno claimed on the same grounds as those on which Aristotle himself enjoyed the right of criticising his predecessors: we are to him as he to them: their truth, which to him seemed error, may be right to us again, for opinion, like other history, moves in cycles. And as to authority, the mass of which was against Bruno, “if we are really sick, it helps us nought that public opinion thinks we are really making for health.”^[85] “It is a poor mind that will think with the multitude because it *is* a multitude: truth is not altered by the opinions of the vulgar or the confirmation of the many”—“it is more blessed to be wise in truth in face of opinion than to be wise in opinion in face of truth.”^[86] The new philosophy gives wings to the mind, to carry it far from the prison cell in which it has been detained by the old system, and from which it could look out upon the orbs of the stars only through chinks and cracks:—to carry it out into infinite space, to behold the innumerable worlds, sisters of the earth, like it in heart and in will, living and life-producing; and returning, to see within itself—“not without, apart, or far from us, but in ourselves, and everywhere one, more intimate, more in the heart of each of us, than we are to ourselves”^[87]—the divine cause, source, and centre of things. Aristotle and the sources of the scholastic philosophy were occupying Bruno’s leisure almost exclusively at this time: he had begun the great Latin work, the *De Immenso*, which was to see the light in Frankfort; and he published in this year a commentary on the physics of Aristotle as well as an account of a mathematical and cosmometric invention of one *Fabrizio Mordenti*, which seems to be of much less value than Bruno supposed.^[88]

Criticism of
Peripatetic Theory.

Leaving France for Germany, the Nolan made his first halt at “*Mez*, or *Magonza*, which is an archiepiscopal city, and the first elector of the Empire”;^[89] it is certainly Mayence. There he remained some days; but not finding either there or at “*Vispure*, a place not far from there,” any means of livelihood such as he cared for, he went on to Wittenberg in Saxony. “*Vispure*” has caused considerable exercise of ingenuity among Bruno’s biographers. The best explanation seems to be that of Brunnhofer, that it represents Wiesbaden, which is not far from Mayence, and is still popularly known as Wisbare or Wisbore; but there may also be a telescoping of the words Wiesbaden and Marburg. Bruno was certainly at the latter town, but it is of course a long distance from Mayence. On the 1st of July 1586, Petrus Nigidius, Doctor of Law and Professor of Moral Philosophy, was elected Rector of the university at Marburg. In the roll of students matriculated under his rectorship stands as eighth name that of “*Jordanus Nolanus* of Naples, Doctor of Roman Theology,” with the date July 25, 1586, and the following note by the rector:—“When the right of publicly teaching philosophy was denied him by me, with the consent of the faculty of philosophy, for weighty reasons, he blazed out, grossly insulting me in my own house, protesting I was acting against the law of nations, the custom of all the universities of Germany, and all the schools of humanity. He refused then to become a member of the university,—his fee was readily returned, and his name accordingly erased from the album of the university by me.” The name could still be read through the thick line drawn across it, and some later rector, when Bruno had become more famous, re-wrote the name above, and cancelled the words “with the consent of the faculty of philosophy” in Nigidius’ note.^[90] The “weighty reasons” for which Bruno was driven from Marburg may have been merely his description of himself as a Doctor of “Roman Theology” at a Protestant university; or perhaps an attack upon Ramus at a place where the Ramian Logic had many adherents; or the Copernican system taught by him, which was as firmly opposed by Protestants as by Catholics. In any case “the Knight-Errant of Philosophy” departed sorrowfully and came to Wittenberg, where he found, for the third time, a respite from his journeyings. On the 20th August 1586 he matriculated at the university,^[91] and there remained for nearly two years. Then, as now, the Protestant Church in Germany was divided into two parties, the Lutheran and the Calvinist or Reformed Churches. Melanchthon’s attempt to unite the two—he himself belonged to the latter—brought upon his head the “formula of concord,” better known as the “formula of discord,” because of the disputes it caused. Among other things it condemned the views of the Calvinists on the person of Christ, their denial of his “Real Presence” in the bread and wine of the communion table, and their doctrine of predestination. When Bruno arrived in Wittenberg, Lutherans were still in power, as they had been under the old Duke Augustus. His son Christian I., however, under the influence of John Casimir, his brother-in-law, of the Palatinate, had gone over to the Calvinist faction, and was trying with the aid of the Chancellor, Krell, to supplant the reigning faith and authority. At the university the philosophical faculty was, in the main, Calvinist, the theological Lutheran; and among the latter party was an Italian Alberico Gentile, the father of International Law, whom Bruno had perhaps known in England as a professor at Oxford. Through him Bruno found favour with the Lutheran party, and received permission to lecture, on the condition that he taught nothing that was subversive of their religion. For two years, accordingly, he lectured on the *Organon* of Aristotle, and other subjects of philosophy, including the Lullian art, which he had for a time discarded. The excellent terms on which he stood with his colleagues is shown by the dedication of a Lullian work, *De Lampade Combinatoria*, to the senate of the university. He speaks gratefully of their kind reception of himself, the freedom of access and residence which was granted not only to students but to professors from all parts of Europe. In his own case “a man of no name, fame, or authority among you, escaped from the tumults of France, supported by no princely commendation, with no outward marks of distinction such as the public loves, neither approved nor even questioned in the dogmas of your religion; but as showing no hostility to man, rather a peaceful and general philanthropy, and my only title the profession of philosophy, merely because I was a pupil in the temple of the Muses, you thought me worthy of the kindest welcome, enrolled me in the album of your academy, and gave me a place in a body of men so noble and learned that I could not fail to see in you neither a private school nor an exclusive conventicle, but as becomes the Athens of Germany, a true university.” In this introduction a large number of the professors are invoked by name, among them the enlightened Grün, a professor of philosophy, who taught that theology cannot be detached from philosophy—that they are necessary complements one of the other.

1586.

Mainz.

Marburg.

July 25, 1586.

Wittenberg.

Aug. 20, 1586.

Dedication of *De Lampade*.

In Wittenberg was published (1587), the *De Lampade Combinatoria Lulliana*, the second of the commentaries on Lully’s art, and representing perhaps the *clavis magna* of the *De Umbris* and other Parisian publications. It was dedicated to the senatus of the University of Wittenberg. A reprint, however, appeared in Prague in the following year with a new frontispiece, a dedication to William of St. Clement, and the addition of a small treatise.^[92] The chief purpose of the work was to furnish the reader with means for “the discovery of an indefinite number of propositions and middle terms for speaking and arguing. It is also the sole key to the intelligence of all Lullian works whatsoever,” Bruno writes with his sublime confidence, “and no less to a great number of the mysteries of the Pythagoreans and Cabalists.” As in the earlier work, so in this also, the root ideas are that

Works published.

thought is a complex of elements, which are to it as the letters of the alphabet are to a printed book; but thought and reality or nature are not opposed to one another—they are essentially one. The elements of thought when discovered will accordingly give us the constitutive elements of nature and the connections in, and workings of, nature will be understood from the different complications of these simple elements of thought. In the same year appeared the *De Progressu et Lampade Venatoriâ Logicorum*, “To enable one to dispute promptly and copiously on any subject proposed.” It was dedicated to the Chancellor of the University of Wittenberg, and was mainly a commentary, without special references, on the *Topics* of Aristotle, and doubtless formed part of the lectures on the *Organon*, given in Bruno’s first year at Wittenberg. The simile of the hunt—*i.e.* the idea that the solution of a problem or the finding of a middle term is like a quarry that has to be stalked and hunted down—is a favourite one with Bruno.

De Progressu, 1587.

Unfortunately for Bruno, the Duke’s party in Wittenberg soon gained the upper hand—only for a time, it is true^[93]—and the party to which Bruno himself belonged fell out of power. As a Copernican, Bruno must in any case soon have fallen foul of the Calvinists, by whom the new theory had been declared a heresy. He therefore left Wittenberg in the beginning of 1588, after delivering on the 8th of March an eloquent farewell address to the university (*Oratio Valedictoria*). By the fable of Paris and the three Goddesses, he indicated his own choice of Wisdom (Minerva) over riches or fame (Juno), and over worldly pleasure or the delights of society (Venus):—“Wisdom is communicated neither so readily nor so widely as riches or pleasure. There are not and there never have been so many Philosophers as Emperors and Princes; nor to so many has it been granted to see Minerva robed and armed, as to see Venus and Juno even in naked simplicity. To see her is to become blind, to be wise through her is to be foolish. They say Tiresias saw Minerva naked, and was struck blind; who that had looked upon her, would not despise the sight of other things?—‘man shall not see me and live.’ ... Wisdom, Sophia, Minerva, beautiful as the moon, great as the sun, terrible as the marshalled ranks of armies; like the moon in her fair gracefulness, like the sun in her lofty majesty, like armies in her invincible courage.... The first-born before all creatures, sprung from the head of Jove—for she is a breath from the virtue of God, an emanation of omnipotent brightness, sincere and pure, clear and inviolate, honourable, powerful, and kind beyond words, well pleasing to God, incomparable:—pure, because nothing of defilement can touch her; clear, because she is the brightness of eternal light; inviolate, because she is the spotless mirror of the majesty of God; honourable, because the image of goodness itself; powerful, because being one she can do all things, being permanent in herself, she renews all things; kind, because she visits the nations that are sacred to her and makes men friends of God, and prophets; pleasing to God, because God loves only him that dwells with wisdom; incomparable, for she is more beautiful than the sun and brighter than the light of all the stars. Her have I loved and sought from my youth, and desired for my spouse, and have become a lover of her form—and I prayed that she might be sent to abide with me, and work with me, that I might know what I lacked, and what was acceptable to God: for she knew and understood, and would guide me soberly in my work and would keep me in her charge: ... But wisdom in the highest sense, in its essence as the thought of God, is incommunicable, incomprehensible, apart from all things. Wisdom has three phases or aspects or ‘mansions’—first, the mind of God the eternal, then the visible world itself which is the first-born, and third, the mind of man which is the second-born of the highest, the true wisdom unattainable by man. Here among men wisdom has built herself a house of reason and of thought (which comes *after* the world), in which we see the shadow of the first, the archetypal and ideal house (which is *before* the world), and the image of the second, the sensible and natural house, which *is* the world. The seven columns of the house or temple are the seven Arts—Grammar, Rhetoric (with poetry), Logic, Mathematics, Physics, Ethics, and Metaphysics, and the temple was built first among the Egyptians and Assyrians, viz. in the Chaldeans, then among the Persians, with the Magi and Zoroaster, third the Indians with their Gymnosophists; ... seventhly, in our time, among the Germans.” So far has Bruno come from taking the Germans as mere beer-bibbers, as he had written of them in England.^[94] “Since the empire (of wisdom) devolved upon you there have risen amongst you new arts and great minds, the like of which no other nations can shew.” In the category of German temple-builders are Albertus Magnus, Nicolas of Cusa, Copernicus, Palingenius, Paracelsus; “among humanists many, apt imitators of the Attic and Ausonian muses, and among them one greater than the rest who more than imitates, rather rivals, the ancient muses” (Erasmus). It is not unnatural that, in his own Wittenberg, Luther should be praised, as among the temple-builders or priests of truth: but Bruno’s words have a ring of sincerity, proving that his sympathy was really aroused for the Lutherans. “When the world was infected by that strong man armed with key and sword, fraud and force, cunning and violence, hypocrisy and ferocity,—at once fox and lion, and vicar of the tyrant of hell,—infected with a superstitious worship and an ignorance more than brutal, under the name of divine wisdom and of a God-pleasing simplicity; and there was no one to oppose or withstand the voracious beast, or dispose an unworthy and abandoned generation to better and happier state and condition,—what other part of Europe or the world could have brought forth for us that Alcides, stronger than Hercules himself, in that he did greater things with less effort and with fewer instruments,—destroying a greater and far more deadly monster than ever any of the past centuries had to suffer? Here in Wittenberg he dragged up that three-headed Cerberus with its threefold tiara from its pit of darkness: you saw it, and it the sun. Here that dog of Styx was compelled to vomit forth its poison. Here your Hercules, your country’s Hercules, triumphed over the adamantine gates of hell, over the city girt about with its threefold wall, and defended by its nine windings of the Styx.”

1588.

Oratio Valedictoria.

Luther.

To this temple Bruno, eager in his pursuit of the ever-eluding Truth, had come,—“a foreigner, an exile, a fugitive, the sport of fortune, meagre in body, slender of means, destitute of favour, pursued by the hatred of the multitude and the contempt of fools and the base,” and could on leaving say to its people that he had become an “occasion, or matter, or subject in whom they unfolded and demonstrated to the world the beauty and wealth of their virtues of moderation, urbanity, and kindness of heart.” It was the last, or nearly the last, spell of happiness that life had in store for him.

The court of the Emperor Rudolph II. was at Prague, in Bohemia; from there his fame as a Maecenas of the learned, and especially of those who claimed power to read the heavens or to work magic, had spread to many countries.

Prague: 1588.

Perhaps Sidney, who had visited him from Elizabeth on the death of Maximilian, may have spoken of him to Bruno: while two of Bruno's friends, the Spanish Ambassador St. Clement and the mathematician Mordentius, were at Prague in 1588. Thither, accordingly, he now turned in the hope of settled quarters, introducing himself, as was his frequent habit, with a Lullian work, which he caused to be printed soon after his arrival, and dedicated to the Spanish Ambassador.

[95] The introductory letter is dated from Prague, June 10, 1588, and is in praise of Lully, whose importance to philosophy Bruno values much more highly than his successors have done: it promised at the same time a future

June 10, 1588.

work, the *Lampas Cabalistica*, in which the inner secrets of Lullism were to be more fully revealed. This, so far as we know, never appeared, and Bruno tried to obtain the Emperor's patronage by a mathematical work dedicated to him, of somewhat revolutionary type—"One hundred and sixty articles against the mathematicians and philosophers of the day." The Emperor, however, had few funds to spare for any but the professed astrologists and alchemists in whom lay his real interest—not at all scientific, although Tycho Brahé and Kepler profited themselves and the world by it. With three hundred dollars, which the Emperor gave in

January 13, 1589.

recognition of his powers, Bruno left about the close of the year, and on January 13, 1589, matriculated in the Julian university of Brunswick at Helmstadt. This, the youngest university in Germany at the time, of only twelve years' standing, had been founded for the Protestant cause by the reigning Duke Julius, a breezy and popular prince, who loved theologians

Helmstadt.

little, Catholics not at all, and founded a model university on liberal principles. It was not, however, an unqualified success. Bruno received some recognition from the university, or from the Duke, and when the latter died in May 1589 he obtained permission to give a funeral oration some days after the official programme had been carried through (on the 1st of July)—the *Oratio Consolatoria*. [96]

Bruno professes as his reason for wishing to speak that he must express his gratitude to one who had made the university he founded free to all lovers of the Muses, even to strangers such as Bruno himself was:—an exile from his Italian fatherland for honourable reasons and zeal for the truth, here he had received the freedom of the university: in Italy he was exposed to the greedy maw of the Roman wolf—here he was in safety: there he had been chained to a superstitious and absurd cult—here he was exhorted to more reformed rites. What is remarkable in this speech is the bitterness of Bruno's personal attack upon Rome, and "the violent tyranny of the Tiberine beast." The constellations are allegorically treated as symbols of the virtues of Julius, or of the vices which he attacked and repressed: among them "the head of the Gorgon, on which for hair there grow venomous snakes, representing that monster of perverse Papal tyranny, which has tongues more numerous than the hairs of the head, aiding and serving it, each and all blasphemous against God, nature, and man, infecting the world with the rankest poison of ignorance and vice." It was indeed strange that Bruno should have thought of entering Italy after publishing words like these.

However, he was not to find the Protestants much more tolerant than the Catholics. In the university archives there is extant a letter from him to the prorector of the academy, appealing against a public excommunication of himself by the first pastor and superintendent of the church at Helmstadt, Boethius. According to this letter, Boethius had made himself both judge and executioner,

Excommunication of Bruno in Helmstadt.

without giving the Italian a hearing at all: and the letter appealed to the senate and rector against the public execution of an unjust sentence, privately passed; it demanded a hearing, so that if any legal derogation were to be made from his rank and good name, he might at least feel it to be justly made, and demanded that Boethius be summoned to show he had not fulminated his bolt out of private malice, but in pursuance of the duty of a good pastor on behalf of his sheep. The date of the letter is October 6, 1589. No further records of the affair have been found, so that the appeal was probably rejected. The meaning of the excommunication is not quite clear: Bruno does not seem to

Oct. 6, 1589.

have been a full member of either the reformed or the Lutheran church, although attending services; and in all probability the sentence was a formal one, which, however, carried serious social inconveniences with it. The prorector, Hofmann, was not one to sympathise either with Bruno or with his philosophy; he was unhappy unless attacking some other person's opinions: philosophy in general fell under his condemnation, although he professed knowledge of it. A few years after he drove Bruno from Helmstadt he himself was dethroned from his place of authority, "ordered to stick to his last," and had to leave Helmstadt in the end (1601). No doubt it is against him that the invectives in *De Immenso*, [97] are directed:—"This scholar, excelling director of the school of Minerva: this Rhadamanthus of boys, without a shadow of an idea even of ordinary philosophy, lauds to the skies the Peripatetic, and dares to criticise the thoughts of diviner men (whose ashes are to be preferred to the souls of such as these)." Later Boethius also had to be suppressed by the consistory. [98] The young Duke, with whom no doubt Bruno stood in favour, since he presented him with eighty *scudi* after the funeral oration, was of the opposite party to Hofmann, but even with this support the Italian could not struggle against his enemies, and towards the middle of 1590 he left for Frankfort, "in order to get two books printed."

1590.

These were the great Latin works he had been writing, perhaps begun in England itself;—the *De Minimo*, and the *De Immenso*, with the *De Monade* as a part of or introduction to the latter. The printing, however, was not begun till the following year: the censor's permission was obtained for the first of them only in March 1591, and it appeared in the catalogue of the Spring bookmarket. He again sought and found patronage with an old friend of Sir Philip Sidney, one of the Wechels, famous printers of their day, in the house of another of whom (André) Sidney had lived. In the protocol-book of the council of Frankfort, under the date July 2, 1590, a petition of *Jordanus Brunus* of Nola is mentioned, in which he asks permission to stay in the house of the printer Wechel. This, as the book of the Burgomaster under the same date shows, was roughly refused:—“*Soll man ime sein pitt abschlagen, und sagen, das er sein pfennig anderswo verzehre*”—“his petition is to be refused and he is to be told go and spend his coin elsewhere.” In spite of this refusal, Wechel found Bruno lodging in the Carmelite Monastery, where he stayed, working with his own hands at the printing of his books, for some six months,—until December, perhaps, of that year. Frankfort was the main centre of the book world in those days; to its half-yearly book-marts printers and sellers came from all parts of Europe to see the new books of the world, to dispose of their goods, to stock their houses. Among others in this year came the booksellers Ciotto and Bertano, who afterwards were witnesses before the Inquisition, and who stayed in the monastery probably in September of that year, where they met Bruno. In the dedication of the *De Minimo*, of date February 13, 1591, Bruno's publishers wrote that “he had only the last folium of the work to correct, when by an unforeseen chance he was hurried away, and could not put the finishing hand upon it, as he had done on the rest of the work: he wrote accordingly asking us to supply in his name what by chance it had been denied him to complete.” The “unforeseen chance” may, as Sigwart suggests, have been the final putting into effect of the Council's refusal to allow him to stay in the town, which may till then have remained a dead letter; or it may have been the summons to Zurich. He had made the acquaintance of a young Swiss squire, Hainzel, an Augsburger by birth, at whose castle of Elgg in Switzerland a gay and open hospitality was extended to a number of the bizarre and the learned spirits of the time: Hainzel had leanings towards the Black Arts,—Alchemy and the rest,—but had interest to spare for any others about which an air of mystery clung, such as Bruno's *Art of Memory* and of Knowledge. Bruno spent a few months with him near Zürich and wrote for him the *De imaginum compositione*, etc.—as a handbook of these arts. Another of the Frankfort pupils would also be in Zürich, the brilliant but erratic Raphael Eglin, who published in 1609 at Marburg (where he was professor of theology), a work Bruno had dictated in Zürich,—the *Summa Terminorum Metaphysicorum*. Eglin suffered along with his friend Hainzel from the trickery of the Alchemists, to whom recourse was had in the hope of repairing the fortunes dissipated by the Squire of Elgg's hospitality.^[99] The *Summa* is dedicated in a letter of April 1595 (from Zürich) to *Frederic a Salices*, and in a personal reminiscence Eglin remarks on Bruno's fluency of thought and speech—“standing on one foot, he would both think and dictate as fast as the pen could follow: so rapid was his mind, so forceful his spirit.”

Frankfort.

Zürich, 1591.

In order perhaps to print the *De Imaginum Compositione* for Hainzel, or to complete the other works, Bruno returned to Frankfort about the beginning of March, 1591, and on the 17th of that month obtained permission to publish the *De Minimo*.^[100] It is to this period probably that he referred when he spoke of himself before the Venetian tribunal, as having spent six months in Frankfort (Doc. 9). It was a *second* period of six months after his return from the Zürich visit, of which he omitted all mention—no doubt he had good reason for that.^[101] At the autumn book-market his *De Monade*, *De Immenso*, and *De Imag. Compositione*, were ready^[102]—the last works that he published. About the same time, on an evil day for himself, he responded to the invitation of a young Venetian patrician, and crossed over to his fatherland,—the last of his free journeyings.

March, 1591.

The Frankfort works are fully dealt with in the chapters on Bruno's philosophy that follow: in their order they were (1) the *De triplici Minimo et Mensura*:—“On the threefold minimum and measurement, being the elements of three speculative and of many practical sciences”:—dedicated to Duke Henry of Brunswick. It is the first of three Latin poems, written somewhat after the manner of Lucretius, but with prose notes to each chapter or section. The style unfortunately seldom approaches that of Lucretius, either in Latinity or in poetic imagery, but the works are full of vigorous verse, and the force of the ideas suffers little from the fact that they are pressed into the Procrustean bed of rhyme and rhythm. The others were (2) the *De Monade, Numero et Figura*:—“On the Monad, number and figure, being the elements of a more esoteric (*secret*, or perhaps *inward*) Physics, Mathematics, and Metaphysics”; and (3) the *De Immenso et Innumerabilibus*:—“On the Immeasurable and the Innumerable, or on the universe and the worlds.” Both are dedicated to Duke Henry. The three works together contain Bruno's finished philosophy of God and of Nature, of the universe and of the worlds within it, as well as a criticism of the prevailing and contrary doctrines of the time.

*De Minimo.**De Monade.**De Immenso.*

In Frankfort appeared also, in 1591, (4) the *De Imaginum, Signorum, et Idearum Compositione*:—“On the composition or arrangement, of Images, Signs, and Ideas, for all kinds of inventions, dispositions, and memory.” It is dedicated to Hainzel, and is the last of the works published by Bruno himself. It sums up all those

De Imag. Comp.

published earlier on the theory of knowledge and on the art of memory. It assumes an identity between the Mind from which the universe sprang, or which is expressed in the universe, and the mind of each individual by whom it is known or approached. It follows that the ideas in our own minds contain implicitly a knowledge of the inmost nature of reality. Here, however, it is chiefly the mnemonic corollaries of this thought that are developed—ideas are to be arranged or grouped about certain images or pictures, in such a way that when any one occurs to the mind, it may readily call up those others which are most closely associated with it, *i.e.* which belong to the same τόπος or “place” in the mind.

During the second part of his stay in Frankfort, Bruno received an invitation from a young patrician of Venice, Giovanni Mocenigo, to come to him there and instruct him in the arts for which Bruno was famed. To the surprise of all who knew the circumstances, Bruno accepted, and re-entered, in August, the Italy which he had left some fourteen years earlier as a refugee. It was through the bookseller Ciotto that the negotiations were carried on. Mocenigo appeared in his shop one day to buy a work of Bruno which Ciotto in his deposition called at first the *Heroici Furori*, but this name was cancelled, and *De Minimo magno et mensura* written in its stead; in all probability it was neither the *Furori* nor any of the Latin poems to which the second (erroneous) title might refer, but one of the Lullian works. Mocenigo asked at the same time whether Ciotto knew Bruno, and where he was; and on the reply that he was probably at Frankfort (they had found lodging in the same monastery there), Mocenigo expressed a wish that Bruno would come to Venice to teach him the secrets of Memory, and the others he professed, as shown by the book that had just changed hands. Ciotto believed Bruno would come if asked; and accordingly, after a few days, Mocenigo brought a letter for Bruno, which Ciotto undertook to deliver, and in which he was besought to come to Venice. The message must have been delivered in the autumn of 1591, and Bruno seems to have replied by immediate acceptance.^[103] A previous letter, however, had been written, probably before Mocenigo spoke with Ciotto, and sent by another hand; it may have been the receipt of it which brought Bruno from Zürich to Frankfort, to hasten the printing of his Latin works. In both letters there were evidently specious promises of protection.^[104]

Venice.

Aug. 1591.

The motives of Mocenigo were more than questionable. He was of the noblest blood of Venice, the Doge's Chair having been seven times filled by members of his family, and among the patrician youth there was a fashionable craze for Lullism and kindred much-promising arts at this time.^[105] *De Valeriis*, another Venetian noble, wrote, in 1589, an *Opus Aureum*, which was published at Strassburg along with other Lullian works (including Bruno's) in 1609. Again, Bruno believed in, and probably taught, a kind of "natural magic," the magic of sympathetic influence from stars, animals, plants, and stones upon the life of man. Mocenigo, as his conduct abundantly showed, was shallow, mean, superstitious, weak-minded, and vain. He was just the type of man to be attracted therefore by anything that savoured of the black art, of which Bruno was popularly regarded as a devotee. His real aim may have been to be initiated by Bruno into this, although he professed the desire merely of having the Lullian mnemonics and art of invention taught him. His disappointment, when he found Bruno had nothing new to give him in that direction, might account, in a man of his character, for the revenge he took. But there may have been worse behind: Mocenigo had been one of the *Savii all' Eresia*—the assessors appointed by the State to the Inquisition Board in Venice—and was therefore familiar with the intrigues of that body. He was also under the influence of his Father Confessor, by whose orders he denounced Bruno. The proceedings make it extremely probable, therefore, that the Inquisition laid a trap for Bruno, into which he unsuspectingly walked. It is more difficult to understand how the latter so calmly entered the lion's jaws. *Acidalius* (Valens Havekenthal), writing to Michael Forgacz from Bologna (January 21, 1592), expressed the general surprise. "Tell me one thing more: Giordano Bruno, whom you knew at Wittenberg, the Nolan, is said to be living just now among you at Padua. Is it really so? What sort of man is this that he dares enter Italy, which he left an exile, as he used himself to confess? I wonder, I wonder! I cannot yet believe the rumour, although I have it on good authority. You shall tell me whether it is true or false." But clearly ill rumours were spreading, for on the third of March he wrote in a different tone, "I no longer wonder about that other sophist, so diverse and incredible are the tales I hear daily of him here."^[106] Probably Bruno did not understand what manner of reputation he had; he still regarded himself as belonging to the Catholic Church. Ciotto deposed he had heard nothing from Bruno's lips which might suggest a doubt of his being a good Catholic and Christian. Venice was a free and powerful state, Mocenigo the son of a powerful house, so that he may well have looked for safety; and it was his beloved Italy, for which he had never ceased to yearn since the day he had crossed the Alps.

Bruno's reasons for returning.

March 3, 1592.

To Venice, at any rate, he came, living for a time by himself, and spending some three months also at Padua, the neighbouring university town, where he gathered pupils about him, and wrote as constantly as before. Some manuscripts that were bought in Paris a few years ago, and which had belonged to Bruno, were partly written in the hand of one of these pupils, Jerome Besler, whom Bruno had known in Helmstadt, and who acted there as his copyist. Others of his German, and possibly some English friends were met with at this renowned university.^[107] It was only a few months after he left that Galilei was invited to teach in Padua—"the creator of modern science following in the steps of its prophet."^[108] The university was in a state of ferment at the time Bruno arrived, one of the hottest disputes being that between the students and certain professors, who read or dictated instead of freely speaking their lectures—*Doctores chartacei* they were called—and a fine of twenty ducats was imposed by the senate on every one who should be found guilty of this crime. Bruno's memory-art may therefore, as Bartholmèss suggests, have "supplied a felt want."

Early in 1592 Bruno took a fatal step, which showed how little he realised his danger—he gave up his personal freedom and went to live in Mocenigo's house. There the two opposite natures soon clashed, and the young patrician began to show his real character. The teaching did not satisfy him, did not

Bruno in Mocenigo's house.

give him the power over nature and man which he no doubt expected. He approached Ciotto again before the spring book-market, telling him how Giordano was living in his house at his expense, "who promised to teach me much, and has had clothes and money in plenty from me, but I cannot bring him to a point, and fear he may not be quite honest"; and asking him to make inquiries in Frankfort as to Bruno's character, and the likelihood of his fulfilling his obligations. Ciotto returned with an unfavourable report: Bruno was known to make profession of a memory-art, and of other *similar secrets*, but had never been known to do any good with them, and all who had gone to him for such things had remained unsatisfied; moreover, it was not understood in Frankfort how he could stay in Venice, as he was held for a man of no religion. To this Mocenigo replied, "I too have my doubts of him, but I will see how much I can get of what he promised me, so as not to lose entirely what I have paid him, and then I will give him up to the judgment of the Holy Office"—the Inquisition. This estimable frame of mind no doubt asserted itself in the relations of pupil and master. Bruno had been introduced by Ciotto to the house of Andrea Morosini, an enlightened patrician, whose open hospitality a number of the most cultured men of the time enjoyed; they formed an Academy after the manner of those of Cosenza, Naples, and other places. "Several gentlemen meet there," said Morosini of these gatherings, "prelates among them, for entertainment, discoursing of literature, and principally of philosophy; thither Bruno came several times, and talked of various things, as is the custom; but there was never a sign that he held any opinions against the faith, and so far as I (Morosini) am concerned, I have always thought him a Catholic, and had I had the least suspicion of the contrary I should not have permitted him to enter my house."^[109] The last statement must, of course, be taken *cum grano*. At this time Bruno was preparing a work on "the Seven Liberal Arts, and on Seven other Inventive Arts,"^[110] which he hoped to be able to present to the Pope in order to obtain from him absolution, and have the ban of excommunication removed, without the compulsion of again entering the order. Many Neapolitan fathers of the order came to Venice to a meeting of Chapter, and to some of these Bruno spoke—to a Father Domenico especially:—he wished to present himself at the feet of his Holiness with some "approved" work, and his ultimate design, as he told Domenico, was to go to Rome and live quietly a life of letters, perhaps obtaining some lecturing in addition.^[111] Among others he consulted Mocenigo, who promised to assist him so far as he could.

Meantime Mocenigo was putting pressure on Bruno to obtain the secrets he sought to know, while Bruno at last became aware of his danger. He pretended he wished to go to Frankfort to have some books printed, and on a certain Thursday in May he took leave of Mocenigo. The latter, fearing his prey was about to escape, began to cajole him into staying, but passed to complaint and finally to threats as Bruno persisted. On the night of the following day (Friday), as Bruno had already made preparations for leaving,

May 22.

Mocenigo came with his servitor Bartolo and five or six men, whom Bruno recognised as gondoliers, from the neighbouring stance, seized the philosopher and locked him up in an attic-room. Mocenigo promised, if he would stay and teach what was desired—viz. “the formulæ for memory and geometry”!—to set him at liberty, otherwise something unpleasant would befall him. This novel method of drawing instruction being foiled by the self-respect of the prisoner, the latter was left for the night, transferred the following day to a cellar under the ground, and during the night was handed over to the servants of the Inquisition, who brought him to their prison. On the 23rd of May, Mocenigo denounced him to the Holy Office, with a hideous but cunning travesty of some of his opinions,

The Inquisition.

reporting him, for example, as saying that Christ’s miracles were only apparent, that He and the apostles were magicians, and that he himself (Bruno) could do as much or more if he had a mind; that the Catholic faith was full of blasphemies against God; that the Friars ought to be prevented from preaching, and should be deprived of their revenues, because the world was befouled by them—they were asses, and the doctrines of the Church asses’ beliefs, and so on. The arrest was on the following night (Sunday night), and on the Monday a second denunciation was entered by Mocenigo, than which there is

Second Denunciation.

no more pitiful self-revelation of meanness and hypocrisy extant. He confesses or rather boasts that, on locking up Bruno, he had recited the charges he would make against him, “hoping to coerce him into revealing his secrets,” *i.e.* the Secret Arts. Bruno’s only reply had been to ask for his liberty, to say that he had not really intended to leave, but was still ready to teach Mocenigo everything he knew, to work for him (“to be my slave,” said Mocenigo), without any further recognition, and to give him anything that he had in the house; only he asked to have returned him a copy of a book of *conjurations* that Mocenigo had found among his written papers and had appropriated. To explain his delay in accusing Bruno, Mocenigo professed not to have been able to get enough against the latter until he had the philosopher in his own house two months earlier (viz. in March), “and then I wished to get the good of him, and by the steps I took I was able to assure myself that he would not leave without telling me of it. *All the time I promised myself to bring the matter before the censorship of the Holy Office.*” These denunciations were confirmed on oath by Mocenigo, whose age is

The Venetian tribunal.

given at thirty-four years, so that the excuse of youth falls from him. The following Tuesday the Holy Tribunal met to consider the case. It consisted, in Venice, of the Papal Nuncio (Ludovico Taberna), the Patriarch of Venice (Lorenzo Priuli),^[112] the Father Inquisitor (John Gabrielli of Saluzzo, *de Salutii*),^[113] along with three assessors or representatives of the State (*Savii all’ Eresia*), one of whom was always present, with the right of suspending the meeting if he thought proper: at the present time the three were Aloysius Fuscari, Sebastian Barbadico, and Tomaso Morosini. On this day the evidence of Ciotto and Bertano, the booksellers who had known Bruno at Frankfort as well as at Venice (Bertano was also at Zürich), was taken; it was in the main favourable, only Bertano recalled the prior of the Carmelite monastery at Frankfort having said of Bruno that he spent most of his time in writing, and went about dreaming dreams and meditating new things, that he had a fine mind and knowledge of letters, and was a *universal* man, but that he had no religion so far as the prior knew, and he quoted a saying of Bruno’s to the effect that the apostles did not know everything, and that he had the mind, if he wished, to make all the world of one religion; while Ciotto reported the common belief in Frankfort that Bruno was a man of *no religion*.

The prisoner himself was then brought forward—“A man of ordinary stature, with chestnut-brown beard, of the age and appearance of forty years”; Ciotto, too, described him as a slender man of small stature, with a small dark beard, about forty years of age. Bruno of his own accord, before a question was put, professed his readiness to speak the truth; he had several times had the threat made to him of being brought before the Holy Office (viz. by Mocenigo), but had always treated it as a jest, because he was quite ready to give an account of himself. This he proceeded to do. The biographical part of his account has been embodied in the preceding pages.

First examination of Bruno.

On the 29th Mocenigo made another deposition, the result of further reflections, at the request of the Father Inquisitor, on the utterances of Bruno against the Catholic faith. Bruno had said that the Catholics did not act on the model of the apostles, who taught by example and good deeds, converting through love, not force; that he preferred the Catholic religion to others, but it also stood in great need of reform; that he hoped great things from the King of Navarre; that it was a mistake to allow the friars to remain so rich (in Venice): they should do as in France, where the nobles enjoyed the revenues of the monasteries, the friars living on soup, as befitted such “asses.” This was a powerful stroke of diplomacy on Mocenigo’s part. It was also hinted that Bruno’s life was not pure, that he said the Church erred in making a sin of what was of great service in nature, and of what he (Bruno) regarded as a high merit.

Third deposition of Mocenigo.

Next day (Saturday) Bruno continued his account of his life, the first note of defence being struck in an appeal to the famous doctrine of the “twofold truth.” “Some of the works composed by me and printed I do not approve, because I spoke and discoursed too much as a philosopher rather than as an ‘honest’^[114] man and good Christian, and in particular I know that in some of these works I taught and believed on philosophic grounds what ought to have been referred to the potency, wisdom, and goodness of God, according to the Christian faith, basing my doctrine on sense and reason, and not upon faith.” On Tuesday, June 2, a deposition was read from Fra Domenico da Nocera confirming Bruno’s appeal to him, and his desire for the favour of the Pope and a reconciliation with the Church, so that he might be able to live quietly in Rome. The prisoner was then cross-examined, and submitted a list of his works, published and unpublished. In these he claimed to have spoken always “philosophically, and according to the light of nature, having no special regard to what ought to be believed according to the faith: his intention had been not to impugn religion, but only to exalt philosophy, although many impieties might have been uttered on the strength of his natural light. Directly he had taught nothing contrary to the Christian Catholic religion; thus in Paris he had been allowed to vindicate the articles against the Peripatetics and others, by natural principles, without prejudice to the truth according to the light of the faith: indirectly, Aristotle’s and Plato’s works were as contrary, indeed much more contrary, to the faith than the articles philosophically propounded and defended by him.” He proceeded to give an admirable statement of his “philosophical” creed which might have fired the hearts of his judges:—“I believe in an infinite universe, the effect of the infinite divine potency, because it has seemed to me unworthy of the divine goodness and power to create a finite world, when able to produce besides it another and others infinite: so that I have declared that there are endless particular worlds similar to this of the Earth; with Pythagoras I regard it as a star, and similar to it are the moon, the planets, and other stars, which are infinite, and all these bodies are worlds, and without number, constituting the infinite all (*università*) in an infinite space; while the latter is called the infinite universe, in which are innumerable worlds; so that there are two kinds of infinity, one in the magnitude of the universe, the other in the multitude of worlds, by which indirectly the truth according to the faith may be impugned. In this universe I place a universal providence, in virtue of which everything lives, grows, moves, and comes to and abides in its perfection. It is present in two fashions: the one is that in which the spirit is present in the body, wholly in the whole, and wholly in any part of the whole, and that I call *nature*, the shadow, the footprint of divinity; the other is the ineffable way in which God by essence, presence and power, is in all and above all, not as part, not as spirit or life, but in an inexplicable way. Then in the divinity, I regard all attributes as being one and the same thing. With theologians and the greatest philosophers I assume three attributes—*power*, *wisdom*, and *goodness*, or *mind*, *understanding*, and *love*; through these, things have, first, existence by reason of *mind*; then an ordered and distinct existence by reason of *understanding*; third, concord and symmetry by reason of *love*. Distinction in divinity is thus posited by way of reason, not of substantial truth.” God in Himself is one; but three aspects of this unity may be distinguished, Mind (Will or Force or Power), Understanding (Knowledge, the Word), and Love or Soul. These three aspects correspond, of course, to the three Persons of the Godhead, the Father, the Son, and the Holy Spirit respectively. Bruno confesses, however, to have doubted, from the philosophic point of view, the becoming flesh of the Understanding or Word of God, although he did not remember giving definite expression to this doubt; and as to the Spirit, he did not think of it as a person, but rather as the soul or life in the universe.^[115] “From the Spirit, the life of the universe, springs, in my philosophy, the life and soul of everything that has soul and life; and I regard it as immortal, as also bodies in substance are immortal, death being nothing but division and congregation: as the Preacher says, ‘The thing that hath been it is that which shall be, and that which is done is that which shall be done; and there is no new thing under the sun.’”

The twofold truth.

Fra Domenico.

Philosophical and theological truth.

Bruno’s creed.

Bruno confessed to have doubted the application of the word “persons” to these distinctions within the Godhead, since his eighteenth year; but he had read in St. Augustine that it was not an old term, but new at that time. To none of his doubts as to the distinction of persons or the Incarnation had he ever knowingly given expression, except in quoting others, Arius, Gabellius, and the like.... On the same day, in his prison-house, he was further examined, and repeated that whatever he had written or said contrary to the Catholic faith was not intended as direct impugment of the faith, but was based on philosophic grounds or on the authority of heretics; he made clearer also his reason for doubting the applicability of the term “persons” to the distinctions in the Godhead, quoting Augustine’s words, “*Cum formidine proferimus hoc nomen personae, quando loquimur de divinis, et necessitate coacti utimur.*” Especially as to the divinity of Christ he had been unable to understand how there could be any such relation between the infinite, divine substance, and the human, finite, as between any other two things,—soul and body, for example,—which may subsist together as one reality, but he had only hesitated as to the ineffable manner of the Incarnation, and not as to the authority of the Holy Scriptures which says “The Word was made flesh.” Divinity could not be held, theologically speaking, to be along with humanity in any other fashion than by way of *assistentia* (*i.e.* temporary influence or presence), but he did not infer anything from this contrary to the divinity of Christ, or of the supposed Divine Being that is called Christ; the miracles of Christ he had always held to be divine, true, and real—not apparent miracles; while the miracles of others were only in virtue of Christ: as to the sacrifice of the Holy Mass and the Transubstantiation of the flesh and blood of Christ he had always held with the Church: he had not attended Mass because of his excommunication, but had been to Vespers and to preachings in the Churches: in his dealings with heretics, he had always

treated of matters philosophical, and had never allowed anything to escape him that was contrary to the Catholic Doctrine, and for that reason Calvinists and Lutherans had always thought of him as having no religion, because he did not entangle himself with theirs, and had been in many parts without having communicated, or accepted the religion of any of them. Some of the grosser charges of Mocenigo were read to him, which he strenuously denied,—and “as he spoke,” says the faithful record, “he grew exceedingly sorrowful,” marvelling that such things could be imputed to him. More strenuous grew his assertion of his orthodoxy—as to the person of Christ, the Virgin Motherhood, the Sacrament of Repentance; he spoke of his repeated efforts to obtain absolution, how for his sins he had always asked pardon of God, and would also willingly have confessed himself had he been able, because he had never doubted of this sacrament (or of any of the others), being firmly convinced that impenitent sinners were condemned and that hell was their portion. Heretic theologians,—Melanchthon, Luther, Calvin and others,—he condemned and despised, and had read their books from curiosity merely, although there were others, as those of Raymond Lully, which he had kept by him because they treated of matters philosophical. Saint Thomas Aquinas, on the other hand, he had always esteemed and loved as his own soul; had his writings always by him, read, studied, and pondered over them; and had spoken of Aquinas in one of his works as “The Honour and Light of all the race of theologians, and of Peripatetics among philosophers.”^[116] When he had spoken of good works as necessary for salvation, he had in his mind not Catholicism, but the “reformed religion, which is in fact *deformed* in the extreme.” One by one Mocenigo’s charges were read, and denied, except that as to his contrasting the apostles’ method of spreading the Gospel with that of the Catholic Church,—this charge he evaded. When the grossest of all, however, was read, alleging him to have said the apparent miracles of Christ and the apostles were due to the black art, and that he himself could equally well do them all—he could not restrain himself;—“raising both hands, and crying, ‘What is this? Who has invented these devilries? I never said such a thing, it never entered my imagination; oh God! what is this? I would rather be dead than that such a thing should have been uttered by me!’” His references to women he admitted an error, but they had been spoken in lightness amid company and during talk of things “otiose and mundane.” Threatened with extreme measures if he refused to confess his errors with respect to the Church, Bruno promised to make a greater effort to recall all he had said and done against the Christian and Catholic faith, protested the sincerity of all he said, and was left in peace for a time. This interview took place in the prison of the Inquisition.

Aquinas.

On the following day in the same place the examination was continued—his neglect of Holy Days and Fastings in England and Germany; his attendance at heretic preachings (although he emphatically denied that he ever partook of the communion in any Protestant church); his doubts concerning the Incarnation, the Miracles, the Sacraments; his familiarity with magical arts; his praise of heretics and heretic Princes,—these were some of the many points of indictment which he had to face. The *Book of Conjurations*, and others like it, he professed to have had only out of curiosity, although he despised and discredited sorcery; but he had wished to study the divining art, and especially the divinatory (prophetic) side of astrology, merely out of scientific interest, and therefore had such books by him. Heretics he had praised, only for the moral virtues they had showed, or from convention (as in the case of Queen Elizabeth). The course of his examination was making clear to Bruno at last in how great danger he really stood; and on this day he made, probably in hope of immediate release, a formal and solemn abjuration of all the errors he had ever committed pertaining to the Catholic life and profession, all the heresies he had believed and the doubts he had permitted himself to hold about the Catholic Faith or the decrees of the Church; and prayed that the Holy Tribunal would receive him into the bosom of the Holy Church, provide him with remedies proper to his salvation, and show mercy upon him.

The earlier processes against him at Naples and at Rome were, however, recalled to mind; and on the following day he was again questioned as to his familiarity with the magic arts. Three weeks later Morosini was examined and Ciotto re-examined; in both cases the evidence was wholly in Bruno’s favour. Then a long interval elapsed. It was not till the 30th of July that the case was again taken up.^[117] Bruno had nothing to add to his defence, except his constant desire to enter the Church, if he could only do so without undergoing the bondage of monkhood again. Worn out by anxiety, and possibly by torture, he humbled himself before his judges: kneeling, he asked pardon of God and of his judges for all the errors he had committed, and offered himself as prepared for any penance they might lay upon him. He hoped his chastisement might exceed rather in gravity than in publicity, whereby dishonour might be cast upon the sacred habit of the Order which he had borne; and if by the mercy of God and of “their illustrious lordships,” his life should be granted him, he promised to make amends for the scandal he had created by equally great edification.

July 30.

This closed the acts of the process so far as the Venetian tribunal was concerned. The “Sacred Congregation of the Supreme Tribunal of the Holy Office,” at Rome, was eager to secure the distinguished heretic for itself, and on the 12th of September the Cardinal San Severina wrote to this effect; the Venetian tribunal, on the 17th, gave orders that Bruno be sent as soon as possible to the Governor of Ancona, who would see to his further custody to Rome. On the 28th this decision was reported to the Doge and Council of Venice by the Vicar of the Patriarch (the Father Inquisitor and Thomas Morosini being present), with an account of the charges against Bruno, and he added, that they did not wish to act without first informing the College (the Doge and Senators), so that they might give what order they thought fit, and the tribunal would wait to know what reply should be made to Rome; but he begged for expedition, since there was at that very time an opportunity of sending the prisoner in security; to all which the Senate promised to give due consideration. On the same day the Father Inquisitor returned, after dinner, to learn the decision of the Signors, adding that there was a vessel at hand, ready to set out. The State was not so willing, however, to allow the Church to have its way, and it was replied “that the matter being of moment, and deserving consideration, and the occupations of the State being many and weighty, they could not at that time come to a decision, and his Reverence might for the present let the vessel sail.” On the 3rd of October they wrote to their ambassador (Donato) at Rome, that the request had been refused, on the ground that it meant an infringement of the rights of the Venetian tribunal and a menace for the future to their subjects. Nearly three months elapsed before any further steps were taken. On the 22nd December the Papal Nuncio appeared before the College pressing them to deal with the Friar Giordano Bruno, described as a publicly known Arch-heretic, whom the Pope desired to have at Rome, in order to bring to an end the process that was begun against him in the Holy Inquisition, and their serenities were begged to permit his being carried to Rome, that justice might be done. His Holiness, the Pope, had already, in the interval, impressed his desire upon the minds of the ambassadors at Rome. On the procurator, Donato, who had meanwhile returned from Rome, pressing the unconstitutional nature of the act, the Nuncio pointed out that Bruno was a Neapolitan, not a subject of the Venetian Republic at all; that there were earlier unfinished processes against him both in Naples and in Rome; and that in similar cases the accused had been sent to the chief tribunal at Rome. The Senate agreed to consider the matter, and expressed their desire to give every possible satisfaction to his Holiness.

Dec. 22.

On the 7th of January, their procurator, Contarini, reported on Bruno to the College that “his faults were extremely grave in respect of heresies, although in other respects one of the most excellent and rarest natures, and of exquisite learning and knowledge”; *but*, since the case was begun at Naples and Rome, was one of extraordinary gravity, and Bruno a stranger, not a subject, he thought it might be convenient to satisfy his Holiness, as had been done before at times in similar cases. He also hinted that Bruno himself, on being informed that his case was to be brought to a speedy conclusion, had said he would send a writing in which he was to ask to be remitted to Rome, but that this might have been intended merely to put off time. His report he desired to have kept secret, both for public and for private reasons.^[118] It was successful in its aim, for on the 7th of January it was decided that “to gratify the Pope, the said Giordano Bruno be remitted to the Tribunal of the Inquisition at Rome, being consigned to Monsignor the Nuncio that he may be sent in what custody and by what means his Reverend Lordship thinks best; that the Nuncio be notified of this, and that our ambassador at Rome be also advised thereof to represent it to his Holiness as a mark of the continued readiness of the Republic to do what is pleasing to him.”^[119] The ambassador, Paruta, was informed of the decision, and asked to present it to the Pope as proceeding, in the words of the letter, “from our reverend and filial regard for his Holiness, with whom you should condole in our name on his indisposition; and if on the arrival of these presents he is in good health, as with the grace of God we hope, you shall congratulate him thereupon.” His Holiness, on Paruta’s informing him of the decision, was highly gratified, and replied with “courteous and kindly words, saying how greatly he desired to remain always in harmony with the Republic, and how he hoped it might not give him bones that were very hard to gnaw, in case others should cast up to him that he yielded overmuch to the affection he bore it.”^[120] Clearly Venice had no desire to quarrel with the Papal Government just at that time, and the unfortunate Bruno was made a political sacrifice. The persistency of the Pope’s representative at Venice in demanding Bruno’s transference to Rome, and the Pope’s evident relief when Venice yielded, show how important the death or complete recantation of Bruno had come to be thought by the Catholic party.

January 7, 1593.

On the 27th of February 1593 Bruno entered the prison of the Inquisition at Rome.^[121]

Bruno's behaviour before the Venetian tribunal has been regarded as a signal blot upon his character. In the course of his cross-examination he entirely changed his attitude, which was at first one of defiant self-confidence, open confession of his (philosophic) differences from the Church, and of indirect attacks upon the faith in his writings; insistence upon his right to use "the natural light" of sense and reason, so long as the doctrines of the Church were accepted by way of faith. Later he passed from this attitude to one of anxious and angry denial of all charges of heterodoxy, of trafficking with heretics, and the like; and finally to one of almost cringing submission and professed readiness to undergo any punishment for his misdeeds. It is possible that he began by overrating the tolerance of the Venetian Republic. In Morosini's circle, of which Fra Paolo Sarpi was afterwards a member, he had heard enlightened talk and free criticism of the Church, and especially of Rome. One of the reputed sayings of Morosini, "we were born Venetians before we became Christians," makes one hesitate to accept as quite honest his evidence before the tribunal. But Bruno's trial occurred at a time when tolerance had given way to diplomacy. Had Bruno been a Venetian or of another nationality the result would have been different. They had adopted a policy of friendship towards the Papal government, and in consequence dealt during that period much more severely with heretical doctrine than with looseness of life. Bruno may have discovered this in the course of his trial, and changed his position in order to save his life. Sigwart comes to the conclusion that "it is impossible to believe in his entire genuineness and truthfulness; it is clear that he was now trying to save himself and escape condemnation by submission." Numberless quotations might be made from his writings which give the lie to his denials before the tribunal, and his wonderful memory could not have allowed them to slip from his mind. However, there is this to be said, that Bruno had never regarded himself as anything but a Catholic; that his criticisms of that Church were suggestions of reform from within rather than attacks from without; that he had always retained an instinctive dislike both of Calvinism and of Lutheranism, in spite of his exaggerated but conventional praises of Luther at Wittenberg; that he had never formally compared his philosophy with his traditional faith, but rather laid that faith aside and worked as a philosopher merely: hence his reputation in Germany as a man of no religion. When he first became aware that he was in danger of losing life or at least liberty, and his dream of a quiet retirement with freedom of work in Italy began to fade, he must have lost his centre of judgment, and had difficulty in estimating his own past doings and sayings from the new standpoint. It would be unjust to say there was the smallest element of hypocrisy in his submission, or of deceit in his denial of guilt. And in any case, whatever errors he committed before the Venetian tribunal were amply amended by his behaviour before the Roman.^[122] One thing is certain: he never either then or afterwards recanted or in any sense withdrew a single proposition belonging to his philosophical creed.

To Rome there went with him, in all probability, copies of the denunciations and evidence given at Venice, the works which Mocenigo had marked, and lists of all his works, including that given by himself, which would be valuable could it now be found. From January 16, 1593 to January 14, 1599 there is absolute silence concerning Bruno, so far as discovered documents go. In 1849 an opportunity was obtained of studying the archives of the Vatican, but the student did not pass beyond November 1598 (beginning from February 1600), before the opportunity was over.^[123] The earliest of these records of Bruno is, as stated above, of January 14, 1599. To the congregation (of the Holy Office) "there were read eight heretical propositions, taken from the works of Fra Giordano Bruno of Nola, apostate of the order of Preaching Friars, imprisoned in the prison of the Holy Office, and from the process against him, by the Reverend Fathers Commissario and Bellarmino. It was decided that selected propositions be read to him, in order to determine whether he was willing to abjure them as heretical. Other heretical propositions are to be looked for in the process and in the books."

What had happened all these years? Why was Bruno's life spared so long? This unusual clemency on the part of the Inquisition points to a great difference in their estimate of Bruno's importance from their view of that of other heretics. In a list of twenty-one prisoners of the Inquisition made on the 5th of April 1599, only one besides Bruno had been for more than a year in their hands; the duration of imprisonment for the others could be counted by months or days. As a general rule they were not slow in striking. Among the reasons that have been suggested is the time required to go over the four processes which had already been drawn up against Bruno, if the documents were extant, and to obtain and read his books and manuscripts. This may be dismissed at once; Bruno's books could not be scarce *then*, although they became so later, and it could not require six years to find enough material to condemn him if that were desired. Another suggestion is that Bruno was a Dominican, and the whole order was concerned in procuring his recantation, rather than have the scandal which his death in apostasy would cause. The historians of the order afterwards denied that Bruno, if really put to death, had been one of their order—"Had he been one of us he would have remained with us *et convictu et sensibus*."^[124] More probable is the idea that Pope Clement had some favour for Bruno, who had intended to dedicate a book to him, and whose skilful pen and biting tongue he hoped to win over to the side of the Church. The book on the *Seven Liberal Arts* may have been actually completed, and may have presented a *modus vivendi* between religious authority and philosophic freedom, as Brunnhofer suggests. If the hope of winning him over was really held, it is not likely that they refrained in his case, any more than in Campanella's, from the use of torture.

Bellarmino, a Jesuit, to whom along with Commissario the study of Bruno's works and of the

processes had been entrusted, was one of the most learned prelates of the day, a keen and ready controversialist, in spite of his reputed love of peace, and a skilful writer of many apologetic and polemical works. Beneath the surface of enlightenment there lay hidden a nature of intense bigotry: it was he who decided that Copernicanism was a heresy; he played a part later in the process against Galilei, and in the attack upon Fra Paolo Sarpi; through his agency the Platonist Patrizzi was induced to retract his heresies, and his works were placed along with those of Telesius, the apostle of Naturalism, upon the index.

On the 4th of February the congregation again considered Bruno's case, he having in the interval made some protest against the eight propositions selected. His Holiness decreed that it should be intimated to him by the Reverend Fathers Bellarmino and Commissario, "that the propositions are heretical, and not only now or lately declared heretical, but according to the most ancient Fathers of the Church and the Apostolic See. If he shall admit them as such, it is well, but if not, a term of forty days shall be set him." What were the eight propositions? It is of course almost impossible to say, but probably Tocco^[125] is right in suggesting that they were neither any of those already withdrawn in Venice (as held "philosophically," but not theologically), nor any of the charges of Mocenigo which Bruno had so vigorously denied, but actual admissions common to his works and to the confessions he had made at Venice—for example, propositions as to (1) the distinction of persons in God; (2) the Incarnation of the Word; (3) the nature of the Holy Spirit; (4) the Divinity of Christ; (5, 6, and 7) the necessity, eternity, and infinity of Nature; (8) the Transmigration of Souls. It must have been in the last four of these, or some similar propositions, that Bruno stood fast by his new faith.

February 4, 1599.

He was granted more than forty days, however, or the period was renewed, for it was not until the 21st of December of that year that the patience or perseverance of the Inquisition began to be exhausted. On that date—the next on which there is any record of Bruno—the congregation again reopened the case. In a rough copy of the report which has been found Bruno is quoted as saying, “that he neither ought nor will recant, that he has nothing to recant, no matter for recantation, does not know what he ought to recant.” In the fair copy the names of the members of the tribunal are given. At their head was Cardinal Madruzzi, and among them were the fanatical San Severin, embittered by his failure to secure the Papacy (he had gone so far as to choose his name—Clement—when his rival was elected in 1592, and became Clement VIII.), the man who figures in history as having declared St. Bartholomew’s “a glorious day, a day of joy for Catholics”; the ascetic Sfondrati; the intolerant Borghese, afterwards Pope Paul V.; and the learned Bellarmino. After hearing Bruno on his defence, it was decided among them that Hippolyte Maria, general of the Dominican order, and Paul of Mirandula, their vicar, “should deal with Bruno, show him what had to be abjured, that he might confess his errors, amend his ways, and agree to abjure; and should try to bring him to the point as soon as possible.” Bruno, however, as they reported, stood firm, denying that he had made any heretical statements, and insisting that he had been misunderstood by the ministers of the Holy Office, and by his Holiness; and at the same meeting (20th of January 1600) a memorial from Bruno to the Pope, who was present, having been opened but not read, it was decreed “that further measures be proceeded to, *servatis servandis*, that sentence be passed, and that the said Friar Giordano be handed over to the secular authority.” On the 8th of February this decision was carried into effect, and he was placed in the hands of the Governor of Rome, with the usual recommendation that he be punished “with as great clemency as possible, and without effusion of blood”—the formula for burning at the stake. A witness of the passing of the sentence was Gaspar Schopp, a youthful but none the less fanatical convert from the reformed religion to Catholicism. It was a year of jubilee in Rome. Pope Clement was possessed of great diplomatic gifts, he had gained the submission of Henry IV. of France, had united France again with Spain, and detached it from England, and had quieted or lulled numerous disputes within the Church itself. Rome was therefore crowded with visitors, more so than usual even in a year of jubilee. Of the distinguished foreigners paying their homage to Clement, Gaspar Schopp was one; facile of tongue as of pen, he quickly gained the Pope’s favour, was made a knight of St. Peter, and a count of the Sacred Palace. This adept at coat-turning sent from Rome a letter to Conrad Rittershausen, which was for long the sole authority for Bruno’s death, but was held by Catholic writers on Bruno to be a forgery. In the face of the solid arguments and evidence forthcoming, Catholic reviewers even at the present day deny that Bruno was put to death. It is quite needless at this date to enter into the question of the authenticity of the letter, its assertion of Bruno’s punishment being the sole ground on which that was ever doubted.^[126] We learn from it that Bruno was publicly reported in Rome to have been burned as a *Lutheran*; and one of the aims of Schopp in writing—which he did on the very day of Bruno’s death—was to prove the falsity of this report. He had heard the sentence pronounced, and its damnatory clauses he gives as the following:—(1) Bruno’s early doubts concerning and ultimate denial of the Transubstantiation, and of the virgin conception; (2) the publication in London of the *Bestia Trionfanti*, which was held to mean the Pope; (3) the “horrible absurdities” taught in his Latin writings, such as the infinite number of worlds, the transmigration of souls, the lawfulness and utility of magic, the Holy Spirit described as merely the soul of the world, the eternity of the world, Moses spoken of as an Egyptian working his miracles by magic—in which he excelled other Egyptians—and as having invented the decalogue, the Holy Scriptures a fable, the salvation of the devil, the Hebrews alone descended from Adam and Eve, other peoples from the men created the previous day; Christ not God, but an illustrious magician, who deceived men, and on that account was properly hanged (*impiccato*) and not crucified; the prophets and apostles corrupt men, magicians, who were for the most part hanged. “In fine, I should never have done were I to pass in review all the monstrosities he has advanced, whether in his books or by word of mouth. In one word, there is not an error of the pagan philosophers or of our heretics, ancient or modern, that he did not sustain.” The delay at Rome, it is suggested, was due to Bruno’s constant promises to retract, but he was only putting off his judges, and the duration of his imprisonment is given (officially?) at “about two years.” It is clear that on the occasion of the sentence being read the denunciations of Mocenigo, as well as all later evidences dragged from Bruno’s own lips, or picked up from his books, were recited for the benefit, presumably, of the visitors present. When the sentence was pronounced Bruno was degraded, excommunicated, and handed over to the secular magistrates, as we have seen. The whole letter is redeemed by the reply of Bruno to his judges—“Greater perhaps is your fear in pronouncing my sentence than mine in hearing it.” These strong words are almost the last we have of Bruno. At the stake he turned his eyes angrily away from the crucifix held before him. And so, adds Schopp, “he was burned and perished miserably, and is gone to tell, I suppose, in those other worlds of his fancy, how the blasphemous and impious are dealt with by the Romans!” It is pleasant to know that when Lord Digby was English ambassador to Spain he caused Gaspard Schopp to be horse-whipped.^[127] For the degradation of Bruno, as we learn from the Register of the Depository-General of the Pontificate, two *scudi* of gold were paid to the Bishop of Sidonia. The memorable words he uttered at the time were reported by another than Schopp, the Count of Ventimiglia, who was a pupil of Bruno, and present at his death (perhaps at the sentence also)—“You who sentence me are in greater fear than I who am condemned”; and before his death Bruno recommended Ventimiglia “to follow

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in his glorious footsteps, to avoid prejudices and errors.”^[128]

In the *Avvisi* and *Ritorni* of Rome, which represented, however meagrely, the newspapers of the time, two references to Bruno appeared, with short garbled accounts of him. In one he was spoken of as a Friar of S. Dominic, of Nola, burnt alive in the Campo di Fiori, an obstinate heretic, *with his tongue tied*, owing to the brutish words he uttered, refusing to listen to the comforters or others: in another he was reported as saying that he died a martyr, and willingly, and that his soul would ascend with the smoke to Paradise, “but now he knows whether he spoke the truth!” The fullest account, however, of his death, and one which should put to rest all doubts on the subject, is in the reports of the Company of St. John the Beheaded. This company—called also the Company of Mercy or Pity (*della misericordia*)—was instituted for the purpose of accompanying condemned heretics to the place of death, encouraging them to repent, to die with contrition for their sins. The priests bore tablets painted with images, which were presented to the condemned to kiss, from time to time, till the faggots were lit. Even the executioner was called to their aid occasionally, and the cruellest methods adopted to produce at least the appearance of kissing, and so of repentance. In obstinate cases, on the other hand, the tongue was tied, so that the heretic could not speak to the people. When the sufferers repented before death the Company took note of their last wishes, and they were buried in the tombs of the Cloister donated for that purpose by Innocent VIII., but if they were impenitent no will was allowed, and the ashes were abandoned to the winds of heaven. This must have happened in Bruno’s case, for there is no mention of will or of burial in the report. Its date is Thursday, 16th February (an error for 17th), and it reads thus:^[129]—“At the second hour of the night it was intimated to the Company that an impenitent was to be executed in the morning; so at the sixth hour the comforters and the chaplain met at St. Ursula, and went to the prison of the Tower of Nona. After the customary prayers in the chapel there was consigned to them the under-mentioned condemned to death, viz. Giordano, son of the late Giovanni Bruno, an Apostate Friar of Nola in the Kingdom, an impenitent heretic. With all charity our brethren exhorted him to repent, and there were called two Fathers of St. Dominic, two of the Society of Jesus, two of the new Church, and one of St. Jerome, who, with all affection and much learning, showed him his error, but he remained to the end in his accursed obstinacy, his brain and intellect seething with a thousand errors and vanities. So, persevering in his obstinacy, he was led by the servants of justice to the Campo dei Fiori, there stripped, bound to a stake, and burnt alive, attended always by our Company chanting the litanies, the comforters exhorting him up to the last point to abandon his obstinacy, but in it finally he ended his miserable, unhappy life.”

So Bruno passed away; his ashes were scattered, his name almost forgotten. His death was the merest incident amid the great doings of the year of Jubilee. None of the many bishops and cardinals and distinguished visitors in Rome, with the single exception of Gaspard Schopp, makes any mention of the occurrence or of the man; and Schopp did so only because he wished to point a moral from the case. During his seven years’ imprisonment, Bruno had almost passed out of the short-lived memory of his fellowmen. Burnings of heretics were not infrequent spectacles, and required no special notice. Three years later (August 7, 1603) all his works were placed upon the Index, and consequently became rare. They were classed with other dangerous works on the black arts, and Bruno’s name became one to avoid.

This was the death which in happier days he had foreseen for himself should he ever enter Italy:—“Torches, fifty or a hundred, will not fail him, even though the march be at mid-day, should it be his fate to die in Roman Catholic country.” What were the real grounds on which his condemnation and sentence were founded? The alleged grounds we have already seen, but they cannot have formed the actual motive of the Pope and the Inquisition. Neither at Venice nor in Rome can much weight have been laid upon the evidence of the weakling Mocenigo. The Cardinals cannot have imagined that Bruno would ever open his heart or even speak freely to so shallow a nature so utterly different in all things from himself. The mere fact of his having left his order was not enough, nor his refusal to return to it, nor were his heretical opinions—defended as they might be, and as Aristotle’s own teaching had to be defended in the Church, by the subterfuge of the twofold truth. Had his chief fault been, as some have thought, his praises of Elizabeth, Henry III., Henry of Navarre, Luther, Duke Julius, and other enemies, real or supposed, of the Church, he would not so long have occupied the prisons of the Inquisition. Probably his earliest biographer, Bartholmèss, was right in suggesting that Bruno was regarded as a heresiarch—he is several times so described in the documents—the founder of a new sect, the leader of an incipient but dangerous crusade against the Church. It was as the apostle of a new religion, founded on a new intuition, a new conception of the universe, and of its relation to God, that Bruno died. Had he been won over to the side of the Church, his mind conquered and his spirit crushed by the long years of waiting, and possibly the days and nights of physical torture, it would have been a signal triumph for the papacy. But the heart which had trembled at the beginning, when the sudden gulf yawned before it, grew more and more steadfast as its trials increased. We can only re-echo Carrière’s words, that in the soul of such a man, who after eight years’ confinement in the prisons of the Inquisition remained so firm, “the governing motives must have been an eternal and inviolable impulse towards Truth, an unbending sense of right, an irrepressible and free enthusiasm.” That for which he died was not any special cult or any special interpretation of Scripture or history, but a broad freedom of thought with the right of free interpretation of history and of nature, which in his own case was founded upon a philosophy, one of the noblest that has been thought out by man.

The fear of death was no part of this philosophy; what we call death, it teaches, is a mere change of state, of “accidents”—no real substance, such as the human spirit is, can ever die. One of the highest values of his philosophy he thought to be this, that it freed man from the fear of death,

“which is worse than death itself.” Strikingly apposite to his own fate is a passage from Ovid^[130] that he quotes—

O' genus attonitum gelidae formidine mortis,
Quid Styga, quid tenebras, et nomina vana timetis,
Materiam vatum, falsique pericula mundi?
Corpora sive rogos flamma, seu tabe vetustas
Abstulerit, mala posse pati non ulla putetis;
Morte carent animae domibus habitantque receptae.

Bruno himself lived within the sphere of which he writes in the *Spaccio*, “surrounded by the impregnable wall of true philosophic contemplation, where the peacefulness of life stands fortified and on high, where truth is open, where the necessity of the Eternity of all substantial things is clear, where nought is to be feared but to be deprived of human perfection and justice.” His finest epitaph is to be found in his own words, “I have fought: that is much—victory is in the hands of fate. Be that as it may with me, this at least future ages will not deny of me, be the victor who may,—that I did not fear to die, yielded to none of my fellows in constancy, and preferred a spirited death to a cowardly life.”

No end in history is more tragic, when looked at in all its circumstances, than that of Giordano Bruno. First a life of endless, unresting struggle, striving through years of wandering, in many lands, to overcome prejudice and outworn authority, to proclaim and urge on unwilling minds the splendid gospel which inspired himself, and by which for a brief time he may have thought to supplant the old; now admired of kings, and sought after by the highest in the land, at another time a hunted pedlar of literary wares; then eight years in darkness from the world, with shame or death to choose for release. The choice made for the nobler end, the mockeries of religion he had detested and reviled pursued him to the end to—the very stake; and the funeral pyre of this martyr for liberty of thought, for the new light of science, became a spectacle for the gay and thoughtless sight-seers of the Roman Jubilee year, to all of whom, one sad disciple excepted, it was but another “damnable and obstinate heretic” who was on this earth, for that brief spell, foretasting his eternal doom.

It is not easy to characterise so complex a personality as Bruno undoubtedly was. The fiery passionate blood of the south ran in his veins, the joy of a strong-flowing life was in his heart and brain. A child of Nature, he was almost from the first, "cribbed, cabined, and confined" by the stone walls of the cloister, as his mind was hampered by the laws and dogmas of the Church.^[131] From Nature herself he drew his first lessons. While his fellows taught that Nature was a thing of evil, he learnt to love her, and to turn to her rather than to the authority of man for instruction. He believed also, as very few of his age did, in the power of human thought to penetrate the secret nature of things, to reach even to the deepest and highest reality, so far as that can be known by another than itself. Trusting to his own mind, to sense and reason, for his theory of the world, he found himself opposed in all essentials to the general thought of the time.

His purpose from the first was to use his own eyes, to discover truth for himself, and to hold fast whatever seemed to be right, irrespective of the opinions of others. "From the beginning I was convinced of the vanity of the cry which summons us to close or lower the eyes that were given to us open and upward-looking. Seeing I do not pretend not to see, nor fear to profess it openly; and as there is continual war between light and darkness, knowledge and ignorance, everywhere have I met with hatred, abuse, clamour, insult (ay, not without risk to my life) from the brute and stupid multitude; but guided by the hand of truth and the divine light, I have overcome it." Not that he really formed his theory by induction from sense-data, or by deductive reasoning; it was rather an inspiration, or an intuition, springing from his temperament, to which optimism was as necessary as pessimism repellent; and there were numerous suggestions of it both in Bruno's immediate predecessors, Copernicus and the rest, and in earlier thinkers. Bruno himself found it, as he thought, in the more ancient pre-Aristotelian philosophies. But, however obtained, this philosophy satisfied even *his* boundless enthusiasm, and it became the chief motive of his life to convince others of its truth, inspire them with the same enthusiasm, and endow them with the joyous freedom of life of which it seemed to him to be the source. His philosophy, in other words, became his religion, his inward religion,—Catholicism remaining a mere habit, a set of formulae to which he was indifferent, to most of which he was willing to subscribe because he had not questioned them.

His perfect self-confidence, and belief in the power of human reason (especially his own reason) to penetrate the mysteries of things, was accompanied by contempt for the argument from authority in philosophy, contempt for humility, submission, obedience in the speculative life. To believe with the many because they were many was the mark of a slave. Bruno, before Bacon, before Descartes, insisted on the need of first of all clearing the mind from all prejudices, all traditional beliefs that rested on authority alone, before attempting the pursuit of truth. They were impediments—burdens that delayed or prevented the attainment of the goal. The whole of the *Cabala* is a satire on the quietistic attitude, the standpoint of ignorant and ignoring faith, which regards sense and reason as alike misleading and unnecessary guides, for which science and philosophy are mere troublings of the still waters of life. "Oh, holy asinity"! one of the sonnets begins, "oh, holy ignorance, holy folly and pious devotion, which alone make souls so good that human wit and zeal can no further go; strenuous watchfulness, in whatsoever art, or invention, or contemplation of the wise, arrives not to the heaven wherein thou buildest thy mansion. Of what avail is your study, ye curious ones, your desire to know how nature works, whether the stars are earth, or fire or sea? Holy asinity for that cares not, but with folded hands and bended knees awaits from God its fate."^[132]

Authority.

Having already that touch of vanity in his character which the possession of a quick mind among sluggards or dullards almost inevitably entails, he was thrown, by his attitude towards nature and the Church, more and more back upon himself. At every step he met with a leaden, uncomprehending, but dogged opposition, until he seemed to himself the one seeing man in a world of the blind. At times this belief was expressed only too emphatically; the reader of Bruno must expect to find a passage in almost every work pointing out that that work is the best of its kind, and dispenses with all others on the subject; while his opponents in any theory are bedaubed with epithets to which the amenities of modern party strife are politeness itself.^[133] Boundless was his confidence in himself, in his power of discerning truth, and in his ability to overcome all difficulties in the way of its discovery. "Difficulty," he writes in the *Cena*, "is ordained to check poltroons. Things ordinary and easy are for the vulgar, for ordinary people. But rare, heroic, divine men pass along this way of difficulty, that necessity may be constrained to yield them the palm of immortality. Although it may not be possible to come so far as to gain the prize, run your race nevertheless, do your hardest in what is of so great importance, strive to your last breath. It is not only he who arrives at the goal that is praised, but also whoever dies no coward's or poltroon's death; he casts the fault of his loss and of his death upon the back of fate, and shows the world that he has come to such an end by no defect of himself, but by error of fortune."^[134]

His outward fortunes left Bruno indifferent; it was the opposition to his philosophy that embittered him, and excited the magnificent invectives scattered everywhere through his works. Of his own mission Bruno had the highest conception: "The Nolan has set free the human mind, and its knowledge, that was shut up within the narrow prison-house of the atmosphere (the troubled air), whence it could only with difficulty, as through chinks, see the far distant stars; its wings were clipped, that it might not fly and pass through the veil of clouds, and see that which is really to be found there.... But he in the eye of sense and reason, with the key of unwearied

inquiry, has opened those prison-doors of the truth which man might open, laid bare nature that was covered over and veiled from sight, given eyes to the moles, enlightened the blind ... loosened the tongue of the mute, that could not and dared not express their inmost feelings.”[135] It was not to the many that he spoke, however; there was little in his heart of that love for his fellowman that was so charming a trait in Spinoza, with all the latter’s desire for solitude, and under all his persecutions. Bruno, whether a son of the people or not, had never the slightest respect for that body. We have already seen what opinion he formed of the English populace, and he held a similar view of the *plebs* in general—“*Rogatus tumet, Pulsatus rogat, Pugnis concisus adorat,*” he quotes (or misquotes)[136] concerning it. Distrust of the natural man he had imbibed along with the teaching of the Church, and doubt as to his capacity for receiving or understanding the truth. Those who have acquired the truth that he has to teach need not, he writes, communicate it to all, “unless they will see what swine can do with pearls, and will gather those fruits of their zeal and labour which usually spring from rash and foolish ignorance, together with presumption and incivility, its constant and trusty companions.”[137] Speaking of the doctrine of the necessity of all human events, as determined and foreseen by God, and its coincidence with true liberty, he shows how theologians and philosophers have held it, but have refrained from communicating it to the vulgar, by whom it could not be understood, who would use it as an excuse for giving rein to their passions. “Faith is required for the instruction of the *plebs*, that must be governed; demonstration (truth) for the wise, the contemplative, that know how to govern themselves and others.”[138] So speculation as to the future life must be kept from them, for it is “with the greatest difficulty that they can be restrained from vice and impelled to virtuous acts through their faith in eternal punishment: what would become of them if they were persuaded of some lighter condition regulating the rewards of heroic and humane deeds, the punishment of wickedness and sin?”[139] He was an “aristocrat of learning,”—only the wise should have the government of the world; the people were unfit to judge either of truth or of men.

Along with this distrust of the vulgar went a far more intense dislike of the kind of learning they admired, and of the type of scholar, the pedant, that most appealed to them. The minds of the vulgar, it seemed to him, were more readily turned by sophisms, by the appearances on the surface of things, than by the truth that is hidden in their substance, and is indeed their substance itself;[140] and the man—too frequent in the Italian, and generally in the learned world of those days—most apt to veil a real ignorance by a pretended knowledge, by a show of externals, by appeal to authorities with whom he had himself no acquaintance, was *the pedant*. Bruno himself was not without that touch of vanity which led him, like others, to mass together quotations and phrases from Latin and even from Greek writers; to point an argument by forced analogies from classical mythology; to heap up references, in support of his theories, to the Neoplatonists, to the mystics, to the Cabbalah, to the older Greek philosophers: these adornments were quite in the fashion of his time, and looked at in that light they add to, rather than detract from, the peculiar charm and spirit of his writings. The true pedant—such as Polihimnio in the *Causa* (who has been thought to have suggested Polonius in *Hamlet*), Mamphurio in the *Candelaio*, Prudentio in the *Cena*—is one that for style loves long words, learned phrases, irrespective of their context; who, under pretence of accuracy, delights in trifling, subtle distinctions, sows broadcast mythological or classical allusions without a hint of relevancy. His favourite hunting-ground is, however, philosophy, and it is to philosophy, according to Bruno, that the pedant has done greatest injury. One of the most vigorous descriptions of him which Bruno gives is in the *Causa*,[141] where, no doubt, some of the actual writers of the time are satirised. Curiously, Ramus and Patrizzi, both reformers of philosophy, are mentioned as “arch-pedants”; but men have always criticised most bitterly those who stood nearest to themselves.

Pedantry.

Bruno regarded words as the servants of his pen, claimed, and indeed exercised almost too freely, the right of inventing new words for new things. Use and wont, he knew, determined the fate of words as of other things; some which had fallen into decay would rise again, others now honoured would lapse from use. For the teaching of the philosophers of old their own old words were the clearest mirror, but for new theories new words might be sought from the readiest source:—“grammarians are the servants of words, words are our servants; it is for them to study the use to which we put our words.”[142]

For such coinage, as for illustrations to his theories, references to old authorities, material for his satire on pedants, as well as for more doubtful purposes,—mystical or magical formulæ, or “proofs,”—his prodigious memory never left Bruno at a loss. But if this memory, in its tenacity, supplied him with powerful and ready arguments against his opponents in their appeal to the authority of antiquity, it was also, in its fertility, the source of the chief defects of his writing, and perhaps also of his speaking. His imagination runs riot in the pursuit of allegories, metaphors, similes from mythology. Tiraboschi, the historian of Italian literature, defies “the most acute intelligence to penetrate into his system, the most patient of men to endure the reading of it.”

So far was this enormous mass of material from blocking up the spring of originality in his mind, however, that the ideas in which he may be said to have “anticipated” modern thought are innumerable. No doubt, in many cases, they came from the earlier Greek philosophers whom he chiefly studied; but Bruno invariably gives them a connection with his own theory, such as precludes us from taking his restoration of them for a happy chance. Such ideas, for example, are those of the evolution or gradual transformation of lower organisms into higher (*De Umbris*, Int. 7), of the part played by *the hand* in the evolution of the human race (*Cabala*, L. 586. 35), of the gradual changes brought about on the surface of the earth, its seas, its islands, the configuration of the land, the climate of different countries, by the constant, if imperceptible, operation of natural causes (*Cena*, L. 190 ff.): of the true nature of mountains, which are only excrescences as compared with the real mountains, the larger continents that slope upwards from the sea (*e.g.* France): of the true nature of comets, so far at least as that they are perfectly natural bodies allied to planets^[143] (*Infin.* L. 372; *De Imm.* iv. 9. 51); of the identity of the matter of heavenly bodies with that of the earth, the universality of movement (even the fixed stars move, *cf. Infin.*, L. 350, 351, 400), the possibility (he said rather the *certainty*) of other worlds than our own being inhabited by beings similar to or more highly developed than ourselves (L. 360. 27). He “anticipated” also the idea of Lessing that myths may contain foreshadowings of truth, and that they should be interpreted not by their letter, as matters of fact, but by their spirit, as indications of higher “truths of reason.” The Bible should be interpreted in the same way: as Spinoza afterwards taught, so Bruno held, that the Scriptures inculcated moral and practical truths, to which their seemingly historical statements were entirely subordinate.

Add to this fermenting thought, power of memory, keenness and sureness of glance, and imaginative force, the fact that Bruno had a deeply poetic nature, fiery, vivid, passionate in defence of what seemed to him true, equally passionate in hatred of what seemed to him false, and the sources of his strength and weakness alike become clear. The Italian writings remain, in spite of their occasional obscurity, the most brilliant of philosophical works in that language, while the Latin works are a monument of learning (too often misapplied or useless), of acute reasoning, and of poetic enthusiasm.

Bruno was far from being what we should now call a Rationalist; he felt that cold reason, mere human logic alone, could not fathom the deepest nature of things, which was God, but that this deepest nature of things was apart from conditions of time and space. Whatever occurred under these conditions,—whatever fell within the actual world,—he claimed for sense and reason, *i.e.* as a subject of natural explanation, as accessible in all its aspects to human knowledge. There are thus two very distinct sides to Bruno's philosophical character: on the one side he is a forerunner of modern science, in his love of nature as a whole, in his desire to understand it, in his application of purely "empirical" methods to its analysis. To this side belong his rejection of the orthodox dogmas concerning the Trinity, the Immaculate Conception, and the rest, his theory of an evolution of man, his idea of a natural history of religions, his entire rejection of authority however high as an argument for or against a theory or view of nature. His own religious creed was simple, and he believed it to be the essence of what was true in all the jarring sects that had separated man from man, nation from nation, and race from race—"the law of love—which springs not from the evil genius of any one race, but from God the father of all, and is in harmony with universal nature, which teaches a general love of man, that we should love our enemies even, should not remain like brutes or barbarians, but be transformed into the likeness of Him who makes His sun to rise upon the good and the bad, and pours the rain of His mercies upon the just and the unjust. This is the religion above controversy or dispute, which I observe from the belief of my own mind, and from the custom of my fatherland and my race."^[144] On the other side, he had inherited the mysticism of the Neoplatonist school, or at least it called out a responsive echo from his mind so soon as he came under its influence. He was full of enthusiasm, as we shall find, for the divine—in things, in us, in the world, in the universe—a "God-intoxicated man" far more strikingly than the impassive Spinoza. It was because the Copernican theory fitted into his mystical thought of the One, as an identity of the infinitely small, the point, and the infinitely great, the broad, deep, immeasurable universe, that it appeared to him an inspiration of genius. Therefore he defended it, extended it further than its originator dared extend it, and finally died for it and for all that it meant to him. His belief in natural magic belongs again to this side, or rather to the influence of the one side of his nature upon the other; owing to their essential unity in God, natural things have sympathies with one another and with human life, so that a change in one thing—a stone, a tree—may indirectly cause a corresponding change in another, a human being. It was characteristic of him that he sought to give to these beliefs—which, be it remembered, were universal in his time—a rational basis, a connection with his thought-system as a whole.

Religion.

The two sides or standpoints are never far apart in Bruno: it is often impossible to say to which a given theory or mood should be attributed, but in his earlier life the mystical, in his later the naturalistic, or rationalist standpoint may be said to have predominated. It is with the more metaphysical attitude that a certain vein of optimism in Bruno's philosophy is connected, the familiar conception of evil, natural or moral, as necessary for the good of the whole, like the discords by which a harmony is heightened. No absolute evil, for the consistent Neoplatonist, can possibly exist in a world which flows from the divine and is an outpouring of His nature. But Bruno had little or nothing of the practical optimist in his own character; whatever he thought to be evil, he fought against with all his might; a victim of intolerance, he had himself no toleration for some points of view—those, namely, which he felt might weaken the bonds of civil society and of human brotherhood. "Such evil teachers," he writes in the *Sigillus* (ii. 2. 182), "succeeding time, and a world wise overlate in its own ill condition, will exterminate as the tares, canker-worms, locust plagues of their age—nay, as scorpions and vipers." Bruno saw only too clearly the evils of the world, and of his age, from the greatest of which—tyranny over the soul, and suppression of mental liberty—he suffered in his own person; and his life, as we have seen, was spent in a ceaseless, and for the time unavailing, struggle against them. But he never lost his faith in the ultimate victory of his own philosophy, based as it was upon his faith in the *essential* goodness, justice, and truth of the eternal source of things. As all things flow from, so all things tend to return to God. Philosophy goes further than to teach merely that pain and evil are not absolute facts, not grounded in the nature of things; it also frees the believer from the burden they impose:—"the practical test of a perfect philosophy is, when one by the height of his speculation is so far withdrawn from bodily things as hardly to feel pain. And there is greater virtue, as we believe, in one who has come to such a point as not to feel pain at all than in another who feels it but resists. He who is more deeply moved by the thought of some other thing does not feel the pangs of death."^[145]

1. *Summa terminorum metaphysicorum ad capessendum Logicae et Philosophiae studium, ex Jordani Bruni Nolani Entis descensu manusc. excerpta; nunc primum luci commissa; a Raphaelae Eglino Iconio, Tigurino*: Zurich, 1595. Reprinted in 1609:—*Summa Terminorum Metaphysicorum, Jordani Bruni Nolani. Accessit eiusdem Praxis Descensus seu Multiplicatio Entis ex Manuscripto per Raphaelum Eglinum Iconium Tigurinum in Acad. Marburg. Profess. Theolog. cum supplemento Rodolphi Goclenii Senioris*, Marburg, 1609.^[147]

Described by the editor, Eglin, who was with Bruno at Zurich, and afterwards became Professor of Theology at Marburg, as Bruno's "Metaphysical remains." It represents the fruit of the lectures given by Bruno at Zurich in 1591,^[148] and is one of the earliest philosophical dictionaries extant. It is on the model of the Fifth Book of Aristotle's *Metaphysics*, now known to have been intended by Aristotle as a separate work, but differs in its choice and arrangement of the terms of philosophy which are discussed. The first part of the work, which was published by itself in Zurich, may best be described as a handbook to philosophy generally, the main reference being to Aristotle's system, as was natural: with it Bruno writes for the most part in agreement. The *second part*, however, which was not published until the Marburg Edition (p. 73 ff. of the State Edition), is an "application" of the several terms already defined to the Neoplatonist philosophy: in its first section (*De Deo seu Mente*) they are applied and illustrated by reference to God as the source of the world, of whom all things are emanations, in a graduated scale of being; in the second (*Intellectus seu Idea*) to the world of Ideas—God in the world, the soul in all things and in everything; and a third section (*Amor seu pulchritudo*) should have followed, dealing with God as the end and goal of things, but is wanting.^[149] The document on the Predicates of God which Mocenigo presented to the Court at Venice was probably the second part of the *Summa*, or perhaps only its first section (Brunnhof, p. 106).

2. *Artificium perorandi traditum a Jordano Bruno Nolano Italo, communicatum a Johan. Henrico Alstedio. In gratiam eorum qui eloquentiae vim et rationem cognoscere cupiunt*. Frankfort, 1612. (Also in Gfrörer, and State Edition, vol. ii. pt. 3, No. 3).—A summary of, or a commentary on, the spurious Rhetoric of Aristotle (*ad Alexandrum*), with the addition of a second part by Bruno, on which he himself lays no great stress, on elocution or adornment; he refers his readers, however, to the orators themselves for complete instruction. It contains chiefly lists of heads of arguments and of synonyms for rhetorical use. Apparently the work is printed from notes of Bruno's lectures in Wittenberg (1587), which came into the hands of the editor, Alsted, in 1610.

3. *Lampas Triginta Statuarum*.—First published in the State Edition, vol. iii. pp. 1–258, from MSS. of the Noroff collection at Moscow. This is in the hand of Besler, Bruno's pupil and copyist, and was done at Padua in the autumn of 1591, although Besler had received the original, which he copied, in April 1590 at Helmstadt. Another MS. is in the Augustan Library, and is both more obviously correct and of earlier date than the copy of Besler (1587); in all probability the work was dictated by Bruno at Wittenberg, and is that referred to as *Lampas Cabalistica* in the letter of dedication prefixed to the *De Specierum Scrutinio* (Prague, 1588), and as shortly to be published.^[150]

It contains a finished study of philosophy from Bruno's standpoint, arranged under thirty and more headings, "Types," "Statues and Images," "Fields," etc. Under each heading are thirty "articles," "conditions," "descriptions," "contemplations." For example, we have first the two triads—Chaos, Orcus, Nox; and Pater, Intellectus Primus, Lux—typifying the lowest and the highest principles of things: the first three are Vacuum, Potency in Appetite, and Matter; the second three Mind or Reason, Understanding or Soul, and Love or Spirit. At the close of the *Statuae* there follows the practical application of them to the scale of Nature—the outflow of the highest towards the lowest, the gradual transition from lowest to highest; an account of the thirty predicates of Substance and of "Nature" in the universal sense; and a logical or methodological illustration of the uses of the Art under the headings of Definition, Verification, Demonstration. The general purpose of the whole is to give an instrument for discovery ("*Invention*") of truth, after the model of the Lullian Art, just as some of the earlier works (e.g. *De Umbris*) contain a similar instrument for *remembering* knowledge acquired.^[151] Unfortunately the work is entirely marred by the artificial distinctions drawn, and the tying down (or expansion) of the ideas treated therein to the thirty fundamental notions and thirty applications of each. Thus subjects and predicates are thirty in number each, and the modes of predication are in classes of fifteen. It is impossible not to agree with Tocco's verdict, that "However fine the analysis employed in distinguishing the subtlest shades of concepts, however great the number of elevated philosophical thoughts scattered throughout, expounded with vigour and felicity of imagery, the tractate as a whole has little value, just as the *ars inventiva* itself has little—more fit to blunt than to sharpen the inventive powers."^[152] One gladly re-echoes Bruno's words at the close: "*Itaque gratias deo agentes, Artem Inventivam per triginta statuas perfecimus.*"

4. *Animadversiones circa Lampaaem Lullianam* (State Edition, vol. ii. pt. 2).—From the Augustan MSS., dated 13th March 1587. Notes dictated in Wittenberg, on the Lullian art as a universal instrument for the discovery of truth.

5. *Libri Physicorum Aristotelis, a clariss. Dn. D. Jordano Bruno Nolano explanati*.—From two codices in the Erlangen Library, the second of which is in the hand of Besler, and was written, presumably, at Helmstadt. The earlier MS. in a German handwriting points to the commentaries

having been dictated by Bruno during his stay at Wittenberg.^[153] The books of Aristotle treated are the five books of the *Physica*, the *De generatione et corruptione*, the *Meteorologica*, Book IV. There is an introduction on the methods of the sciences, and other matters, by Bruno himself; the remainder follows closely the text of Aristotle, except in the fourth and fifth books, where Bruno is much less exact.

6. *De Magia*, et *Theses de Magia*.—The MS. of this work is in the Erlangen Codex, by Besler, and also in the Moscow (Noroff) collection, by the same hand; the former is a copy of the latter, which was dictated by Bruno in the early part of 1590 at Helmstadt.

It deals with one of the three divisions of Magic, viz. Natural or Physical Magic (the others being Divine, Metaphysical or Supernatural, and Mathematical—that of symbols, numbers, etc.). Physical magic is shown to be a natural consequence, first, of the fact that the same soul, the soul of the world, is in all things, of which the individual finite soul of each thing is a temporary mode or phase; hence all things are linked one with another, through their spiritual identity, in a bond of sympathy; secondly, of the hierarchy of beings—the principle that all finite things are emanations, in increasing degree of imperfection, from the Divine. The Theses represent a summary of the *De Magia*, and in the latter the headings of the former are referred to throughout, except in two episodes or excursus not strictly connected with natural magic (on spirit-charms and spirit-analogies): the work is referred to in the *De Minimo*, i. 3. 210 (*re* the magical influences of bodies newly dead; “the soul everywhere recognises the matter of its own body, as we have shown in the book on physical magic”).

7. *De Magia Mathematica*.—Merely a collection of excerpts from writers on Magic—Tritemius, Agrippa, Pietro Di Abano, the (Pseudo-) Albertus Magnus. (Noroff MSS. The title is that of the Italian editors.)

8. *De Rerum Principiis et Elementis et Causis*.—(Noroff MSS. The writing was begun on the 16th of March 1590, in Helmstadt, by Besler, to Bruno’s dictation.)

It contains the theory of the natural and material elements or principles of things—light and fire, wind or air, water or vapour or darkness, and earth or the dry, with their “forms,” time and place—leaving the metaphysical and the immaterial principles (spirit and soul) for consideration elsewhere. It is not of great scientific value. Bruno makes use of abstract terms even more readily than Aristotle (e.g. “*lux seminaliter est ubique, et in tenebris*,” p. 514). The chief aim of the work is to illustrate the magical applications of the different elements^[154] (cf. pp. 516, 525, etc.). Its value mainly lies in the light it throws on Bruno’s atomic theory, and on one or two other minor points of his philosophy—the harmony, co-ordination, and sympathy between all natural things, the doctrines of liberty and necessity, etc.

9. *De Medicina Lulliana, partim ex mathematicis, partim ex physicis principiis educta*.—Written immediately after the above (*de rerum principiis*), to which it occasionally refers: merely a collection of abstracts from works of Lully on medicine, as a practical application of the system of magic contained in the three previous writings. It is accordingly of the astrological type of mediæval medicine.

10. *De Vinculis in genere*. Noroff MSS.—A first sketch in Bruno’s own hand, dating probably from Frankfort; and a later, much more detailed, in Besler’s, copied at Padua. It in a sense completes the tractates on Magic, by dealing with “attraction” in general, of which the attractions and sympathies of natural and mathematical magic are special cases. As it stands, however (for neither sketch is finished: Bruno’s covers wider ground than Besler’s, the latter breaks off abruptly before the natural end is reached), it is a psychological essay on the human passions, and more especially on human love, from a purely objective, matter-of-fact standpoint. In it the most grossly material and the highest spiritual sources of love are placed side by side; and to love, including self-love, are reduced all passions, all effects, even *hate*, which is an outcome, a reversion of love.

PART II

PHILOSOPHY OF BRUNO

CHAPTER I

THE SOURCES OF THE PHILOSOPHY

In the school and the monastery at Naples Bruno passed as a matter of course through a training in the Scholastic Philosophy. Before entering the monastery of St. Dominic at fifteen years of age he had studied "humane letters, logic, and dialectic,"^[155] and had attended, among other lectures, a private course by Theophilus of Varrano, an Augustine monk and distinguished Aristotelian. From him, probably, Bruno received an impetus towards the study of Aristotle in the original works, if not also in the original tongue, which stood him in admirable stead when he came later to attack the foundations of the vulgar philosophy. He was familiar at first hand with all the main writings of Aristotle.^[156] He had read, too, and cites, most of the earlier commentators—Adrastus and Alexander of Aphrodisias, Porphyry, Themistius, Simplicius, and "Philoponus"^[157]—as well as the later, the Arabians and other Schoolmen. He had accordingly a more thorough acquaintance with the mind of Aristotle than any of the latter's staunchest supporters in his time: the lack of the historic sense prevented him, however, from taking a just view of the system as a whole: it was not the Aristotle of Greek philosophy whom he rejected, and against whom he wielded the powerful weapons of his armoury, but the Aristotle of his own day, —a living force with which no one could avoid a reckoning, the influence of which was no longer for good, but which formed, as Bruno felt, a barrier against the progressive thought and spirit of the time. In the introductory letter to the *Figuratio Arist. Phys. Auditus*, Bruno gave three reasons for undertaking the work:^[158]—(1) "that he might not appear, like so many others, to be taking up the office of censor without a sufficient knowledge of his subject; (2) that he might present to his opponents the philosophy of Aristotle as it really was, for the majority of the Aristotelians admired it rather from their faith in the man Aristotle than from discriminate judgment concerning the principles of the philosophy; (3) that he might seem not an audacious caviller against thoughts that were beyond his depth, but a genuine and legitimate disputant on doctrines that were clear to himself."^[159] The name of Aristotle was a charm; his opinion final not in matters of pure philosophy alone, but equally in natural theory; his natural philosophy had been harmonised with scriptural authority, and was the accepted doctrine of the Church. The cry which his critic heard had weight behind it: "You against Aristotle—against so many authorities, so great names? I would rather be in error along with them, than find truth with you!"^[160] The danger lay not so much in the error of Aristotle's theory of nature, or of his metaphysical theories, as in his authority; "many of the Peripatetics," Bruno says in the *Cena*, "grow angry, and flush and quarrel about Aristotle, yet do not understand even the meanings of the titles of his books."^[161] It was the influence of this authority that Bruno, in the interests of true philosophy and science, set to work to undermine. The charge which he brought against Aristotle was the same as that which Bacon afterwards brought—that he attempted to explain nature by logical categories. "It is not strange that from impossible, logical, and imaginary distinctions quite discordant with the truth of things, he infers an infinite number of other untruths" (*inconvenientia*).^[162] "Matter is formless only to logical abstraction, as with Aristotle, who is constantly dividing by reason what is indivisible according to nature and truth:"^[163] "a logical intention (or concept) is made into a principle (or element) of nature."^[164] However unfair and indeed absurd the charge must appear when Aristotle is considered in his actual place within the development of philosophy and science, and however far Bruno or Bacon or any of the nature-philosophers of the Renaissance was from avoiding the use in explanation of similar purely logical or metaphysical conceptions, it was still a great and necessary step to call attention to the need of observation and experiment upon nature, and to the value of mathematics as a method of calculating and correlating the phenomena observed. This was a second objection to Aristotle, that he despised mathematics, "being too much of a logician (and stronger in criticism than in argument)," yet, Bruno adds, "when he sought to explain any of the more profound facts of nature, he was often driven by necessity to the repudiated mathematics." Many of Bruno's own mathematical applications savour rather of Neopythagorean mysticism than of the spirit of modern science, and his geometry was far from Euclidean, but he at least made a serious attempt to account for the building-up of bodies and of the universe on mathematical principles. A third objection, which again we find in Bacon, is as to Aristotle's treatment of his predecessors. His depreciation of them is condemned in the *Causa*:—"Of all philosophers I do not know one who founds more upon imagination, or is further removed from nature than he: and if sometimes what he says is excellent, we know that it does not spring from his own principles, but is always a proposition taken from other philosophers."^[165] In another passage he is described as a "dry sophist, aiming with malicious explanations and frivolous arguments to pervert the opinions of the ancients, and to oppose the truth, not so much perhaps through imbecility of intelligence as through the influence of envy and ambition."^[166] So Bacon speaks of him as imposing "innumerable fictions upon the nature of things at his own will: being everywhere more anxious as to how one should extricate oneself by an answer, and how some positive reply in words should be made, than as to the internal truth of things."^[167] In particular it was argued that Aristotle confused the various meanings of the same name with one another:—"He takes the word *vacuum* in a sense in which no one has ever understood it, building castles in the air, and then pulling down his 'vacuum,' but not that of any other who has spoken of a vacuum or made use of the name. So he acts in all other cases,—those for example of 'motion,' 'infinite,' 'matter,' 'form,' 'demonstration,' 'being,' always building on the faith of his own definition, which gives the name a new sense."^[168]

Aristotle's rejection of mathematical method.

His treatment of the earlier Greeks.

The close study of Aristotle himself, which was one of the greatest results of the Humanist movement, had the effect of bringing into greater prominence the earlier Greek philosophers, whose doctrines Aristotle states and criticises in many of his works—notably the *Physics* and *Metaphysics*. The rediscovery of antiquity included that of ancient philosophy; and Bruno's dissatisfaction with Aristotle led him into greater sympathy with the nature-philosophers whom Aristotle decried. Towards these earlier Greeks, as towards other philosophers, his attitude is wholly that of an Eclectic: he does not attempt to appreciate their relative value, nor to discover any evolution of thought through the successive systems. From each he takes that which agrees or appears to agree with his own philosophy, and treats it as an anticipation of, or as an authority for, the latter. The "universal intelligence," for example, as the universal efficient cause in nature, is a doctrine ascribed in the *Causa* indiscriminately to the Pythagoreans, the Platonists, the Magi, Orpheus, Empedocles, and Plotinus.^[169] The belief in an infinite ether (Heraclitus' Fire) surrounding the earth, and containing innumerable worlds within it, in the *Cena* is attributed, equally without discrimination, to Heraclitus, Democritus, Epicurus, Pythagoras, Parmenides, and Melissus.^[170] Xenophanes represented for Bruno the static aspect of Pantheism—the Absolute One as in itself, apart from all reference to the finite;^[171] Heraclitus its dynamic aspect—the Absolute as unfolding, revealing itself, "appearing" in and through the finite.^[172] Anaxagoras expressed the relation between the finite individual and the One,—“All things are in all things,” for “omnipotent, all-producing divinity pervades the whole, therefore nothing is so small but that divinity lies concealed in it.”^[173] “Everything is in everything, because spirit or soul is in all things, and therefore out of anything may be produced anything else.”^[174] To Anaxagoras, as to Bruno, nature was divine.^[175] No special distinction was made by Bruno between the teaching of Anaxagoras and that of Empedocles: in one passage he attributes to the former the theory of effluxes and influxes of atoms through the pores of bodies, which really belongs to the latter,^[176] and in another suggests that Empedocles only put in a more “abstract” way what Anaxagoras had shown “concretely,” that all things are in all.^[177]

The Pre-Aristotelians.

With Leucippus and Democritus Bruno might have been expected to claim affinity, through their common atomism and naturalism: with two cardinal features of the traditional Epicureanism he was however in entire disagreement. The one was its admission of the void or vacuum: it explained the constitution of diverse bodies out of atoms which were all of the same spherical form, by the different positions and order in which the void and solid parts respectively were arranged, whereas Bruno could not imagine the corporeal atoms holding together without a material substance, extending continuously throughout the universe.^[178] The other point of contrast was its denial that anything but corporeal matter exists, with the corollary that forms are merely accidental dispositions of matter: Bruno confesses to have been at one time of the same opinion, but he had been unable wholly to reduce forms to matter, and therefore was compelled to admit two kinds of substance, forms or ideas, and matter or body, although these again were modes of a still higher unity, the One.^[179] “The deep thought of the learned Lucretius”^[180] early fascinated Bruno, and Lucretius gave the trend not only to much of his philosophy but also to the style of his writing. The Latin poems were suggested by Lucretius' *De rerum natura*, to which they are far inferior, certainly, in literary charm; the philosophical system of the later writer however is not only bolder and grander in itself, but far more thoroughly worked out into the detail of exposition and of criticism. In the Italian dialogues also Lucretius is constantly quoted,—frequently from memory, as one may judge from the errors made.

Democritus

Lucretius

But in the first reaction against the now barren Peripatetic philosophy, the school to which Bruno turned, with so many of his fellow-countrymen, was that which nominally derived from Aristotle's immediate predecessor. The revival of Platonism in its secondary form of Neoplatonism was one of the most marked traits of the time. In connection with the attempt to unite the Greek and Latin Churches in 1438, a Greek scholar came from Constantinople,—one *Georgius Gemistus* (Gemistus Plethon),—to the court at Florence, and there opened the minds of the Italians to the beauty of the Platonic philosophy. Its mystical world of ideas charmed all who were imbued with the new spirit—romantic, adventurous, hopeful, self-confident. The Ideas, it is true, were materialised and personified in the transition through Neoplatonism, and it was as spirits of the stars and worlds, demons of the earth and sea, the living souls of plants and stones, that they appealed to minds fed on the grosser fare of mediæval superstition. Plethon's lectures, uncritical as they were, ensured the spread of Platonism in Italy. Bessarion of Trebizond, Marsilio Ficino, who became head of the Platonist Academy at Florence, and Pico of Mirandula followed in his steps. Both Ficino and Pico are mentioned by Bruno, and his knowledge of Plato, as of Plotinus, Porphyry, and other Neoplatonists, was derived, almost certainly, from Ficino's translations. The teaching of Plato was interpreted in the light of, and confused by admixture with, the mystical ideas of Philo and Plotinus, of Porphyry and Iamblichus, of the Jewish Cabala, and the mythical sayings of Egyptian, Chaldean, Indian, and Persian sages. The new world was struggling for light, and it rushed towards every gleam of brightness, however feeble. Thus in the address to the senate at Wittenberg before leaving the university, Bruno named the foremost of those whom he regarded as Builders of the Temple of Wisdom: the list begins with the Chaldeans among the Egyptians and Assyrians; there follow Zoroaster and the Magi among the Persians, the Gymnosophists of India, Orpheus and Atlas among Thracians and Libyans, Thales and other wise men among the Greeks,—and so down to Paracelsus in Bruno's own century. The fantastic grouping is characteristic of the uncritical syncretism of this last phase of Neoplatonism: Plethon had conjoined the dogmas of Plato with those of Zoroaster, and had confirmed both by illustrations from Greek mythology.

Neoplatonism

Among the most widely read works were those of Iamblichus the Platonist, who died early in the fourth century,—the *Life of Pythagoras*, and especially the *Mysteries of the Egyptians*.^[181] Another work, in many books, which has not come down to us, but which penetrated into the literature of the middle ages, was on the *Perfect Theology of the Chaldaeans*. To Iamblichus, as to Plotinus, the Ideal world was a hierarchy of Gods, from the ineffable, unsearchable One, down, tier upon tier, through successive emanations, to the Gods that are immanent in the world we know and the things of the world. In the scheme not only do the Ideas of Plato, the Numbers of Pythagoras, the Forms of Aristotle, find a place, but also all the Gods of the Greek mythology, of the Egyptian religion, of the Babylonian and Hebrew esoteric cults. The same character is to be found in the writings of the so-called Hermes or Mercurius Trismegistus, to whom Bruno constantly appeals.^[182] It was partly for their cosmology, more in accord with modern thought than that of the Peripatetics and the Church, that they were read; but still more for the support their belief in demonic spirits, governing the movements of the worlds and of all individual things, gave to magical and theurgical practices, which through the slackening of the rule of the Church were now universal. “All stars are called fires by the Chaldaeans,” writes Bruno, “animals of fire, ministers of fire, innumerable gods, divine oracles.”^[183] “The Chaldaeans and the wise Rabbis endowed the stars with intelligence and feeling.”^[184] “There are some who are by no means thought worthy of a hearing among philosophers,—the Chaldaeans and Hebrew sages, who attribute body to the omnipotent God, calling him ‘a consuming fire’: below Him were innumerable Gods, flames of fire, and spirits of air, which were subtle, active, mobile bodies: souls too were spirits—that is, subtle bodies; and Bruno adds, “We do not pursue this mode of philosophising, but are far from despising it, nor have ever thought that a wise man should think it contemptible.”^[185] The theology or theosophy of the Egyptians is praised in the *Spaccio*,^[186]—“The magical and divine cult of the Egyptians, who saw divinity in all things, and in all actions (each manifesting divinity in its own special way); and knew by means of its forms in the bosom of nature how to secure the benefits they derived from it—as out of the sea and rivers it gives fish, out of the deserts wild beasts, and out of mines metals, out of trees fruits, and out of certain parts of nature, certain animals, certain brutes, certain plants, are gifted certain fates, virtues, fortunes, or impressions. Divinity in the sea was called Neptune, in the sun Apollo, in the earth Ceres, in the deserts Diana, and diversely in each of the other species of things: as divine ideas, they were diverse deities in Nature, and all were referred to one deity of deities, one source of Ideas above Nature.” The passage shows clearly the connection between the revived enthusiasm for the old pagan cults and the new but dark beginnings of independent study of nature, in Magic, Divination, Alchemy, and Astrology: equally close was the connection of both with the revival of Pantheism, the conception of nature as a single whole throbbing with one life, springing from one single source. So of the Hebrew Cabala, Bruno writes, “its wisdom (whatever it be in its kind) derives from the Egyptians, among whom Moses was brought up.” “In the first place it attributes to the first principle a name ineffable, from which proceed, in the second place, four names, afterwards resolved into twelve, these into seventy-two, these into one hundred and forty-four, etc., etc. By each name they name a god, an angel, an intelligence, a power that presides over a species of things,—so the whole of divinity is reduced back to one source, as all light is brought back to the first, self-shining light; and the images in the diverse, innumerable mirrors,—particular existences,—are referred to one formal,^[187] ideal source.”^[188]

Egyptian theosophy.

Hebrew Cabala.

As might be expected, Plato himself was best known to the school through one of the least characteristic of his works, the *Timaeus*, with its fantastic cosmology and demonology, alongside of which was placed the work of (the Pseudo-) Timaeus of Locris, a later writing, based upon that of Plato, although professing to belong to an earlier date: next to these in importance came the *Republic*, with the theory of Ideas. It was from the Chaldaeans, Egyptians, and Pythagoreans that Plato was supposed to have derived his cosmology. It is, however, with the system of Plotinus that Bruno’s earlier theory has the closest affinity: he passed far beyond that system, as the following chapters may show, but many of the ideas that had come down from the master remained throughout part of the basis of Bruno’s thought: such are, for example, the idea of the Universal Intelligence,—distinct from the One, the Highest and Unknowable Being, or God,—as the soul of the world and the source of the forms of material things;^[189] the *rationes* or ideas which are contained in it mould and form all things from the seed onwards: the seed is a miniature world containing *implicitly*, *i.e.* in its *ratio*, form or soul, the perfect thing.^[190] The conception again of the lower, sensible world, as an imitation of the higher, the intelligible, is derived from Plotinus, as is that of the seven grades or steps of emanation from the First Principle to the material world, which correspond to the seven grades by which the human mind rises from the knowledge of sensible things to that of the Highest, the Good.^[191] The order of knowledge corresponds step for step with the order of emanation—of creation. Most significant of all for the development of Bruno’s philosophy was Plotinus’ conception of an “intelligible matter,” which is common to all the different beings and species, in the intelligible world, just as brute matter is that which is common to all kinds of corporeal objects.^[192] Again from Plotinus derives the distinction that the matter underlying the intelligible world *is* all things and all together: having in it (implicitly) all forms, there is nothing into which it may change: whereas the matter of the sensible world *becomes* all by change in its parts, becomes at successive moments this and that, is therefore at all times in diversity, change, movement. Matter of either kind is never without form, but all forms are in them in different ways—in the one in the instant of eternity, in the other in the instants of time; in the one all at once, in the other successively, in the one *complicitly*, in the other *explicitly*.^[193] The same idea is attributed in the *De Immenso* (Book V.) to the Platonists,—“that God has imbued celestial matter with all forms at once, but gives them to elemental matter in single moments, just as he has poured into the nature of the

Gods all ideas once for all, but instils them into animal nature day by day. And as in the order of minds there is an ultimate principle which is incorruptible, so in the order of bodies. For the order of bodies follows that of intelligences as a footmark follows the foot, as a shadow follows the body; hence whatever order is proved to hold of minds, the same will be found to hold of "bodies."^[194] It only remained to identify the two kinds of matter, the divine and the "elemental," the spiritual and the corporeal, to obtain the pure Pantheistic naturalism of the middle period of Bruno's philosophy: at that stage he was no longer in sympathy with the Neoplatonist psychology, and denied the doctrine of a *separate* intelligence or understanding in man, an intelligence, that is, of different origin from sense, and therefore of different kind; he rejected also their view that the imagination which is the source of instinct in animals, differs from human imagination, and their assertion of a difference in kind between reason and intellect in man. For Bruno, as the order of nature was throughout the same in kind, constituted of similar elements, so the order of thought or knowledge was one in kind, from its lowest phase in sense, to its highest in the divine ecstasy. In the *Heroici Furori* (as again in the posthumous *De Vinculis in genere*) the Platonic doctrine of the ascent to the ecstatic vision and love of divine beauty, from sense-perception and the material feeling for sensible beauty, is the essential topic throughout: and in both Bruno is largely indebted for his symbolism to the Neoplatonist mystics.

The renewed passion for physical science brought another school of philosophy into prominence—the Arabian.^[195] The chief commentaries of this school on Aristotle, as well as many of their original writings, were translated and published before the middle of the sixteenth century. Their interest being directed rather towards the physical and metaphysical writings of the master, than towards the logical, they helped to satisfy and to foster the growing spirit of inquiry, and at the same time to spread abroad a more exact knowledge of the real Aristotle than was to be derived from the Christian commentators, whose philosophy was much less in sympathy with Aristotle's than was imagined. The general trend of the Arabian school in metaphysics was towards a modified Aristotelianism, leavened by the Neoplatonist conception of the essential unity of all being and all thought, particular things and particular ideas being a free outflow from the One, into which they of necessity return again without affecting its fundamental nature. Bruno was familiar with *Avicenna*,^[196] *Avempace*,^[197] *Avicebron*,^[198] *Algazel*,^[199] and above all *Averroes*. Avicebron or Avencebrol was the author of the famous *Fons Vitae*, "the Source of Life," which gained a quite undeserved notoriety for its supposed materialism. Bruno did not know it at first hand, but through quotations in the translated Arabian writings,^[200] and criticisms in the Scholastics. Accordingly his idea of it is by no means accurate.^[201] He knew that Avicebron had spoken of matter as divine, that he had reduced even the "substantial forms" of Aristotle to transitory phases of matter—"the stable, the eternal, progenetrix, mother of all things,"^[202] and had shown the logical necessity of assuming a matter, or ground, out of which corporeal nature on the one hand, incorporeal or spiritual on the other, are differentiated.^[203] It is clear that this underlying matter was not material in the ordinary sense, but a unity which in itself was neither corporeal nor spiritual, yet in its different aspects was both at once. That is a conception which formed one of the main theses in Bruno's philosophy. Directly or indirectly, he drew from the *Fons Vitae* the thought of a common something which runs through all differences, which is their basis, and gives them reality, which stands to them in the relation of Aristotle's matter to forms: under the differences of bodily objects there lies one common matter, under the differences of spiritual beings another, and under the differences of these two secondary "matters" lies a primary matter in which both are one. So too the progress of thought is from the most complex, or composite, material bodies,—through the less complex, the spiritual,—to the highest and simplest, the One.^[204] Of Algazel's *Makacid*—a resumé of the chief philosophical systems, which were criticised in a second part of the work—a translation was published in 1506. Although an orthodox theologian, he taught Bruno that the Sacred Books had as their end not so much truth or knowledge about reality "as goodness of custom, the advantage of the civil body, harmonious living together of peoples, and practice for the benefit of human intercourse, maintenance of peace, increase of republics";^[205] in other words, that the Bible claimed no authority in regard to matters of historical fact or of natural science, but contained a revelation of moral or practical rather than of speculative or theoretical truth.^[206] For Averroes, Bruno has the highest respect:^[207] he constantly speaks of him as "the most subtle and weighty of the Peripatetics"; "Averroes, though an Arab and ignorant of Greek (!), is more at home in the Peripatetic doctrine than any Greek I have read: and he would have understood it better, had he not been so devoted to his deity Aristotle."^[208] This blind faith in Aristotle was the weak spot in Averroes' armour, and the cause of many of his subtleties. "He could not believe that Aristotle, whose knowledge was co-extensive with creation, could have erred; rather than deny Aristotle, he refused to believe his own senses."^[209] In philosophical theory there were at least two points of contact between Bruno and the great Arabian—one was the doctrine that forms, *i.e.* individual particular objects, are sent out from and therefore originally contained in matter, or, in modern phrase, that the evolution of natural objects is from within outwards, not imposed upon nature by an alien and separate creator:^[210] the other was the theory of a universal intelligence pervading and illuminating all human minds, yet remaining one and the same in all, itself an emanation from the Divine, and the lowest in the order of intelligences.^[211] Bruno did not, however, speak of it as separate from the finite minds, but as immanent in them: nor did he regard it as the only immortal element in man.

Averroes:—Ibn Roschd (1126-1198).

Of the Scholastics proper, from whom much at least of Bruno's terminology is derived, two seem to have influenced him most strongly:—Albert the Great, whose interest in natural science entitled him to a place in the temple of wisdom: "He had no equal in his time, and was far superior to Aristotle, whose school, in which he ranked according to the conditions of his age, was unworthy of him";^[212] and Thomas

Albertus Magnus.

Aquinas, the angelic doctor, “honour and glory of all and every race of theologians and of Peripatetic philosophers.”^[213] Generally speaking, however, the Scholastic is to Bruno the pedant, the dabbler in words, as contrasted with the student of nature or of reality.^[214] Under this condemnation fell two of the greatest innovators upon the Aristotelian philosophy of his own time,—Ramus, and Patrizzi. The great logician was merely “a French arch-pedant, who has written *The School upon the Liberal Arts*, and the *Animadversions against Aristotle*. We may admit that he understood Aristotle, but he understood him badly; and had he understood him well, he would perhaps have been minded to make honourable war upon him, as the judicious Telesio has done.”^[215] The fashionable philosopher and Platonist is “*un altro sterco di pedanti*, an Italian who has soiled so many quires with his *Discussiones Peripateticae*; we cannot say he understood Aristotle, either well or ill, but he has read and re-read, stitched and unstitched, and compared with a thousand other Greek authors, friendly and unfriendly to Aristotle, and in the end has undergone great labour, not only without any profit, but also with very great disprofit, so that he who would see into what presumptuous folly and vanity the pedantic habit may plunge a man, let him look at that book, before the memory of it is lost.” Tocco has laid his finger upon the reason for Bruno’s dislike of these moderns, and it explains his objection to the Scholastics generally:—it was that they attempted to remodel and reform the Logic and Rhetoric of Aristotle, the very parts of his work which Bruno regarded as the most perfect,—and neglected the physical works, the theory of which had so powerful an authority to back it, and therefore all the more required the energies of the stronger minds of the time to be directed upon it.^[216]

One of the mediæval writers Bruno associated so closely with himself, that his indebtedness might easily be exaggerated: this was Raymond Lully, whose grim figure stands out from the shadowy thirteenth century,—the author of the celebrated *Art of Reasoning*.^[217] The object of the Art was to tabulate the primary forms or elements of thought, and their modes of combination, from which data, it was believed, any process of reasoning, however complex, might be carried out, without greater expenditure of energy than in performing an arithmetical operation with any of the first nine numbers. There was no question of a possible divorce between thought and reality. The result of any such process of rational calculus properly carried out was truth. Bruno thought with Lully that the ultimate ideas within reach of human thought were at the same time substantial elements in reality and that the completest knowledge of reality—short of the Absolute—was within the power of human reason to achieve. Lully included in this rational sphere the dogmas of Christian theology: faith was for the many, who must be *driven* to believe; reason for the few, the wise. Lully’s method attracted, and his teaching influenced nearly all the greater minds of the later middle ages, and of the Renaissance. They became a source of as bitter contention as the doctrines of Aristotle himself. Bruno speaks of Lully as “almost divine”; Agrippa, after being an ardent follower, came to see the vanity of the system, and Bacon called it a method of imposture. At different times Bruno expounded, criticised, and expanded the Art. He claims^[218] to have “embellished the method of him whom the best leaders among philosophers admire, follow, imitate.” Duns Scotus (“Scotigena”), Nicholas of Cusa, Paracelsus, Agrippa, are named, unjustly, as having drawn their chief doctrines from this source: Lefevre and Bouillé^[219] cited among his most recent followers. The art was taught “by some divine genius to a rude uncultured hermit, and although it seems to issue from one too dense and stupid, yet it excels the teaching of any famous Attic orator in this kind, as a crop of wheat excels one of barley. It seemed to us unfitting that this work, struggling upwards to the light, against the envy of oppressing darkness, should be suffered to perish and be lost.”^[220] Yet Bruno by no means thought Lully’s exposition perfect. Of his own Lullian work, the *De Compendiosa Architectura*,^[221] he says that it “suffices for the understanding, estimating, and prosecuting of the art of Lully, by those who are skilled in the vulgar philosophy. For in it is expressed in one whole, all that is in Lully’s many ‘Arts,’ in which he always seems to be saying the same thing; you have there all that is in the *Ars Brevis*, the *Ars Magna*, and other books bearing the name of *Arbor Scientiae*, *Inventionis*, *Artes demonstrativae*, *mixtionis principiorum*, *Auditus cabalistici*, or any other of that kind, in which the poor fellow strove always to express the same thing.”

It was the dream of universal knowledge that attracted Bruno and others to Lullism, just as the dream of universal power over nature attracted the greater minds of the Renaissance to the pseudo-science of Alchemy. The same idea is at the root of both. All things are in all things, *i.e.* the one fundamental nature is in each and every individual thing, therefore out of any one may be produced any other. So in the idea of any one thing, the knowledge of all and any others is necessarily contained, requiring only a proper method for its extraction, as out of the seed may be brought the great tree. Therefore, to Bruno, the hermit Lully seemed “omniscient and almost divine,” his method an inspiration from above.^[222] There is little, however, to connect Bruno with the substantive teaching of Lully, apart from the method. He explicitly rejects, for example, the main contention of Lully, that the Christian dogmas are capable of demonstration by reason. —“Those relations (*i.e.* between God and man), which have been revealed to the worshippers of Christ alone, are contrary to all reasoning, philosophy, other faiths and superstitions, and allow of no demonstration but of faith only, in spite of what Lully in his madness (*delirando*) attempted to do, in face of the opinion of the great theologians.”^[223]

Foremost of all, however, of the influences which directed Bruno’s thought was that of the Cardinal Nicolaus of Cusa (Nicholas Chryppfs). A “pre-reformation reformer,” he stands both in theology and philosophy between the old and the new eras, summing up in his own theory the purest theology and the most refined philosophy of the Middle Ages, yet inevitably pointing forwards to a scientific and religious reform which should transcend both. “Where,” cried Bruno in his oration at Wittenberg, “will you

Lully, 1235-1305.

Nicolaus Cusanus.

find his equal? and the greater he is the fewer are they to whom he is accessible. Had not the robe of the priest infected his genius it would have been not merely equal to but far superior to that of Pythagoras.”^[224] “He knew and discerned much, and is truly one of the most gifted natures that have ever breathed the air of heaven; but as to the apprehension of truth, he was like a swimmer in tempestuous waters, cast now high now low, he did not see the light continuously, openly, clearly; did not swim as in calm and quiet waters, but interruptedly, at intervals, for he had not cast off all the false principles which he had received from the common doctrine—his starting-point.”^[225]

A sketch of the philosophy of the Cusan will show in how close a relation Bruno stands to him, yet how great is the difference in outcome between the two philosophies. Clemens, whose sympathies are with the orthodox theologian, does not hesitate to say that this is “the real and direct source from which Bruno drew with both hands, the philosophy to which he owes many of the main principles of his nature-philosophy, and which he has to thank for all the essentials of teaching said to be peculiar to himself”; and Falckenberg is equally inclined to underrate the originality of the Italian in preference to the German philosopher. The outset of Cusanus’ philosophy is from a theory of knowledge which he held from Platonist traditions:—Knowledge is posterior both in time and in value to Being, or Reality, of which it is at best a copy or a sign, hence Reality can never be wholly comprehended by it. Every human assertion is at best a “conjecture,” a hypothesis or approach to truth, but never the absolute truth itself. Only in the Divine spirit are thought and reality one; the Divine thought is at the same time creative, human only reflective, imitative, thus the Ultimate Being is and must remain incomprehensible for human minds. So Bruno also taught. The Cusan did not, however, reject on this account all human knowledge. On the contrary, reason approximates ever more and more closely to the Divine mind, as a polygon approaches more and more to the form of a circle when the number of its sides is increased; as it never becomes an actual circle, so the Divine reason may be known ever more and more truly through human reason, but never quite truly. It is the knowledge of this our essential *ignorance* of the Divine that brings us nearest to it.^[226] Thus although from one point of view all that is best in human experience may be attributed to the Divine nature in a higher form (*positive theology*), from another every predicate, even the highest, may be denied of it (*negative theology*), or from still a third standpoint (*mystical theology*), contrary predicates equally hold or do not hold of the Divine. This “coincidence of contraries,” suggested perhaps by the tradition of Heraclitus and Empedocles, was in the Cusan a principle of knowledge merely. The Divine was at once the greatest and the least; *greatest* because we could not imagine it added to, for it was the all; *least* because, being truly existent, we could not imagine anything taken away from it. It is owing to the limits of human thought, therefore, that God is at once greatest and least, equal and unequal, many and one; God Himself is free from all contradiction, the apparent contraries of our understanding are in Him one and the same. So, to our imagination, the infinite circle coincides with the infinite straight line, and a top spinning with its fastest movement appears to stand still.

Bruno extols the greatness of this discovery—“Considering it physically, mathematically, morally, one sees that the philosopher who saw into the coincidence of contraries made a discovery of the highest importance, and that the magician who knows to seek it where it is is no feeble practician.”^[227] Yet, although he made use of the same geometrical illustrations, and believed himself to be substantially following Cusanus, his theory was widely different. The coincidence springs in Bruno, not from the limitations of the human mind, but from the fulness of the Divine nature. It is not in God as the transcendent unknowable Being that the coincidence inheres, but in the infinite universe as one with God, which is in itself at once the greatest and the least, the maximum and the minimum. Since nature is permeated by God, in everything, in the least of things, is God the greatest; the least *is* the greatest, has in it the nature of the whole, and so, too, the greatest is the least. In Bruno it is a *pantheistic*, in the Cusan a *theistic*, doctrine. The same conception occurs again in its different meanings, when both compare God to an infinite circle in which centre and circumference are one; in Cusanus it is to our knowledge that He so appears, in Bruno He really *is* infinite, and is with His whole nature at any point or centre, as well as in the whole, the circumference.

With the Cusan the threefold nature of the Highest Being is deduced as a necessity of Reason: it is (1) *unity* eternal; (2) *sameness* or *equality* eternal; and (3) the *union* of unity and equality. As there cannot be three eternal and highest beings, these three are necessarily one—the Unity (the Father) produces or begets from itself the *same* (the Son), and out of both springs their union (the Holy Ghost), yet each of these in the One is one and the same.^[228] In the universe, the created world, there is also a Trinity, since it is a copy or reflection of the Divine. (1) *Possibility* or *Matter*, the unlimited, indeterminate, but capable of being limited and determined, corresponds to the unity of the eternal; (2) *Actuality*, or *Form*, the limiting or determining something, that which limits, corresponds to the sameness or equality of the Eternal; and (3) the unifying *movement* by which the possible receives actuality, matter receives form, implying a spirit of union, of Love, corresponds to the Absolute Union, the Holy Ghost.^[229] At a later stage of his philosophy, however, the Cusan gave a second deduction of the Trinity.^[230] God is both Absolute Possibility, Absolute Power or Potency (the Creative Word, the Son), and the union of both in Absolute Reality; yet these are merely different aspects or points of view of the Eternal Being. Again, God is the identity of knowing, or intellect, the knowable or intelligible (the Word), and love, as the inter-relation of each with each, the striving of the knowing after the knowable, its highest good.^[231] Bruno also adopts the Trinity of Possibility or Matter, Potency or Form, and Reality, but it is applied at once to God and to Nature as two sides of the same thing. As the Divine potency is

The Trinity.

infinite, so is nature, its expression, infinite; matter and form do not in their origin stand opposed to one another, as if separated from one another, any more than *power* and *possibility* are separate in God; all that can be is realised; matter has in itself all possible forms, and produces these out of itself in the successive moments of time; the universe is eternal, therefore, in order that the infinite power may in it be realised. In all these respects Bruno transforms the orthodox Cusanus' conception of a created and finite world; although nowhere perhaps has the idea of a creation been more skilfully woven into a profound philosophical system than in the Cardinal's quaint dialogues. The Cusan does not attempt the impossible, to account for the fact of creation—"God comprehends (or contains) all things, for all things are in Him, and He unfolds all things out of Himself, for in all things He lives"; but the essence and the process of the comprehension and the unfolding are unknowable by us, just as we can never understand how *chance* comes to be united with *necessity* (creation) in the world. It is to this incomprehensible partnership that the imperfections of created things are attributed. In its reality the universe is finite, limited; in its possibility (*i.e.* its *idea*) it is infinite, but only *privatively* infinite—that is, God could still call a more perfect universe into existence than it has actually pleased Him to do. Only He, as the Absolute Greatest, is infinite in the full *negative* sense, *i.e.* that which can neither be nor be thought greater than it is. Here Bruno's theory is in complete contrast with that of the Cusan. There are, however, many consequences that both alike have drawn, as that no two things in the universe are wholly and in all respects alike (the *identity of indiscernibles*); each thing expresses the nature of the whole in a special way, but all things may be arranged in graduated scales from the lowest to the highest, or from any one to any other, *i.e.* there are no absolute differences, only differences of degree. Nor are there absolute centres in the universe, or in any of the worlds, nor perfect figures—thus there are no perfect circles described, *e.g.* by the planets, in nature. A further corollary was that the whole is mirrored in each of the parts, as each particular thing partakes of the soul or creative force of all; each does not, however, mirror or reflect the Divine nature with the same adequacy as every other; some do so more perfectly than others, man most perfectly of all.[232] Cusanus did not definitely accept the suggestion of a soul of the universe, analogous in its relation to the world to the soul of man in the body; still less did he identify it with God, as Bruno tended more and more to do. Hence he escaped the fantastical consequences of the belief in Universal Animism, which were drawn without reserve by the Renaissance writers—the consequence, *e.g.* that if one soul, one nature, pervades all things, and is the life of all things, then out of each may be produced any other—out of lead, gold, etc. On the other hand, the four elements at least were different forms of the same fundamental being, and might be produced each out of the other; and, in common with Bruno, Cusanus held the pre-Aristotelian belief in Atomism:—there cannot be division of anything, cube or surface, or line—*ad infinitum*; ultimately there must in each kind be a minimum,[233] an atom, beyond which we cannot *in fact* go, although to *thought* it may be still further divisible; so there is in every figure, in every kind of thing, a definite *number* of atoms. It was partly this thought, partly also the mystical value from time immemorial given to the different numbers and geometrical figures, that led both Cusanus and Bruno to look to mathematics and geometry for the true method or organon of natural science. "Number is the natural and fruitful principle of the understanding's activity; irrational beings do not number. But number is nothing but the unfolding of the understanding. Without it the understanding would have none of the results to which it attains.... Nothing can exist before number, for all that goes beyond the simplest unity is in its fashion a composite, and, therefore, without number is unthinkable, for multitude, difference, and relation of parts arise from number." [234] In both again human knowledge proceeds inversely as creation (or emanation) from number, the many, back through successive grades of simplicity to the one highest, most simple, God, in whom are all things complicitly (without number). "What appears to us as after another, successive, is by no means after in Thy Thought, which is eternity itself. The single thought, which is Thy word, embraces (*complicat*) all and each in itself, Thy single word cannot be manifold, opposite, changeable.... In the eternity in which Thou thinkest, coincides all the *after another* of time, with the *now* of eternity. There is, therefore, no past nor future where future and past coincide with the present." [235] The merely logical understanding, that which is based upon sense and requires sense-images for its material, is inadequate to this highest knowledge, gives approximation merely, and we are thrown back upon mystical intuition on the one hand, reasoned faith on the other, for our insight into the true nature of the One and the All. [236]

Other influences which gave direction to Bruno's genius belong rather to physical science and pseudo-science than to philosophical theory. Cornelius Agrippa of Nettesheim (1487–1535), the scholarly adventurer, the Faust who acquired all the knowledge and most of the arts of his time, wrote a compendium and justification (from Neoplatonist philosophy) of magical practices,[237] and at the close of his life the great declamation "on the uncertainty and vanity of all sciences and arts," [238]—a plea for the simple life and the simple gospel. The *De occulta philosophia* is the chief source from which Bruno drew the fantastical lore of the *De Monade*. [239] The satires upon Asinity, as the chief human virtue, in the *Spaccio* and the *Cabala*, directed as they are against blind faith without works or wisdom, found their occasion at least in Agrippa's praise of the Ass (in the *De Vanitate*) as the mouthpiece of God in the story of Balaam, and the bearer of Christ in the New Testament history.

Agrippa of
Nettesheim.

Paracelsus [240] proposed a reform of medicine on Neoplatonist principles, attacking the Galenian doctrine of the Four Humours, which was based on the four elements of the Aristotelians (the warm and the cold, the moist and the dry). His own more "natural" theory made salt, sulphur, and mercury the (chemical) elements of all things—those which in living organisms were vivified and directed by an inner spirit (*e.g.*

Paracelsus.

the *Archaeus* in man), a direct emanation from the soul of the universe. Through their common constitution, and the spirit that infused all things alike, there was a subtle, mysterious sympathy between the microcosm and the macrocosm, the individual body and the universe, and it was by the study of the relations (magical, astrological, and the rest) between the stars and the things of earth, between the different metals and the body of man, that Paracelsus proposed to reform the art of medicine. Bruno, in the *Causa*,^[241] praises Paracelsus for his “philosophical” treatment of medicine, that he did not rest content with the three chemical principles alone for explanation of the different vital phenomena, but sought the true principle of life everywhere in a spirit or soul. He is one of the builders of the temple of wisdom,—*ad miraculum medicus*.^[242] In his magical writings and in the *De Monade*, Bruno is largely indebted for materials to Paracelsus. The same general tendency, the desire for a return to nature and to sense-observation as opposed to the authority of Aristotle, and to the cult of logical or grammatical subtleties, is found also in Cardan.^[243] In his work there is the same mixture of mathematics and physical science with theology, magic, and Neoplatonism, and to him Bruno owes many of his superstitions. The more profound Telesio also (who before Bruno “made honourable war upon Aristotle”)^[244] attempted, independently of all authority, from sense-knowledge and induction alone, to penetrate the mysteries of nature.

Cardanus.

Neoplatonism, and

Telesio.

Only one name remains with which that of Bruno is indelibly associated—that of Copernicus, whose *De orbium coelestium Revolutionibus* was published in 1543. It was his theory of the solar system, coinciding as it seemed with that of the most ancient philosophers, that gave the decisive trend to Bruno’s thought, holding him fast to the one all-important fact that the earth is not the centre of the universe but one of its humblest members. Without the solid arguments of Copernicus, Bruno’s superb conception of the cosmic system would have remained a dream, an intuition of genius, rather than a well-grounded forecast of modern scientific discovery. “There is more understanding,” said Bruno, “in two of his chapters than in the whole philosophy of nature of Aristotle and all the Peripatetics.”^[245] Grave, thoughtful, careful, and mature in mind, not inferior to any of the astronomers that went before him—in natural judgment far superior to Ptolemy, Hipparch, Eudoxus, and all the others that have walked in their footsteps—a height he attained by freeing himself from the prejudices, not to say blindness, of the vulgar philosophy. Yet he did not get beyond it; being more a student of mathematics than of nature, he was unable wholly to uproot all unfitting, vain principles, to solve all contrary difficulties, liberate both himself and others from so many vain inquiries, and fix their contemplation on things abiding and sure. With all that, who can sufficiently appraise the greatness of this German, who paid little heed to the foolish multitude, and stood solid against the torrent of opposing belief. Although almost destitute of living reasons for weapons, he took up those cast-off and rusty fragments that he could get to his hand from antiquity; repolished them, brought the pieces together, mended them, so that through his arguments—mathematical rather than physical though they were—he made a cause that had been ridiculed, despised, neglected, to be honoured and prized, to seem more probable than its contrary, and certainly more suitable and expeditious for calculation.”^[246] Copernicus had put forward the theory as a hypothesis merely, and had shown how much more simply the different positions of the sun and planets as seen from the earth could be explained by it, and how much more accurately they could be calculated. In the Epistle prefixed to his work (said by Bruno not to be by Copernicus himself), the reader was warned of the folly of taking this hypothesis as true. To Bruno the contrary of the hypothesis was absurd. Bruno did not appreciate the mathematical proofs of Copernicus, and constantly spoke of him as too much of a mathematician, too little of a physicist: his own mathematical demonstrations were, however, much less successful than those of his predecessor.^[247]

Copernicus.

CHAPTER II

THE FOUNDATIONS OF KNOWLEDGE^[248]

It is the object of this chapter to give some account of the speculations on nature and spirit which occupied Bruno during his first year in England, and which show how hard he was striving to pierce through the shell of mediæval thought in which his mind was encased. However fiercely he struggled to gain his freedom, it was impossible that he should do so quite at once. With all his contemporaries, he was imbued in Aristotle's ways of thought, and the problems he set himself to answer were largely determined for him by Aristotle. The categories with which he wrought,—“principle,” “cause,” “form,” “matter,” “potency,” “act,” “subject,” were those of the Stagirite, and were open, therefore, to the same charge of unfruitfulness. On the other hand, while the outward form of Bruno's philosophy, and to a certain extent its matter also, were essentially Aristotelian, the spirit which infused it all was not so; the emotion and enthusiasm with which he wrote savoured rather of the fire of Plato than of the logical mind of his successor; and throughout, the new conception of nature and of mind which belongs to modern philosophy was struggling to the light.

From his Platonist masters Bruno had learned that the Highest or First Principle was unknowable to man, being beyond the reach of his senses and of his understanding alike: a complete systematisation of knowledge was therefore impossible. A philosophy of nature had to seek only for physical (*i.e.* real or “immanent”) causes or principles; these might depend, indeed, upon the highest and first principle or cause, but the dependence was not so close that the knowledge of the former gave us knowledge of the latter: no single system of knowledge could embrace both. Knowing the universe, we yet knew nothing of the essence or substance of its first cause, any more than that of the sculptor Apelles could be inferred from the statue he had made. The things of nature, although effects of the divine operation, became the remotest accidents, when regarded as means to the knowledge of the divine supernatural Essence. “We have still less ground for knowing it than for knowing Apelles from his finished statues, for all of these we may see, and examine, part by part, but not the great and infinite effect of the divine potency.”^[249] The First Principle is, therefore, the concern of the moralist and of the theologian, as revealed to them by the gods, or declared to them through the inspired knowledge of diviner men and of the prophets. On the other hand, in the universe we have the infinite image of God, and it is, therefore, possible through it to obtain an approximate knowledge of Him: “the magnificent stars and shining bodies, which are so many inhabited worlds, and animate beings or deities, worlds similar to that which contains ourselves, must depend, since they are composite and capable of dissolution, upon a principle and cause; and consequently, by their greatness, their life and work, they show forth and preach the majesty of this first principle and cause.”^[250] Thus the starting-point of Bruno's mature philosophy is *nature* as the vestige or imprint of divinity, and divinity is considered only “as nature itself or as reflected in nature”: the presence of a transcendent principle above and beyond nature is, indeed, premised to the discussion of the *Causa*, but it is no longer admitted that its study falls within the philosopher's scope, nor does it ever hamper or in any way influence the course of the argument. So far from that, we find, at the completion of the dialogue, that we have arrived at an *immanent* principle or divinity, which renders the *transcendent* superfluous.

The purpose of the *Causa*,^[251] Bruno's first purely philosophical work, was to determine what are the creative and constitutive principles of the natural world,—its efficient cause, its end, its form, its matter, and its unity; or, in other words, to lay down the “foundations of knowledge,” to give an outline-picture of reality the details of which it was left to experience and observation to fill in. Bruno begins by laying down certain distinctions, which, however, do not, in the end, prove very binding. First, a *principle* (*principio*) is that which enters, intrinsically, into the constitution of a thing, while a *cause* concurs from without in its production; thus, matter and form, which are principles rather than causes, are the elements of which a thing is composed and into which it is resolved. A cause, on the other hand, remains outside of the resultant object—for example, the efficient, creating cause, and the end or final cause for which the thing is ordained. Principle is the more general term, for “in Nature, not everything that is principle, is also cause: the point is principle of the line, not cause; the instant, of the event; the starting-point, of the movement; the premisses, of the argument.”^[252] God is both principle and cause, but from different points of view: “He is first *principle* in so far as all things are posterior to him in nature, duration, or dignity; he is first *cause* in so far as all things are distinguished from him as effect from efficient, thing produced from producer. The points of view are different, for not always is the prior and more worthy a cause of that which is posterior and less worthy; and not always is the cause prior and more worthy than that which is caused.”^[253] There are really two marks of a principle given by Bruno, priority in worth, and internality; but, generally, a principle is that without which a thing could not come into being, and which if taken away would take away also the being of the thing. To a cause the latter half of this description would not apply, as it remains outside of the effect. Thus God as principle is immanent in all things, and is the higher source from which they proceed. This twofold interpretation of the relation of God to nature and to natural things was already inherent in the Neoplatonic doctrine which formed Bruno's starting-point, since God as the source of emanation was outside of the emanations themselves, and was unaffected by them; on the other hand, the gradations in the different stages of emanation, and the possibility of rising from the lowest to the highest, to the One above all, implied the existence of *somewhat* of the

Principle: Cause.

One as a common nature in all. The two points of view were, however, held apart, and the contradiction between them was not consciously perceived, so that the coincidence of nature between God as the source, and matter as the lowest emanation, never suggested itself; on the contrary, their complete opposition was maintained until Bruno put forward his theory of the "divinity of matter," which forms the real theme of the *Causa*.

The *efficient cause* of the natural world is the universal intelligence, "the first and principal faculty of the soul of the world." This *intellectus universalis* is to natural things as our intellect to the thoughts of our mind, and Bruno identifies it with the Demiurge of the Platonists, and the "seed-sower" of the Magi, for it impregnates matter with all "forms": it is an *artefice interno*, for it works from within in giving form and figure to matter, as the seed or root from within sends forth the stem, the stem the branches, the branches the formed twigs, and these the buds; "from within leaves, flowers, fruit are formed, figured, patterned; from within again in due time the sap is recalled from leaves and fruit to twigs, from twigs to branches, from these to stem, from stem to root.... But how much greater an artificer is he that works not in any single part of matter alone, but continually and in all."^[254] The *intellectus* is both external and internal to any particular being; *i.e.* it is not a part of any particular existence, is not exhausted by it, therefore is so far external to it; on the other hand, it does not act upon matter from without, but from within,^[255] the efficient cause is at the same time an inward principle.

Efficient cause of nature.

The *formal cause* of nature is the *ideal reason*; before the intelligence can produce species or particular things, can bring them forth from the potentiality of matter into reality, it must contain them "formally," *i.e.* ideally, in itself, as the sculptor cannot mould different statues without having first thought out their different forms.^[256] This ideal reason is the *Idea ante rem* of the Scholastics. The ideas of the intelligence are not, as such, the things of nature, they are the models by which the intellect guides nature in its production of individual things. The *final cause* which the intellect sets before itself is the perfection of the universe, *i.e.* that all possible forms may have actual existence in the different portions of matter; from its joy in this end proceeds its ceaseless activity in the production of forms out of matter.^[257]

Formal cause of nature.

Final cause.

Among *constitutive principles* or elements of things, the *intellectus* again takes the foremost place as the form; for, as we have seen, it is both extrinsic and intrinsic to the nature of things, ... "the soul is in the body as the pilot in the ship; in so far as he is moved along with it, he is part of the ship, but in so far as he governs and guides it, he is not a part but a separate agent; so the soul of the universe, in so far as it animates and gives form to things, is intrinsic formal principle; in so far as it directs and governs, it is not part, nor principle, but cause."^[258] As external, the soul of the world is independent of matter, and untouched by its defects: it is only the perfections of the lower that are present in the higher being, and that to a higher degree. As internal it constitutes the soul in all things—down to the very lowest, although in these it is repressed or latent. This all-presence of soul does not mean, however, that each particular thing, *e.g.* a table or garment, is, as such, a living and sensible being, but only that in everything, however small or insignificant, there is a portion or share of spirit, animating it, and this, "if it find a properly disposed subject, may extend itself so as to become plant or animal, and may receive the limbs of any body whatsoever, such as is commonly said to be animate." Even the smallest material body, therefore, has in it the potentiality of life and mind.

Form.

It follows that there are, strictly speaking, only two *substances*, matter and spirit: all particular things result from the composition in varying degrees of these two—are therefore mere "accidents," and have no abiding reality. Bruno joins issue in this with the Peripatetics, to whom the "real man," for example, is a composite of body and soul, or the true soul is the perfection or actualisation of the living body, or is a resultant from a certain harmony of form and of limbs.^[259] Death or dissolution would mean to them the loss of their being; whereas neither "body nor soul need fear death, for both matter and form are constant abiding principles."^[260] This theory of substance and of immortality was regarded by Bruno as one of the cardinal points of his philosophy,^[261] and one in which he differed most widely from Aristotle, as interpreted by him, and from the Aristotelians. Its statement, and the criticism of the Peripatetics, occur again and again throughout the works, and he believed the removal from man of the fear of death to be one of the greatest results of his teaching.—"This spirit, being persistent along with matter—and these being the one and the other indissoluble, it is impossible that anything should in any respect see corruption or come to death, in its substance, although in certain accidents everything changes face, and passes now into one composition, now into another, through now one disposition, now another, leaving off or taking up now this now that existence. Aristotelians, Platonists, and other sophists have not understood what the substance of things is. In natural things that which they call substance, apart from matter, is pure accident. When we know what *form* really is, we know what is life and what is death; and, the vain and puerile fear of the latter passing from us, we experience some of that blessedness which our philosophy brings with it, inasmuch as it lifts the dark veil of foolish sentiment concerning Orcus and the insatiable Charon, that wrests from us or empisons all that is sweetest in our lives."^[262]

Substance.

There is a certain ambiguity in the description of substance. Whether is the spiritual unity which is placed over against matter itself substance, or is it rather the particular souls which are part of it, and which are thus immortal, changing only the form of composition into which they enter? In

this dialogue it seems Bruno is speaking only of the world-soul,[263] but in later works, especially in the *Spaccio* and *De Minimo*, the substantiality and immortality of the individual soul are categorically asserted. In the *Causa* however, Bruno maintains quite clearly the substantiality of the universal soul alone, the finite individual being merely one of the modes of its determination in matter.[264]

Having shown that no part of matter is ever entirely without “form,” Bruno leaves aside for the present the question whether all form (Spirit) is equally accompanied by matter. The form or world-soul is not more than one, for all numerical multiplication depends on matter. It is in itself unchanging; only the objects vary, the different portions of matter into which it enters: and although in the object it is the spirit or form which causes the part to differ from the whole, yet *it* does not differ in the part or in the whole. There are differences of aspect only, according as it is regarded as (a) subsisting in itself, or as (b) the actuality and perfection of some object, or as (c) referred to different objects with different dispositions.[265] That is, Spirit in itself,—the universal Spirit,—the Spirit or Soul of a particular animate being, the Spirits or Souls of a number of different beings (a system of beings), these are all the same thing looked at from different points of view. It is the same unique Spirit which determines the life of the human individual, the development of the human race as a whole, and the persistence of the world; the soul of Caesar and the spirit of humanity are one with the soul of the universe. The relation of spirit to matter in Bruno’s philosophy is more difficult to understand. Spirit is said to be neither external to nor mixed with matter, nor inherent in it, but “inexistent,” *i.e.* associated with or present to it. Moreover it is defined and determined by matter, because having in itself power to realise particular things of innumerable kinds, it “contracts” or limits itself to realise a given individual; and on the other side the potency of matter, which is indeterminate, and capable of any form whatsoever, is “determined” to one particular kind; so that the one is cause of the definition and determination of the other. Thus particular bodies are modes (determinations) of spirit and also of matter. As the universal form, spirit is all-present throughout the universe, not however materially or in extension, but spiritually, *i.e.* intensively. Bruno’s favourite illustration is that of a voice or utterance—“imagine a voice which is wholly in the whole of a room, and in every part of it; everywhere it is heard wholly, as these words which I speak are understood wholly by all, and would be even if there were a thousand present; and if my voice could reach to all the world, it would be all in all.”[266] So the soul is individual, not as a point is, but, analogously to a voice, or utterance, filling the universe. It is clear from these passages that the finite soul has no more reality in this phase of Bruno’s pantheism than in Spinoza’s; not only is the world-soul one as *unique*, but it is also one as indivisible—there are no parts of it: it is wholly in each of the parts of the universe—in each of its realisations. The finite individual, as this particular soul in this particular body, is accordingly a mere accident, and passes away as all accidents do; its existence is due chiefly to matter, by the varying “dispositions” of which the universal form is “determined” to this or that particular form; matter is in general the source of all particularity, all number and measure. The difficulty underlying this attribution of diversity to a matter which is supposed to be, apart from the *form*, undetermined and undifferentiated, has been referred to above. It is emphasised in the argument to this part of the *Causa* given in the introductory epistle,[267] where matter, although formless in itself, is spoken of as “consisting in diverse grades of active and passive qualities?” Bruno seems, however, at this time unconscious of the difficulty. Certainly from pure matter and pure form, body and spirit, standing over against one another, no start could be made. Diversity had to come into the world somehow.

We have not yet solved the problem as to the relation between these two principles themselves—matter and form. Bruno confesses to have held at one period the “Epicurean view that matter was the only substance, the forms being merely accidental dispositions of it; but on further consideration he was compelled to recognise a formal as well as a material substance.”[268] In fact, however, both form and matter tend as the philosophy develops to coincide in a higher unity which is at last the ultimate reality. The “proof” of “Matter” is from the analogy between Nature and Art. All who have attempted, said Bruno, to distinguish *matter* from *form* have made use of the analogy of the arts (*e.g.* the Pythagoreans, Platonists, Peripatetics). Take some art such as that of the wood-worker; in all its forms and all its operations it has as subject (or material) wood—as the iron-worker has iron; the tailor, cloth. All these arts produce each in its own material various pictures, arrangements, figures, none of which is proper or natural to that material. So Nature, which art resembles, must have for its operations a certain matter (material); for no agent intending to make something can work without something *of* which to make it, or wishing to act can do so without something *on* which to act; there is therefore a species of subject or material, of which and in which *nature* effectuates its operation, its work, and which is by it formed in the many forms presented to the eye of reflection. And as wood by itself has not any artificial form, but may have any or all through the action of the wood-worker, so the matter of which we speak, of itself and in its own nature, has not any *natural* form, but may have any or all through the agent, the active principle of nature. This natural matter or material is imperceptible, differing so from the material of art, because the matter of nature has absolutely no form, whereas the matter of art is a thing already formed by nature. Art can operate only upon the surface of things formed by nature, as wood, iron, stone, wool, and similar things; but nature operates from the centre so to speak, of its subject, or matter, which in itself is wholly devoid of form. The subjects of the arts are many—of nature one; for those being diversely formed by nature, are different and various, while the latter, not being formed at all, is entirely indifferent,—every difference and variety being due to the form.[269] As it is absolutely formless, this matter cannot be perceived by the senses, which are the media of natural forms, but only by the eye of reason. As visible matter, that of art, remains the same under countless variations of form,—the form of a tree becoming

The deduction of matter.

that of a trunk, of a beam, of a table, a chair, a stool, a comb, its nature as wood continuing throughout; so in *nature* that which was seed becomes herb; the herb, corn in the ear; the corn, bread; the bread, bile; bile, blood; blood again seed, an embryo, a man, a corpse, earth, stone, or other things, and so through all natural forms. There must then be one and the same thing which in itself is not stone nor earth, nor corpse, nor man, nor embryo, nor blood, nor anything else. [270] So the Pythagorean Timaeus[271] inferred, from the transmutations of the elements one into another,—earth into water, the dry into the moist,—a *tertium quid*, which was neither moist nor dry, but became subject now of the one, now of the other *nature*. Otherwise the earth would have gone to nothing and the water come from nothing, which is impossible. Thus nothing is ever annihilated but the accidental, the exterior, material form, both matter and the substantial form, *i.e.* spirit, being eternal.

The argument has proved that there is a something, the “I know not what” of Locke, which is the substance of all natural things, “natural forms.” We have now to see in what relation this substance stands to the forms, the differences, which are on its surface. All natural forms dissolve in matter, and come again in matter, so that nothing is really “constant, firm, eternal, or deserving of the name of a principle, but matter: besides that the forms have no existence without matter, in it they are generated and decay, from it they issue, into it are received again; therefore matter, which remains always the same and always fruitful, must be regarded as the only substantial principle, as that which always is and always abides; and the forms but as varying dispositions of matter, which come and go, cease and are renewed; therefore they have no claim to be principles.”[272]

Natural forms.

The matter or material of which Bruno here speaks is what afterwards was called *extension*, or the extended substance, and the natural forms are the various individual shapes or bodies of nature: both from the transformations of one into the other, and again from the fact that the particular forms come into being and cease to exist, it was argued that there must be an underlying something, material indeed, but different from all the things we know or see, indifferently capable of becoming any one of them, persisting throughout their becoming, their change, and their ceasing to exist,—*i.e.* a permanent reality.

Matter, however, meant not only “subject” or substrate, but also “potentiality,” or possibility: and we have to consider it in this light also. Everything that exists is therefore *possible*, and the possibility of coming into existence,—“passive potency,”—implies that of bringing into existence —“active potentiality or power”; the one is never without the other, not even in the first principle. Thus the first principle is all that which it has the possibility of being—in it reality and possibility are one; whereas a stone, *e.g.* is not all that it has the possibility of being, for it is not lime, nor vase, nor dust, nor grass. That which is all that it can be, the Absolute, is also all that any other thing is or can be: it embraces all being within itself. Other things are not thus absolute, but limited to one reality at a time, *i.e.* one specific and particular existence. They can be more only through succession and change. “Every possibility and actuality that in the (first) principle is as it were *complicate*, united, one, in other things is *explicate*, dispersed, many. The universe, which is the great *simulacrum* and image (of the first principle) is—it also—all that which it may be in its kinds and principal members, as containing all matter, to which no element of the whole (the universal) form can be added, in which no phase of that form is ever wanting; but it is not all that which it may be in its differences, its modes, properties, and individuals; thus it is a mere shadow of the first reality, and first potency, and so far in it reality and possibility are not the same absolutely, that no part of it is all that which it may be: besides that, as we have said, the universe is all that it may be only in explicitness, dispersion, distinctness, whereas its *principle* is so unitedly and indifferently, for in it all is all, and the same, simply, without difference or distinction.”[273]

Matter as potentiality.

First principle or absolute.

Bruno works out at considerable length the paradoxes to which this identity of all possibility and all reality in the first principle lead. Thus, in magnitude it is both greatest and least, and as in magnitude, so in goodness, in beauty; the sun would fitly represent such a principle if it were at the same moment in all parts of the universe, if its motion were so swift that it was everywhere at once, and therefore motionless. God, however, is not only all that the sun may be, but also all that everything else may be—“potency of all potencies, reality of all realities, life of all lives, soul of all souls, being of all beings.” That which elsewhere is contrary and opposite, is in Him one and the same.[274] Bruno has brought us back in a curious way to the very first principle which he proposed to exclude from contemplation: it can be understood, it is true, only by negations, for our intellect cannot measure itself with the immeasurable: we can form no image or idea of a great that might not be greater. But here follows one of the most vital steps in his philosophy:—As the absolute possibility, the first principle becomes itself *matter*, and as there is no possibility without an actuality, present or to come, the absolute possibility is also absolute reality, or matter and form coincide in the *One*. [275] We approach this conclusion first from the consideration of matter as “subject” (substrate). From the changes of one natural substance into others we inferred a universal substrate, undifferentiated, which formed at once the basis of the community of nature in things, and the ground of their difference.[276] But the spiritual and the corporeal worlds, also, as distinguished from one another, imply a common “subject” or substrate in which they are *one* or identical. Bruno refers, as we have seen, to Plotinus[277] as having held that distinction and difference imply a common ground or unity, and that “intelligible” distinctions are not exempt from this rule. “As man *quâ* man is different from lion *quâ* lion, but in the common nature of animal or of

Matter and form are one.

Matter or substrate of the spiritual world.

corporeal substance they are one and the same, so the matter of things corporeal, as such, is different from the matter of things incorporeal, as such: but from another point of view it is the same matter which in dimensions or extension is corporeal matter, and which when without dimensions or extension is an incorporeal substance. In things eternal (spiritual) there is one matter in one simple realisation, in things variable (corporeal) matter has now one, now another; in the former, it has at one time and all together all that which it can have, and is all that it may be; in the latter, at many times, on different occasions, and in succession. The former has all species of figure and dimension, and because it has all, it has none: for that which is so many diverse things, cannot be any one of them in particular. That which is all must include every particular existence.^[278] In it, absolute potency and absolute actuality, matter and form, do not differ at all; it is the extreme of purity, simplicity, individuality, and unity, because it is absolutely all. It is individual in the highest sense. Being both matter and form, it is neither: as matter, it has all dimensions and none; as form, it has all formal existence or qualities and none. The corporeal matter is *contracted* to this or that dimension, whereas spiritual matter is free (*absoluta*) of dimensions, therefore is both above all, and comprising all. Thus matter in itself, being without dimensions, is indivisible: it acquires dimensions according to the nature of the form it receives: the dimensions under the human form differ from those under the horse form, and from those under the olive or the myrtle form. But before it can be under any of these forms, it must have *in faculty* all their dimensions, as it has the possibility or potency of receiving all the forms. In itself it includes rather than excludes all dimensions, because it does not receive them as from without, but sends them, brings them forth, from itself, as from the womb.^[279] In other words, *Nature*, under one aspect, is a spiritual unity, in which are comprised all possible differences, or all separate existences: under another it is these many existences themselves, in each of which, in succession, all differences are “realised,” all modes come into being: and finally, under another aspect, it is the force which brings forth the separate forms or existences out of the formless, indeterminate, undifferentiated unity of being, or God.

The two kinds of matter, or potentiality, the lower and the higher, are thus essentially one; so we reach the notion, not indeed of “the highest and best principle,” as Bruno is again careful to remind us, but of the soul of the world, as reality of all, and potency of all, and all in all. Thus in the end, although individuals are innumerable, all things are one; and the knowledge of this unity is the goal and limit of all philosophy of nature.

This unity, which embraces all the knowable, is the subject of the fifth dialogue of the *Causa*. The steps by which we have reached it are:—first, the identification of a common nature, or *substratum* in things corporeal,—corporeal matter, that which is common to all physical existences; secondly, the recognition that there must similarly be a corresponding matter, or common ground of things spiritual; there also differences exist and demand an identity; and finally, corporeal matter and spiritual matter must themselves coincide in ground; there must exist that which is indifferently either, or which is the potency of both, and their “subject” or substratum. To the objection that to have dimensions is characteristic of matter, it is answered that each kind of matter *has* dimensions, only the latter has them absolutely, *i.e.* it has all indifferently, and therefore none, while the other is always “contracted” to one or other at each instant, but has all successively. We have seen that at the close of the fourth dialogue Bruno refers again to the first principle, unknowable, or knowable only by faith, and professes to abstain from any consideration of it. It is quite clear, however, that Bruno could not have said of it anything other than he says of this unity of the corporeal and the spiritual itself. That which is implicitly all reality in such a manner that it is at the same time none of the particular forms of the real, is all things and none—could not be other than the highest principle. Further, this unity already has the distinction applied formerly to the Highest Intelligence,—it “is all,” and at the same time it “creates all,” in producing the forms out of itself. The unity then is only the world-soul from a special point of view, or the world-soul is at once the unity of itself and of the corporeal world.^[280] This means that of the spiritual and the corporeal worlds each is a unity in itself, and each only a special aspect of a final unity which embraces both. It is no wonder then that Schelling found a congenial spirit in Bruno. The reality of this final matter or unity is moreover higher, truer, than that of any of the forms to which it gives birth, and finally it is *divine*. Little more is wanting to prove the entire superfluity of the theological highest principle. The unity (or matter) is by no means an “abstract” identity, but a concrete whole, which contains all differentiation in itself, and a “dynamic” being, which produces, or realises, its own modes. “Determinate, sensible, *explicate* existence is not the highest characteristic (*raggione*) of actuality, but is a thing consequent, an effect of the latter; thus the principal essence of wood, *e.g.* the characteristic of its actuality, does not consist in its being ‘bed’; but in its being of such a substance and consistency that it *may be* bed, bench, beam, idol, or anything formed of wood. Nature, however, from its material produces all things, not as art, by mechanical removal or addition of parts, but by separation, birth, efflux, as the Pythagoreans understood,”—Bruno adds Anaxagoras, Democritus, the Wise Men of Babylon, Moses! “Rather, then, it contains the forms and includes them, than is empty of them, or excludes them; and matter, which makes explicit what it contains implicitly, ought to be called a *Divine thing*: it is the substance of nature.”^[281] Thus the One is the only ultimate reality; it is neither matter nor form, yet both together,—implicitly. And it has no parts, or all parts, for all parts coincide in it, the smallest with the greatest, in it all particular things coincide with one another, and all differences. It has all possible existence and is therefore unchangeable, it has all perfections and therefore is infinitely perfect.

The unity of spirit and body.

Coincidence of all things in the One.

“The universe is one, infinite, immovable. One is the absolute possibility, one the reality. One the

form or soul, one matter or body. One the thing, one the *ens*. One the greatest and best, which can not be comprised, and therefore can neither be ended nor limited, and even so is infinite and unlimited, and consequently immovable. It does not move locally, for there is no place outside of itself, to which it might transport itself (for it is the all). Of it is no generation, for there is no other existence which it can desire or expect, for it has all existence. Of it is no corruption, for there is no other thing to which it can change; it is everything. It cannot grow less or greater, for it is infinite; it cannot be added to, and it cannot be subtracted from, for the infinite has no proportional parts. It cannot be subject to mutation in any quality whatever, nor is there anything contrary to, or diverse from it, which may alter it, for in it all things are in harmony.”[282] In it height is not greater than length or depth; hence by a kind of simile it may be called a sphere. It has no parts, for a part of the infinite must be infinite, and if it is infinite it concurs in one with the whole; hence the universe is one, infinite, without parts. Within it there is not part greater and part less, for one part, however great, has no greater proportion to the infinite than another, however small; and therefore, in infinite duration, there is no difference between the hour and the day, between the day and the year, between the year and the century, between the century and the moment; for moments and hours are not more in number than centuries, and those bear no less proportion to eternity than these. Similarly, in the immeasurable, the foot is not different from the yard, the yard from the mile, for in proportion to immensity, the mile is not nearer than the foot. Infinite hours are not more than infinite centuries, infinite feet are not of greater number than infinite miles.[283] Thus, Bruno frankly draws the conclusion, which is inherent in all pantheistic thought, that in the infinite all things are indifferent; there are no proportional parts thereof—in it one is not greater nor better than another: “In comparison, similitude, union, identity with the infinite, one does not approach nearer by being a man than by being an ant, by being a star than by being a man. In the infinite these things are indifferent, and what I say of these holds of all other things or particular existences. Now if all these particular things in the infinite are not one and another, are not different, are not species, it necessarily follows that they are not number (*i.e.* not distinct)—the universe is again an immovable, unchangeable one. If in it act does not differ from potency, then point, line, superficies and body do not differ in it (for each is potency of the other—a line by motion may become a surface, a surface a body). In the infinite, then, point does not differ from body; since the point is potency of body, it does not differ from body, where potency and act are one and the same thing. If point does not differ from body, centre from circumference, finite from infinite, the greatest from the least, then the universe, as we have said, is all centre, or the centre of the universe is everywhere; or, again, the circumference is everywhere but the centre is nowhere.” Thus, not only are the particular existences indifferent in the infinite: they have also in it no *true* reality, *i.e.* their existence is a purely relative one.

Indifference of all things in the Infinite.

We have now to consider the relation of particular things one to another. It follows from the argument that all things are in all; each particular thing has the possibility of all reality, has all reality implicit in itself, but only one *mode* is at any particular time realised, and the life of particular things consists in their constant transmutation from one mode to another. While the universe comprehends all existence and all modes of existence,—of particular things, each has all existence, but not all *modes* of existence, and cannot *actually* have all circumstances and accidents, for many forms are incompatible in the same subject, either as contraries or as belonging to diverse species. The same individual subject (*supposito*) cannot be under the accidents of horse and of man, under the dimensions of a plant and of an animal. Moreover, the universe comprehends all existence wholly, because outside of and beyond infinite existence there is nothing that exists, for there is no outside or beyond: of particular things on the other hand, each comprehends all existence, but not wholly, for beyond each are infinite others. But the *ens*, substance, essence of all is one, which being infinite and unlimited in its substance as in its duration, in its greatness as in its force, can neither be called principle nor resultant; for as everything concurs in its unity and identity, it is not relative, but absolute. In the one infinite, immovable, which is substance, *ens*, there is multitude, number; and number, as “mode” of the *ens*, differentiates thing from thing; it does not therefore make the *ens* to be more than one, but to be of many modes, forms, and figures. Hence “leaving the logicians to their vain imaginings,” we find that all that makes difference and number is pure accident, pure figure, pure “complexion”; every creation of whatsoever sort it may be is an *alteration*, the substance remaining always the same, for there is only One Being, divine, immortal.[284]

Thus all things are in the universe, the universe in all things; we in it, it in us; and so all concurs in a perfect unity. Therefore, cries Bruno, we need not be troubled in spirit, nor be afraid; for this unity is one, stable, and always abides; this one is eternal; every aspect, every face, every other thing, is vanity, is as nought; all that is outside of this One is nought. These philosophers have found the wisdom that they love, who have found this unity. Wisdom, truth, unity, are the same. All difference in bodies, difference of formation, complexion, figure, colour, or other property, is nothing but a varying aspect of one and the same substance,—an aspect that changes, moves, passes away, of one immovable, abiding, and eternal being, in which are all forms, figures, members, but indistinct and “agglomerated,” just as in the seed, or germ, the arm is not distinct from the head, the sinew from the bone, and the distinction or “disglomeration” does not produce another and new substance, but only realises in act and fulfilment certain qualities of the substance, already present.

Beauty, harmony, permanence of nature.

The coincidence of Bruno’s doctrine with some of Spinoza’s principal positions is striking, although their terms are different. The indeterminate all-comprising unity of Bruno is that which was afterwards called by Spinoza substance; its two aspects, material and spiritual—substances

with Bruno,—are attributes in Spinoza, and finally, the innumerable finite and passing modes with both are mere accidents, and therefore do not determine any change in the one reality itself. In a subsequent chapter other more detailed resemblances will be pointed out in their bearing on the history of Spinoza's development.

The concluding portion of this dialogue and of the work is taken up with the doctrine of the *Coincidence of Contraries*, which derives from that of the unity and coincidence of all differences, and which, although it was undoubtedly contained in his own system, Bruno obtained directly from Nicholas of Cusa. It is an indirect proof, from the side of particular things themselves, of the identity of all in the One. The first illustrations are geometrical.[285] The straight line and the circle, or the straight line and the curve, are opposites; but in their elements, or their *minima*, they coincide, for, as Cusanus saw, there is no difference between the smallest possible arc and the smallest possible chord. Again, in the *maximum* there is no difference between the infinite circle and the straight line; the greater a circle is, the more nearly it approximates to straightness ... as a line which is greater in magnitude than another approximates more nearly to straightness, so the greatest of all ought to be superlatively, more than all, straight, so that in the end the infinite straight line is an infinite circle. Thus the maximum and the minimum come together in one existence, as has already been proved, and both in the maximum and in the minimum, contraries are one and indifferent.

Coincidence of
Contraries.

"Signs."

These geometrical illustrations are "signs" of the identity of contraries, those which follow are called by Bruno "verifications,"[286] the first of which is taken from the primary qualities of bodies. The element of heat, its "principle," must be indivisible—it cannot have differences within itself, and can be neither hot nor cold, therefore it is an identity of hot and cold. "One contrary is the 'principle' or starting-point of the other, and therefore transmutations are circular, because there is a substrate, principle, term, continuation and concurrence of both." So minimal warmth and minimal cold are the same. The movement towards cold takes its beginning from the limit of greatest heat (its "principle" in another sense). Thus not only do the two maxima sometimes concur in resistance, the two minima in concordance, but even the maximum and the minimum concur through the succession of transmutations. Doctors fear when one is in the best of health; it is in the height of happiness that the foreseeing are most timid. So also the "principle" of corruption and of generation is one and the same. The end of decay is the beginning of generation; corruption is nothing but a generation, generation a corruption. Love is hate, hate is love in the end; hatred of the unfitting is love of the fitting, the love of this the hatred of that. In substance and in root, therefore, love and hate, friendship and strife, are one and the same thing. Poison gives its own antidote, and the greatest poisons are the best medicines. There is but one potency of two contraries, because contraries are apprehended by one and the same sense, therefore belong to the same subject or substrate; where the principle (*i.e.* the source, or faculty) of the *knowledge* of two objects is the same, the principle (*i.e.* elementary form) of their *existence* is also one. (Examples are the curved and the plane, the concave and the convex, anger and patience, pride and humility, miserliness and liberality). In conclusion:—"He who would know the greatest secrets of nature, let him regard and contemplate the minima and maxima of contraries and opposites. *Profound magic it is to know how to extract the contrary after having found the point of union.*" Aristotle was striving towards it, but did not attain it, said Bruno; "remaining with his foot in the *genus* of opposition, he was so fettered that he could not descend to the *species* of contrariety ... but wandered further from the goal at every step, as when he said that contraries could not co-exist at the same time in the same subject." [287] There is a naïve but at the same time a bold realism in this demand of Bruno's that reality shall correspond even to the simpler unities of thought—unities which after all are mere limitations. It is only because we cannot distinguish in imagination between an infinite circle and a straight line that their identity in actual existence is postulated, and so the minimal chord and minimal arc coincide to our limited imagination only. Admittedly in the case of sense-qualities the argument is from oneness of faculty knowing to oneness of things known. These, however, are only, as we have said, "signs" and "verifications" of a metaphysical truth which is arrived at by other methods.

"Verifications."

A corresponding passage in the *De Minimo*[288] explains more fully the coincidence of contraries in the *minimum*:—"In the *minimum*, the simple, the monad, all opposites coincide, odd and even, many and few, finite and infinite; therefore that which is *minimum* is also *maximum*, and any degree between these." Besides the coincidence of contraries in God as the monad of monads, the examples are given of the indifference of all dimensions in the universe, and the ubiquity of its centre; the indifference of the radial directions from the centre of a particular sphere; the indifference of all points in the diurnal rotation of the earth, so that any point whatever is east, west, north, or south; the "subjective" coincidence of concave and convex in the circle ("subjective" meaning "in the thing itself"); the coincidence of the acute and the obtuse angle in the inclination of one line to another; that of smallest arc and chord as of greatest arc and chord, "whence it follows that the infinite circle and the infinite straight line, also the infinite diameter, area, and centre are one and the same." Lastly, we have the coincidence of swiftest motion with slowest, or with rest, "for the absolutely swift (swift '*simpliciter*,' *i.e.* in its highest possible manifestation, without any degree of the contrary, slowness) which moves from A to B, and from B to A, is at once in A, and in B, and in the whole orbit, therefore, it stands still."

These coincidences are again of two kinds: some "subjective" in the modern sense, *e.g.* the coincidences of directions in the globe; any one may be taken as depth according to the spectator's standpoint; others are "objective," *e.g.* when in God the one and the many are said to coincide. According as the stress is laid on one or on the other, the theory may be regarded as

either dualistic (as Cusanus' really was) or as pantheistic. There is no doubt, however, that it was in the latter sense that Bruno held the coincidence of contraries.

CHAPTER III

THE INFINITE UNIVERSE—THE MIRROR OF GOD^[289]

In the contemplation of the infinite, writes Bruno, man attains his highest good. All things aspire to the end for which they are ordained, and the more perfect its nature the more nobly and effectively does each aspire. Man alone, however, as endowed with a twofold nature, pursues a twofold good,—“on the boundary line of eternity and time, between the archetypal world and the copy, the intelligible and the sensible, participating in either substance.”^[290] Human effort can find satisfaction in none but the highest and first truth and goodness. Neither our intellect nor our will ever rests. It is clear therefore that their end lies not in particular goods or truths which lead us on from one to another and to another, but in universal good and truth, outside of and beyond which no good or truth exists. So long as we believe that any truth is left to know, or any good to gain, we seek always further truth, desire always further good. The end of our inquiry, therefore, and of our effort cannot be in a truth or in a good that is limited. In each and all is the desire in-born to become all things. Such infinite desire implies the existence in reality of that which will satisfy it. If “Universal Nature” or Spirit is *able* to satisfy the appetite of each “particular nature” or mode of itself, and that of itself as a whole, then the understanding and desire which are innate, inseparable from and co-substantial with each and all shall not be in vain, nor look hopelessly to a false and impossible end. Again, were universal nature and the efficient cause content with finite truth and good, they would not satisfy the infinite aspiration of particular things. It is true that even the desire for continuance of our present life is not satisfied; a particular mode of matter cannot realise all “forms” or ideas at once, but only in succession and one by one; it knows and therefore desires only that which is present to it at any given time: by force of nature, therefore, it comes in its ignorance (which arises from the “contraction” of the form to this or that particular matter and the limitation of matter by this or that form) to desire to be *always* that which it *now* is. The wise soul, however, will not fear death, will indeed sometimes wish for it, since there awaits every substance eternity of duration, immensity of space, and the realisation of all being. “Whatever the good be for which a man strives, let him turn his eyes to the heavens and the worlds; there is spread before him a picture, a book, a mirror, in which he may behold, read, contemplate the imprint (*vestigium*), the law, and the reflection of the highest good—and with his sensible ears drink in the highest harmony, and raise himself as by a ladder, according to the grades of the forms of things, to the contemplation of another, the highest world.”^[291] The contemplation of the extended infinite and “explicate” or unfolded nature is thus only a means by which we may rise to the contemplation of the infinite in itself, “implicate” nature, God. “It is no frivolous or futile contemplation, but one most weighty and worthy of the perfect man, which we pursue, when we seek the splendour, the fusion, and the intercommunication of divinity and of nature not in an Egyptian, Syrian, Greek or Roman individual, not in food, drink, or any ignoble matter, with the gaping many, but in the august palace of the all-powerful, in the immeasurable space of the Ether, in the infinite potency of twofold nature, all-becoming and all-creating. So from the eternal vast and immeasurable effect in visible things, we comprehend the eternal and the immeasurable majesty and goodness. Let us then turn our eyes to the omniform image of the omniform God, and gaze upon the living and mighty reflection of Him.”

The three characteristics of the universe as a mirror of God which Bruno sought to drive home to the minds of men were its infinite extent, the infinite number of its parts, and its uniformity, or the similarity of its constituent elements throughout its whole extent. His illustrations and his arguments would in many cases cause a smile if they were put forward seriously at the present day, but no absurdities can outbalance his enthusiasm, the readiness and thoroughness of his polemic against Aristotle and the old cosmology, and the fertility of imagination by which he is able to look, and to make others look, at things from his new, and therefore, at first, confusing point of view.

Bruno’s arguments rest partly on inferences from sense-knowledge, partly on the principle of sufficient reason. Thus the infinity of extent is evidenced, first, by the teaching of sense, in the constant change which our circle of vision undergoes as we move from one place to another. There always appears to be an ultimate limit, but no sooner do we move than the limit is seen to have been only apparent; so, it may be inferred, could we transfer ourselves with our senses to any of the distant stars, we should still seem to ourselves to be in the centre of a closed sphere,—the very same appearance which is presented to us on this earth.

The universe
infinite.

Aristotle’s theory of the limitation of space by the ultimate sphere of the heavens was open to objections, many of which were raised in the early schools. The “subtle Averroes” had endeavoured to avoid some of these by the doctrine that beyond this outer sphere is the divine being, the eternal self-sufficient Mind.^[292] “But how,” asks Bruno, “can body be bounded by that which is not body? The divine nature is no less nor in any other manner *within* the whole than *without*; it is neither place nor in place.”^[293] Space therefore is always bounded by space, body by body, that is, each is infinite in extent. Were divinity that which bounds space, it would itself be space under another name.^[294] Aristotle’s theory implied that the universe as a whole was not in any place or space. The “place” of each body, he had said, is the containing surface of the sphere above it; the outermost sphere, therefore, as there is no other beyond it, is itself uncontained and without place. The theory implied also the identity of body and space, and was the ground of Aristotle’s rejection of the vacuum in nature. For a truer conception of Space,

Bruno turned to an earlier commentator (or group of commentators—"Philoponus") on Aristotle, who defined it as "a continuous physical quantity in three dimensions, in which the magnitude of bodies is contained, in nature before and apart from all bodies, receiving all indifferently, beyond all conditions of action and passion, not mixing with things, impenetrable, without form or place."^[295] It is called *physical*, because it can not be separated from the existence of natural things. It is itself not contained, because it equals with its dimensions those of body as the transparency of a crystal has the same dimensions with the crystal itself. Neither body nor space can be thought of the one apart from the other.^[296] Granted the infinity of space, that of matter necessarily follows by an inverse of the principle of sufficient reason:—for there is no reason, according to Bruno, why this small part alone of space, where our earth is, should be filled; the eternal operation is not distinct from the eternal power, nor could it be the will of God to cramp nature, which is the hand of the all-powerful, his force, act, reason, word, voice, order and will.^[297] "There is one matter, one power, one space, one efficient cause, God and Nature, everywhere equally, and everywhere powerful.—We insult the infinite cause when we say that it may be the cause of a finite effect; to a finite effect it can have neither the name nor the relation of an efficient."^[298]

The corresponding argument from the capacity of our human imagination to think always of a greater than any given magnitude, *i.e.* its inability to rest short of the infinite, is expanded elsewhere. Our imaginative faculty is the *umbra* or shadow of nature; its power, therefore, of adding quantity to quantity, *ad infinitum*, must have something in nature to which it corresponds; nature does not give a faculty for which there is no satisfaction. There is then in truth an infinite universe, such as our imagination demands. Bruno notices the objection that on this theory anything whatever might be said about the universe, *e.g.* that it is infinite man, since one can imagine a human form filling the universe; and he replies, "it *is* infinite man, or infinite ass, or infinite tree, each and all, since in the infinite all particular things are one and the same."^[299]

The arguments we have traced are:—(1) What appears to be a limit to our senses always proves to be imaginary, when we are able to test it, therefore we may infer that it is imaginary in other cases; (2) the very notion of space, implying that it has neither form nor place, means that it is infinite, limitless; (3) we cannot imagine a portion of space than which there is not another greater, and so *ad infinitum*: but reality cannot fall short of thought, therefore space is infinite.

The arguments of Aristotle against the infinity of the world are taken up in detail in the second book of the *De Immenso*. As the controversy, however important at the time, has lost much of its interest for us, we need only give a brief sketch of its main lines. The first argument was drawn from the assumption of an ultimate sphere or *primum mobile* which moved about the earth as a centre.^[300] It was clear that if the universe were infinite the radii of this sphere would be infinitely prolonged, and therefore the termini of any two given radii at an infinite distance one from another. The motion of the sphere would thus be inconceivable, for it would require infinite time in which to pass from one point to another. The answer of Bruno was that the universe as a whole was not moveable at all, nor had it any centre; only its parts were moved and each of these had its own relative and finite centre. The apparent motion of the sphere was due to the real movement of the earth about its axis. A similar answer was given to the argument from the movements of bodies according to their elements. As to us on the earth, the earth appears to be the centre of the universe, so to the inhabitants of the moon, the moon will appear to be such. Matter rising from the earth to the moon would appear to the inhabitants of the latter to fall. These distinctions were relative to the finite worlds, but might not be referred to the whole universe. As the earth is one world, the moon another, so each has its own centre, each its own *up* and *down*: nor can these differences be assigned absolutely to the whole and its parts together, but only relatively to the position and condition of the latter.^[301] In his *third* argument Aristotle sought to prove that infinite body in general was impossible.^[302] If the whole is infinite its simple elements must be so also. These must be either of an infinite number of kinds, different from one another, or of a finite number of kinds, or all of the same kind. But the first of the alternatives is impossible on the *a priori* ground that each element must have a special kind of movement corresponding to it, and the kinds of movement are actually few in number; the second and third, because the movement of the elements should then be infinite, whereas in the actual universe motion is limited both in centre and circumference. The arguments, however, do not apply to Bruno's theory of the universe. Motion is always from one definite point to another; we do not set out from Italy in order to go on *ad infinitum*, but to go to some definite point. He does not, as Epicurus did, regard all minima as in infinite motion downwards through the universe; there is no down, no centre, no up, all is simply and generally in flux. It is not the elements that are innumerable in kind, but the composite bodies, the stars, which are constituted by them; and of these the parts move about their natural body, as the parts of the earth towards the earth, and those of the moon toward the moon in their own regions; all motion is therefore limited,—each world has, as it were, *margins* of its own. The idea that if any of the elements, as fire or water, were infinite, there would be infinite lightness or gravity, and hence that the universe would move as a whole upwards or downwards, is equally at fault. To the universe as a whole the terms heavy and light do not apply, but only to its parts, the finite and determinate bodies consisting of finite and determinate elements. These elements, whether they be taken as of one or more kinds, since they cannot move outside of the universe, must have finite movements.

Aristotle.

1. The *primum mobile*.

2. The elements.

3. The whole and its parts.

The fourth argument^[303] was based upon the impossibility of action between an infinite body and a second body whether finite or infinite. An infinite

4. Action between the infinite and the

cannot act upon a finite because the action would necessarily be timeless. Were it in time we could then find a finite body which in the same time would produce the same effect; but there can be no such equality between the finite and the infinite. Similarly action between two infinities would occur in infinite time; in other words, would not take place at all. The conclusion is that neither fire nor earth nor any of the elements can be infinite in quantity. Bruno suggests, in the first place,^[304] that a change may be produced timelessly; thus if a body in a large circle cover a certain space in the *minimum* of time, a body in a smaller circle will cover a less space in *no* time, for nothing can be smaller than the minimum.^[305] In the second place, no action of the whole or effect upon the whole exists, it is only the finite bodies within it, each with its finite force, that act upon one another. Even if two infinite bodies, over against one another, were supposed, their action would not be of one whole upon another, but of the parts on the contiguous parts.^[306] Force is exerted by bodies not *intensively* but *extensively*, because as, where one part of a body is, there another is not, so at the point where one part of the body acts another does not.^[307]

finite.

A difficulty, not unknown to recent philosophy, occurred as to the relation of infinities to one another. Whatever is an element of the infinite must be infinite also; hence both earths and suns are infinite in number. But the infinity of the former, said Bruno, is not greater than that of the latter; nor, where all are inhabited, are the inhabitants in greater proportion to the infinite than the stars themselves.^[308] Each sun is surrounded by several earths or planets, but the one class is not greater in respect of its infinite than the other. A single sun, earth, constellation, is not really a part of the infinite nor a part in it, for it can bear no proportion to it. A thousand infinities are not more than two or three, and even *one* is not comprehensible by finite numbers. In the innumerable and the immeasurable there is no place for more or less, few or many, nor for any distinctions of number or measure.^[309] The matter of the stars is immeasurable, and no less immeasurable is that of the fiery type or suns than of the aqueous type or earths. Nor does the fact that these infinities are not given to sense disprove their existence, as Aristotle had maintained. To imagine there is nothing beyond the sphere which limits our range of sight, is to be like Bruno as a child, when he believed there was nothing beyond Mount Vesuvius because there *was* nothing to strike his senses.^[310] Though each class be infinite, we have seen that the infinite does not act infinitely, that is *intensively*, but acts finitely, *i.e. extensively*. Each individual and species is finite, but the number of all individuals is infinite, and infinite are the matter in which they consist and the space in which they move. Everywhere, therefore, limit and measure are only in the particular and the individual, which, compared with the universe, are nothing.

5. Proportion of parts to whole in the infinite.

A further argument was derived from the necessity of figure in body and from the relation of body to space.^[311] Every body is known to us as of a certain and definite figure, whereas infinite body would necessarily be unfigured. In this case, said Bruno, Aristotle is confounding body with space, although he elsewhere separates the two notions. That space is something other than the bodies which fill it, that it is more than limit or figure, is evident from the fact that always between any two corporeal surfaces, between any two atoms, there is space. Nor is space merely an accident of body, a special quality of it, as colour is, for example, for we cannot think of colour without a body in which it exists, and when the body is abstracted the colour goes also, whereas space may be thought of apart from body, and body, when removed does not take with it its space. Perhaps we should say that space is really the continuous ether or light which penetrates throughout the universe, and seems to fill space more continuously than wood, stone, or iron, in which there is an admixture of *vacuum*. Must all bodies be figured, then the figure of the infinite is the sphere. The dimensions of space coincide with those of body, and the definition given of body as tri-dimensional quantity applies also to space:—there cannot be any body which is not in place, nor can its dimensions exist without equal dimensions of the containing space.

6. Figure and body.

A seventh argument, closely related to some of the others, is drawn from the old belief in the earth as the centre of gravity, the heaviest body in the universe, and in the empyrean as the outermost limit and the lightest body.^[312] But, as we have seen, there is in the universe no centre—as the stars and their inhabitants are heavenly beings to us, so are we and our earth to them. “Just as the earth knows no centre or downward direction proper which is away from its own body, but only a centre of its mass, a central cavern of its heart, from which the precious life is diffused through the whole body, and which we may believe to be the chief seat of the soul; so there must be in the moon and other bodies a centre which connects all parts, to which every member contributes, and which is nourished by all the forces of the living body.” The old belief, therefore, that if there were inhabitants at the antipodes they would be apt to fall downwards into space, or that the parts of the moon and its living beings might fall upon our earth, was absurd, for the face of the earth always looks upward in the direction of the radii from the centre to the superficies.^[313]

7. The centre of the earth, etc.

The last argument was that drawn from the supposed perfection of the universe.^[314] Aristotle defined the perfect as that which was limited by itself, not by another. Hence the immeasurable would not be perfect, while the world was perfect because limited by its own terminus. Again body does not pass over into any other kind of quantity, but it is the limit into which the line and the point flow. The first argument, said Bruno, would hold of any fragment of body, while the second would apply to any animal or member of an animal, for these also are self-contained and do not pass over into any other kind. Perfection has no reference to quantity, nor to limitation by self, which is a geometrical determination.^[315] For this mechanical idea of perfection, Bruno substitutes a teleological; the perfect is that which consists of a number of parts or members, working

8. The perfect as the self-limited.

together towards the end for which the whole is ordained: the universe is perfect “as adorned by so many worlds, which are so many deities, and as that in and to which, as a unity embracing the perfection of all, innumerable things perfect in their kind are reduced, referred, united.”[316]

The infinity of space or ether and of matter being proved, it follows again, by the principle of sufficient reason, that the “worlds” are “innumerable” or infinite in number.—As it is good that the world exists, and would be bad did it not exist, so in a similar space, and where similar causes are, it is good that there be a world, and bad should there not be one. If the world is single, then there is a single, finite, particular good, and infinite wide-spread universal evil. He who is able to produce good, and does not do so, without cause, is evil; “as not to be able is *privatively* evil, to be able and to be unwilling would be so *positively*, and God in regard to the finite effect would be a finitely good cause, in regard, however, to the repression of infinite realisation, would be infinitely evil.”[317] Perfection does not belong to our world, our system, taken by itself, since there are innumerable other possible worlds which cannot be contained in it. Given a man endowed with all human perfections, the existence of other men subordinate to him is not excluded, but rather demanded in order that he may fulfil the harmony of his being. So the best, the first, of the monads,—which comprises all particular things in itself,—embraces, in spite of its unity, innumerable worlds, without limit, under its corporeal aspect. *One* does not suffice, for the productive mind diffuses itself throughout the whole universe, wholly in every part, in equal goodness and power, and fills the void in order that its great image may be presented throughout the whole.[318] Nature thus puts forth an infinite mirror of itself and a fitting reflection; its substance is infinite and its force eternal, there is an *explicit* immeasurable, as God is *implicitly* in the whole and everywhere wholly.[319] To the infinite nothing finite bears any proportion, nor can be a fitting product of it. Hence if it communicate itself at all to corporeal things, or unfold its magnitude in corporeal existences and in multitude, the reflection of its essence and imprint of its power must be infinite in magnitude and without number. “Although, when we consider individuals singly, under that proximate and immediate respect in which they are particulars, they must be referred to a finite principle and cause (since a finite effect demands a finite power), in the consideration of the universe, however, each and all the innumerable existences in immeasurable space point to an infinite first cause.”[320]

Infinite number of worlds.

In the simplicity and unity of God’s being, all attributes are one, therefore knowledge, will, and power coincide. The consequences of this doctrine Bruno unfolds in a series of aphorisms or propositions—which are interesting as anticipating Spinoza’s method of “proof”:[321]—1. The Divine essence is infinite. 2. As the measure of being, so is the measure of power. 3. As the measure of power, so is the measure of action. 4. God is absolutely simple essence or being in which there can be no complexity nor internal diversity. 5. Consequently in him, being, power, action, volition, and whatever can be truly attributed to him, are one and the same. 6. Therefore the will of God is above all things, and can be frustrated neither by himself nor by another. 7. Consequently the Divine will is not only necessary, but is necessity itself, and its opposite is not only impossible but impossibility itself. 8. In simple essence there cannot be contrariety of any kind, nor inequality: will, therefore, is not contrary to, nor unequal to, power. 9. Necessity and liberty are one, hence what acts by the necessity of nature acts freely; it would not act freely at all did it act otherwise than is demanded by necessity and nature, or by the necessity of nature.[322] 10. There is not an infinite *power*, unless there be an infinite *possible*; *i.e.* there is not that which is able to create an infinite unless there be that which is able to be created. What is a power which is impossible of realisation or which is relative to an impossible? 11. As there is a world in *this* space, so also there is able to be one in any space similar to that which, were this world removed, would remain equal to the world. 12. There is no ground for denying, outside the world, a similar space to that in which the world is, nor any for regarding it as finite.[323] 14. It is better to be than not to be; it is more worthy to create what is good than not to create it. To posit (create) being and truth is incomparably better than to allow not-being or nothing. 15. The potency of nature ought not to be frustrated, nor space remain unfilled for infinite duration, for then potency would be relative to an impossible. 16. That infinite potency (whether extensive or intensive) should be frustrated of existence means that infinite evil should be actually posited, as space is actually infinite. 17. As *this* space can receive this world and be adorned thereby, so also any similar space whatever, indiscernible from it, a similar principle being present, could have received a similar world.[324] 19. Of God and of nature we should think as highly as possible. 20. Of the greatest things nothing should be rashly asserted which is contrary to sense and reason.

Argument from God to the world.

The infinite number of worlds is thus made to depend for its proof upon the identity of power and will, of will and knowledge, *i.e.* thought, in God. Whatever is in the mind of God is realised in the universe. Before God past, present, and future are one, present, and eternal; [325] he is unable to change his purpose or to deny himself. What he wills and what he can are one and the same; nor can he do what he wills not, for fate is the Divine will itself. Hence, as he cannot be other than he is, so nothing can be done by him otherwise than as it is done. The nature of God is a simple substance; however many names be predicated of it, they signify, one and all, the same thing.[326] Infinite virtue, if limited neither by itself nor by another, acts by the necessity of its own nature, not by a necessity alien to itself and to its will; it is itself necessity. The necessity by which it acts, therefore, can be frustrated neither from within, by itself, nor from without, by another: not the former, for it cannot be both one thing and another, nor the latter, because its necessity is the law of all other things. There can be nothing which may prevent this nature, necessity, will, power, from proceeding according to its whole power, which is goodness itself, according to its whole goodness, which is power itself, and

Knowledge of God.

both are infinite, and diffuse themselves infinitely. Man's liberty of action is expressed imperfectly, and sometimes in an imperfect object, is continually being disturbed by passion and ignorance of things; for if we acted without any disturbance of the will, or course of thought, without ignorance, or passion, then our action would be determined always towards the better of two opposed ends. Before we act we stand between the two ways and deliberate, and at last determine, but in uncertainty and perturbedness of spirit; while God, as in nature most perfect, acts in the one of two ways that is the most fitting. Nor is it an imperfection of nature to be determined in one direction only, away from that which may lead to error. Thus we may not refer the will and action of God to a liberty of this kind, of being equally or unequally disposed to two contradictory volitions or acts—a liberty of indifference—but his liberty is of the kind which is identical with necessity. Over it is nothing greater, in the way of it there is nothing equal, all things in all and throughout all serve it. God's knowledge is not discursive, involves no effort. To be in the mind of God is to be realised (*species concepta deo est effectio resque*). Thus as the perfect monad, he is intrinsically and extrinsically the whole, sustaining all things. There is on the one side infinite goodness and infinite desire for its realisation, on the other infinite desire of being realised; the result must be perfect satisfaction and perfect good.

In order to understand how far Bruno has moved at this, the final stage of his philosophy, from the Neoplatonism of its beginnings, the ninth chapter of the last book of the *De Immenso* must be taken into account.^[327] It is interesting in view of the relation of Spinoza to Bruno, as well as of the consistency of Bruno's own thought. In it the existence of *abstract ideal types* is contended against,—“Nowhere is essence apart from existence;—nature is nothing but the virtue that is immanent (*insita*) in things, and the law by which all things fulfil their course. There is no abstract that subsists in logical reason but not in reality, no justice by which things are just, no goodness through which they are good, wisdom through which they are wise, nor are *deitas* and *feritas* the ground of existence of gods and beasts: nor is it light by which shining bodies shine, nor shadow by which folly, darkness, fictions, nonsense come to exist.” The student of nature must not suppose form and matter, light and colour and motion, to exist separately by themselves because they may be conceived or defined by themselves. There is then no archetypal world to which the Creator looked in fabricating this of ours, but nature produces all things from within itself, without thought or hesitation. “Study to know where Nature and God are, for there are the causes of things, the life of principles, the source of elements, the seeds of the things that are to be brought forth, the typical forms, active potency producing all things, ... there is also matter, the underlying passive potency, abiding, present, ever coming together into one as it were, for it is not as if a creator came from on high, to give it order and form from without. Matter pours forth all things from its own lap, Nature itself is the inward workman, a living art, a wondrous virtue which is endowed with mind, giving realisation to a matter which is its own, not foreign to itself; not hesitating, but producing all things easily out of itself, as fire shines and burns, as light spreads without effort through space.... Nature is not so miserably endowed as to be excelled by human art, which is directed by a kind of internal sense, while several kinds of animals, guided by their inward mind, show an innate foresight of a wonderful kind,—ants and the industrious bees, which have no type or model spread before them. For there is a nature which is *more than present to*, which is *immanent in* things, remote from none as none is remote from being, except the false: and while only the surface of things without changes, deeper in the heart of all than is each to itself it lives, the principle of existence, source of all forms, ... Mind, God, Being, One, Truth, Fate, Reason, Order.”^[328] *Natura naturata* is thus not a resultant or outcome of *natura naturans* with Bruno; they are one and the same thing under different aspects, and both are one with God, the living force in things.

Abstract ideas.

The arguments of Aristotle against the plurality of worlds are in the seventh book set out one by one, and controverted from Bruno's own standpoint, at times with great fulness and subtlety. It would be unprofitable to enter far into this debate, where the advantage lay so obviously on one side. We have already seen that Bruno was able to lay his finger upon the weak spot in Aristotle's system, the definitions of space and time. There is no absolute norm of time, said Bruno, whether arithmetical, geometrical, or physical; for in this kind we cannot fix a *minimum*, and least of all on Peripatetic principles; there is always a less than any given period of time, hence we cannot lay down any true measure of time, *i.e.* all time is relative to the individual. In any case the daily movement (of the outermost sphere, as Aristotle thought, but in fact) of the earth, is not really circular. There are as many moving agents as there are stars, as there are souls, or deities.^[329] But “if we must assume some one presiding over the infinite number of agents, we must ascend above all or descend down to the centre of all, to the absolute being, present above all and within all ... more intimate to all things than each is to itself, not more distant from one than from another, for it is equally the nearest to all.”^[330] Several of the arguments of Aristotle were drawn from abstract conceptions of unity and perfection, and evidently raised interesting problems for the time of Bruno. They are, briefly,

Aristotle on plurality of worlds.

Perfection.

that a plurality of worlds would be irrational, since no reason could be given for one number rather than another, that it is more in accordance with the perfection of the monad, that all reality should be massed together in one world, that the economy of nature does not admit of the multiplication of goods, that the passive capacity (*matter*) is not equal to the active power (the *form*), that the perfect is by its very nature unique. Bruno answers that there is no definite, but an infinite, number of worlds, and that if the former were the case no reason could be put forward why there should be only one, which in Bruno's sense of world is no doubt true. As to the monad, the true monad is that which embraces all number or plurality in itself. “We are not compelled to define a number, we who say that there is an infinite number of worlds; *there* no

distinction exists of odd or even, since these are differences of number, not of the innumerable. Nor can I think there have ever been philosophers who, in positing several worlds, did not posit them also as infinite: for would not reason, which demands something further beyond this sensible world, so also outside of and beyond whatever number of worlds is assumed, assume again another and another?"[331]

That there are more worlds than one is due to the presence everywhere throughout space of the same principle of life, which everywhere has the same effect; just as within one of these worlds, the earth, we find different species of the same animal—of man, for example—which cannot be descended from the same parentage. There are "men of different colours, cavemen, mountain-pygmyes, the guardians of minerals, the giants of the South," each of which races must have been produced independently in its own place. And finally, although it is true that nothing can be added to the perfect, why may not the perfect be multiplicable? Though the perfect man is one, nature may produce several within the same species. "Everywhere is one soul, one spirit of the world, wholly in the whole and in every part of it, as we find in our lesser world also. This soul ... (should the kind of place and of element not conflict) produces all things everywhere; so that for the generation of some even time is not required.... The infinite universe, and it only under God, is perfect. Nothing finite is so good that it could not be better; whatever may be better has some degree of evil and defect, as what is not absolutely bright is not without some signs of obscurity.... Therefore the perfect, absolutely and in itself, is one, infinite, which cannot be greater or better, and than which nothing can be greater or better. This is one, everywhere, the only God, universal nature, of which nothing can be a perfect image or reflection, but the infinite. Everything finite therefore is imperfect, every sensible world is imperfect, as good and evil, matter and form, light and darkness, joy and sadness concur in it, and all things everywhere are in alteration and movement; but all of them, in the infinite, are as in unity, truth, and goodness, and in this aspect the infinite is rightly called the universe." [332] In the infinite, as we have learned from the *Causa*, all contraries are one. The universe is perfect, not because of its quantity, but because it contains all other things in it. [333] Within the limits of their kind small causes can produce small effects with some perfection; much more effective is that immeasurable and more general cause, of which nothing stands in the way. It is a harmony of the many in one, the only corporeal image of the divine mind. The finite, however, is imperfect only when taken apart from the whole to which it belongs, *i.e.* evil and defect are appearances only. Although in nature not all things are of their best, and more species than one produce monstrosities, yet we may not find fault with the great building of the mighty architect, for even the small, weak, and diminutive contributes its part to the nobility of the whole. Is a picture most beautiful when it is blazoned all over with gold and purple? Does it not shine out best from a dull background? Can there be any part which, in its order and place within the whole body, is not good, and the best in the end and in the whole? A harmony in music is better the greater the variety within it of length, accent, pause, and the like. [334]

One life in all the worlds.

The perfect may be either (1) "the perfect absolutely, or (2) the perfect in its kind." The former again is twofold, according as it is (1) "that which is wholly in the whole and in every part, or (2) that which is wholly in the whole but not in the part." Of these the one is divinity, the intellect of the universe, absolute goodness and truth, the other the immeasurable corporeal reflection of the divine. As within the universe there are many things perfect in their kind, which it combines in its unity, containing in itself the perfection of all, it may in a second sense be called the absolutely perfect. For no one world singly, nor system of worlds, nor any number of systems, can be brought into comparison with God, except indirectly, through the immeasurable wisdom, power, and goodness. "Nothing is absolutely imperfect or evil, for the highest nature exists in a certain sense in the meanest and lowest, as on the palette of a painter colours are thought little of which presently, unfolded into the scheme of the picture, shall seem to be, along with the painter himself, of chief importance." [335] Moral evil, itself, as we shall find, has no reality for Bruno's pantheism. Justice and goodness, not existing as abstract entities, have their only ground in the divine will, *i.e.* in the course of nature. [336] On the other hand, it is not in the part, the detail, the trivial or minute existence, that the divine will is most adequately declared, but in the whole, its plan and its law. "What is best and most glorious, most beseeeming the goodness of His nature, is to be attributed to His will. It is impious to seek this in the blood of insects, in the mummied corpse, in the foam of the epileptic, under the shaking feet of murderers, or in the melancholy mysteries of vile necromancers; [337] it must be sought rather in the inviolable, intemperate law of nature, in the religion of a mind directed duly by that law, in the splendour of the sun, in the beauty of the things which are brought forth from this our parent, after His true image, as expressed bodily in the beauty of those innumerable living things, which, in the immeasurable sweep of the one heaven, shine and live, have sense and intelligence, and sing praises to the One, the highest and best." [338]

CHAPTER IV

NATURE AND THE LIVING WORLDS

We have found that, according to Bruno, the universe is infinite in extent, and that there are innumerable worlds within it: it remains to know what are the materials that constitute the universe, and the moving principles that govern its changes and direct the worlds in their courses.

Nature, he said, is the same in kind, in its substance, and in its elements, throughout its whole extent—a daring conception for a time when the empyrean and all space beyond it were still regarded as the special abode of divinity. He reminded his opponents of his own childish experiences:—when from Cicala he looked towards Mount Vesuvius, he thought it dark, gloomy, bare of trees and flowers; but when he approached it, he found it fairer than Cicala itself, while now the latter looked bare and dark.^[339] The Aristotelians were committing a similar error in judging the distant stars and the firmament to be in reality as they appeared to our eyes, and in denying the existence of that which was not visible to us. “As the philosopher must not believe what cannot be demonstrated by evidence, so neither must he foolishly despise or find fault with what cannot be disproved by reason.”^[340] Had men, instead of bending so long over the books of Aristotle and his commentators, the *nebulosa volumina*, but turned their eyes to the book and light of nature, they would have formed a far different conception of the constitution of the heavens than that of the eight, nine, ten, or more spheres and innumerable epicycles of the Ptolemaic system. Bruno showed how as we rise from the surface of the earth our horizon becomes wider, while in detail less vivid, and he supposed himself to continue the ascension upwards to the surface of the moon.^[341] A few miles away tree and mountain would not be distinguishable from the rest of the earth, but we should perceive only a wide circle of light with dark spots, the appearance of sea and of land respectively. As the distance increased the form of the earth would become more visible while it lost all appearance of opacity, and the whole would seem continuous light. As we neared the moon, the earth would come to appear exactly as the moon does to us from the earth. The moon also revolves round its own axis, and from it, as with us, the universe will appear to revolve round it as centre. It had been said that the appearance of the heavenly bodies had always been and continued to be the same, but Bruno points to the fact that although a mountain, when seen from at hand, changes its face from day to day, and from season to season, yet from a distance it seems always the same.^[342] It is owing to the distance that the face of the moon appears to us never to change, although it is certainly subject to as many alterations as the earth itself; and to the dwellers on the moon the earth will appear equally changeless. The light and shadow seen on the surface of the moon are due to the variety of sea and land in it, the one reflecting light, the other absorbing. On the moon, as on the earth, Nature is in continuous change: for example, the relative positions of sea and land are ever altering; but the magnitude of the distance renders these invisible, and more especially the minuteness and gradual nature of the changes themselves. The lunar spectator will be presented with eclipses of the earth, and, according to the position of sea and land, *i.e.* of light and shadow, with phases of the earth.^[343] In the same way Bruno applied his principle of similarity to show that from distant stars the earth would appear of uniform magnitude and unvarying position, while in the neighbourhood of other suns it and all the other planets would disappear. As matter is the same in kind throughout the universe, so it is subject everywhere to the same law of unceasing change:—“The sun in its rising never seeks twice the same point, all things by stress of the continuous flux are renewed, nor ever seek again the haunts they have left, nor is there any part of the earth which does not pass through every region, and a like force now carries each part in one direction or another, now drives it away; and if by chance any one revisit the centre, it is no longer in the same form, nor in the same connection (*ordine*).”^[344] Not even the whole can ever be twice the same, since the order and arrangement of its parts are continuously changing. Even in things that seem ever to present the same face there is a latent alteration which time will bring to light. There would otherwise be nothing to prevent the whole of Nature being fixed, petrified, as it were, to all eternity. Yet the substance of things—the atom—is unchanging.^[345] “All things are in flow; the parts of the earth, seas, and rivers vary their positions, by a certain ebbing and flowing order of Nature. As matter wanders, flowing in and out, now here, now there, so the forms travel through matter. For there is not any form which, once occupying a portion of matter, retains it always, nor any matter which, once obtaining a certain form, maintains it for ever. Hence it is that, matter always taking up one form or another, and having equal capacity for all, consequently by virtue of its eternity it must sometimes fall in with that which is able to bind it to itself for ever; if this were to happen, all things would be so constituted that there would be no alteration or difference in them.”^[346]

Uniformity of Nature.

The universe to Bruno is transfused with spirit, soul or life, “the soul of the universe,” which animates its every part. “The seat or place of God is the universe, everywhere the whole immeasurable heaven, empty space, of which He is the fulness.” The material aspect, or, as Bruno sometimes seems to say, the *body* of this spirit is the ether, a subtle fluid distinguished from the air we breathe by the absence of moisture. The ether is a purely passive, non-resisting medium, permeating the universe, without quality, and unimpressionable by force or action; thus it is penetrated by the heat of any radiating body without diminishing its force. It took the place, for Bruno, of the mythical Fifth Essence, which had so long fed the dreams of philosophers—“Divine yet corporeal, material yet without matter, a form without privation, conjoining act with potency, neither heavy nor light, suffering neither generation, nor corruption, nor alteration, neither increase nor decrease;

The Ether.

beyond which no sensible existence is, first-born and creatrix of Nature, simplest of beings, all-containing, most powerful, most active, most living, most perfect of existences, endowed with life and intelligence, of its own nature moving circularly, etc., etc.—all this is at length proved to have been a most portentous shadow without body.”[347] Heaven is either empty space, or it is an ethereal substance, “a very subtle kind of air, which is the first and most universal occupant of space.”[348] Again, the ether is described as a vapour or smoke, a nebulous matter, penetrating throughout the depths of the void, interpenetrating all things and embracing all; as not entering into movement of its own accord, for it is but an exhalation of the wind—a kind of continuous vapour such as is contained in the bowels of the earth: in it is neither heat nor cold nor any similar effect (*passio*), but it is the medium through which these are borne. All these require moisture: moisture alone can “fix” light or darkness or combine atoms into a concrete body and prevent their random flight through the air.[349] It has been claimed that in this and other passages Bruno anticipated the modern theory of the ether; it must be noted, however, that he expressly denies to its parts any kind of motion—it is only the composite body which moves—and that he speaks of this heaven or ether as the soul which is at once immanent in and comprehends the stars, *i.e.* as the soul of the universe.

Of the strictly material elements of the universe, the most important is *moisture* or *water*. It is moisture which gives concreteness and therefore weight to things. Nothing has weight which has not been formed into one by the union of innumerable parts under the action of water.[350] Consistently with this, Bruno believed the heaviest bodies, as the metals, to be the most solid and concrete, and therefore to contain most moisture. It is moisture also which, penetrating through the arteries, veins, and bones of the earth, gives to it both variety of aspect and the power of life. The visible moisture on the earth’s surface, the seas and lakes, is a mere nothing as compared to that which is diffused through its interior—is but the sweat, as it were, of the earth’s body.[351] Bruno’s passion for homogeneity led him to understand that in its surface the land under the sea is similar to that above it, with which the former is continually changing place, and it is divided up into plains, mountains, valleys, the islands and rocks of the sea being the tops of the mountains:—a remarkable intuition of the truth, however arrived at. As to the familiar elements, *earth* and *fire*, Bruno could neither allow a special place or sphere nor a special direction of movement to either, as in the Aristotelian cosmology. The earth was not the centre of the universe, and there were earths or similar planets everywhere. To the several arguments of the Peripatetics[352] for the centrality of the earth,—from the heaviness, the darkness, solidity, composite character of the earth’s matter, and the movements of its parts, from the idea that contraries shun one another so that the coldest element, for example, should be in the centre, the hottest at the extreme,—Bruno opposed the common-sense answers that his own theory suggested to him. His appeal was always from “fictitious order” to the evidence of “sense and reason.” The argument has no longer any interest in itself, and to pursue it into detail would hardly be edifying; but so full is it, so weighty and so vigorous, that one wonders how even the “Peripatetics” failed to be convinced by it. Bruno’s very errors are interesting. Fire for example, far from being the outermost, lightest, subtlest element, was regarded by him as a body of which the substance, (light and heat being *accidents*) was water mixed with earth:[353] and in general, he maintained, no element was ever found in isolation. As to the supposed coldness of the central element,—the earth,—he believed, again anticipating future discoveries, that the centre of the earth was not cold, but hot, the source of terrestrial warmth; but the theory loses something of its value, scientifically, from the imagined *vitality* of the planet, by which it is supported.[354] It was natural that the *coincidence of contraries* should be brought to do duty against the maxim on which the Aristotelian view was really based—namely, that contraries tend to rest at the greatest possible distance from one another, against which Bruno marshalled a whole army of facts. Away from the shadow of the earth there was perhaps no light but that of the sun, too strong for our eyes, for the daylight arose from a mixture of the light of the sun and the darkness of the earth; we could see other colours by it, for the reason that they were similarly composed—mixtures of light and darkness. The heat of the sun also was only bearable when tempered by the coolness of the earth or other planets. The body of the earth, great as it is, can bear this heat only through its swift revolution. As to the objection that if the earth moved we should feel its motion, Bruno remarked that when we are carried in a smoothly and continuously moving vehicle, not striking against any object, we do not perceive that we are moving, except by comparison with some object known to us to be fixed. Thus sense furnishes its own correction.[355] The differences in the distances of the planets from the sun, as seen from the earth, are explained much more readily by the assumption that they and the earth itself are moving about the sun, than by that of the centrality of the earth, which compelled astronomers to the complicated device of the epicycles.[356] The fact that the moon always turns the same face towards the earth disproved the Ptolemaic theory: were it on an epicycle, as was supposed, this would be impossible. According to the old doctrine, the earth was fixed immovably in the centre of the universe, while about it circled the spheres of sun, planets, and fixed stars. With Bruno, on the other hand, the centre of the universe is everywhere, or nowhere,—in other words it is relative to the body on which the spectator is supposed to stand.

The principle of continuous change was employed to explain, among other matters, the variation of the equinoxes, which was already known to occur; but the continuous change was itself accounted for on teleological grounds.—“The motion which causes the poles to tremble, and the equinoctial and solstitial points to vary irregularly, is on account of the variations which are always taking place in parts of the earth; for the frigid zones may not always be frigid, nor the torrid, torrid; all parts must rest and have holiday from each kind of ‘affect,’ and consequently take up every kind of disposition successively.” ... “The centre of the earth, therefore, and its

Moisture.

Earth: Fire.

position relatively to the poles, will vary.”^[357] No star ever repeats one day the revolution of the previous, or any one year that of another. Mathematical exactness, as we have seen, is never found in the material world: the earth may not always present the same face to the sun, so that one pole must at length pass into the place of the other—a change which must occur sensibly and continuously, and irregularly, as natural bodies and elements of bodies are naturally in continuous alteration and movement. “The same composite body is never in exactly the same state at any two moments, nor consists of quite the same parts, for from all sides and everywhere there is, necessarily, an unceasing influx and efflux of elementary bodies.”^[358] The stars and planets are compared to a flock of birds, which float hither and thither in the clear ether, guided only by their desires.^[359] Never does the flock present precisely the same appearance twice. In nature the law is vicissitude and succession, so that each thing may in actual fact come to be all things.^[360]

All the stars consist of the same elements, since water cannot subsist without earth, nor fire without water; but in some stars the aqueous element predominates (planets), in others the igneous (suns). From sameness of appearance and of effects (*accidents*) we may infer sameness of substance. It is clear therefore to Bruno that moon, planets, stars, are all of precisely the same substance as the earth. It is unnecessary to point out by how long a period this brilliant philosophical faith preceded the slower if surer march of science. The great worlds of the universe are of two kinds—the suns, in which fire is the predominating element, and from which light is diffused; and the earths or planets, in which water predominates and which reflects light. To the first class belong the so-called fixed stars, from which our sun would appear no larger and no brighter than they appear to us; to the second belong the moon, Mercury, and other planets, all in one and the same ethereal space, suspended in free air and balanced by their own weight as is our earth. In all are seas and woods, rivers, men, cattle, reptiles, birds, fishes, as on the earth, and in all the same continuous changes occur.^[361] No one is in the centre of the universe rather than another, for about all equally extends immeasurable space with its innumerable stars. Of these “first bodies” one kind could not exist without the other, for it is by the concourse of contraries and opposites that nature provides for movement, life, and growth in things. About each of the scintillating stars, or suns, which we see, there must circle planets which are for the most part invisible to us, but which *may* become visible.^[362] In the same way, both on account of the smallness of their bodies, and especially on that of the less intensity of reflected light in comparison with light of original force, the planets which are about our fixed star, the sun, would not be seen from any of the others. The discovery in the last half-century of what is almost certainly a satellite of Sirius confirms in this also Bruno’s “anticipation of nature.” Another of these was his theory of comets,^[363] which he held to be of the same nature as planets, and to move in similar orbits. He believed also that there were other solar planets which never appeared to us because their position in the heavens precluded their reflecting any of the sun’s rays to us:—a belief to which the reported eclipses of the sun by occult bodies has given some support. The shape of the comet, with its appendages, was only apparent, Bruno said, and was due to the angle made by the light reflected from its surface. In another reference, however, he compares it with the oblique reflection of light from a mirror, or from the surface of water; it is the watery matter, the vapours which are drawn out by the warmth of the sun, that give the unusual reflection.^[364] This shows how nearly he approached the modern theory. In the true spirit of the Renaissance, however, he appealed to the authority of the ancients, of Aeschylus and Hipparchus of Chios, who, according to Aristotle, regarded the comets as planets.^[365] The comets of the sixteenth century,^[366] so far as observed, went wholly against the received view that their orbits must lie within the sphere of the moon, and proved that the substance of bodies beyond that sphere was the same as the elementary substance of the earth, as well as that there was penetrable space beyond. Both of these to Bruno were important consequences. Still greater, however, was their importance for humanity, in removing the grounds of the terror which comets and other heavenly wonders had hitherto inspired. “There are some,” said Bruno, “who rest their faith in a virtue above and beyond nature, saying that God, who is above nature, creates these appearances in the heavens in order to signify something to us: as if those were not better, nay the very best, signs of divinity which arise in the ordinary course of nature; among which are those of which we speak, for they also are not apart from this order, although their order is hidden from us.”

Earths and Suns.

Comets.

To account for the many appearances which seemed to conflict with his new view of the universe, Bruno had recourse to several slight experiments and analogies of daily observation such as a schoolmaster might employ at the present day before his class,^[367] but by which even a man of Kepler’s intelligence refused then to be convinced; at least he would not openly profess his conviction. Among other fruitful suggestions which Bruno makes is that the sun may perhaps turn on its own axis, and again that it may contain vapour and earth.^[368] He had a curious theory that the heat of the sun is only directed outward *from the surface*, not inwards; that this is the general course of radiation; and that it leaves an inner surface of the sun cold, on which solar animals live; finally that meteors are “animals” expelled from the sun! So always the fruitful idea is accompanied by the absurd.

From the principle of the identity of nature it follows that bodies which are remote from us are the same in kind with those that are with us and near us; nothing may be denied of the former which is affirmed of the latter, and *vice versa*. There can be no doubt, therefore, of their similar composition and similar parts. Thus if here on the earth we nowhere see fire subsisting without earth, nowhere earth without water or fire, while their composites are both contained in and penetrated by air and void, then the same is necessarily the case in the upper world also; neither

sense nor reason compels us to assert or suspect otherwise.[369] Bruno has grasped, however confusedly, the idea that each individual, each being in the universe, is as it were an epitome of the universe itself; that each therefore stands in a peculiar relation to it, differing from it only in the “proportion” in which the elements are composed into unity. It is impossible not to see in this idea the germ of the most important development of Leibniz’ philosophy, whatever the source may have been through which it came to the latter. It is true that here, at least, Bruno’s conception appears much less spiritual than that of his successor, inasmuch as he is thinking rather of the actual physical elements which go to make up a body (and in which all bodies are similar to one another). On the other hand, the formation of the body is, in his view, the work of the soul, and it is in the last resort the identity of the universal soul of nature in all its members that brings each of these into correspondence with all others. It is true, also, that Bruno has no definite explanation of what constitutes an individual, and his readers are exposed to the dilemma either of regarding the physical atoms as themselves “*beseelt*,”—a view which Bruno nowhere sanctions,—or, on the other hand, of accepting a dualism of spirit (the soul of the universe or God) and matter (the material atoms, moisture, fire, and ether). Yet the tenour of Bruno’s philosophy is wholly opposed to such a dualism. As a corollary of this theory, Bruno suggested an explanation of what has been called “spontaneous generation,” supported, however, by tales of the credulous rather than by actual observation. “Dust that has been heated by the sun, as soon as moisture falls upon it, becomes a frog, the whole substance of dung goes into worms or flies, the body of a horse will turn into wasps, the provident bee rises from the body of an ox!”[370] As each thing is in its inner nature identical with every other, so it *may*, and in the natural course *does, become* every other, as we have learned from the Italian works. Nevertheless, the outward appearances of things do not cease to be different from one another. “That is more latent in one subject which is more unfolded in the remainder.” “The subject of all is one (*monas*), and all things are in truth one, although in individuals they seem to be many.”

The movements of the earth and of other free-moving bodies are always attributed by Bruno to an “internal principle or *soul*.” Movement from without could only take place through direct contact, and the liquid air or ether is too light to move these heavy bodies.[371] “It is taking things by the wrong end to say that the loadstone attracts the iron, the amber the straw, the sun the sunflower. In the iron there is a kind of sense, awakened by a spiritual (*i.e.* a subtly material) virtue diffused from the loadstone, ... and generally everything that desires and has intelligence moves towards the thing desired, converts itself into it as far as possible, beginning with the wish to be in the same place.” By the same principle are explained the phenomena of *gravity*, which is defined as impulse towards the place of preservation, such as the earth is to the stone that has formed part of it; its opposite, “*levity*,” is impulse away from the contrary or the injurious. “*Gravity* and *levity* are nothing but the impulse of parts to their place, where they may either move or be at rest, or to a place through which it is necessary for them to go (in the circular movement of all material things).” Thus the motions of the heavy and the light are merely relative movements; the same kind of motion does not belong always to the same kind of substance or element.[372]

Movements of bodies; their soul-principle.

The movement of the stars is determined not by considerations of place only, but also by the necessity that bodies of one kind are under of deriving sustenance from those of another,—the suns from the earths and the earths from the suns. It is through the soul that their needs are felt, and the soul directs their movements as does the human soul those of the human body. There are, however, no fixed limits to their movements: they are governed only by the convenience of life, as perceived by the sense and mind, which are inborn in each. By this fantastic principle Bruno explained what he thought to be the fact, that all heavenly bodies whatsoever are in movement; or perhaps we should say he inferred the fact from the principle:—which was first in the order of his thought it would be impossible to know. Like most of his contemporaries he looked upon the conception of a soul in all things with peculiar reverence—

*Porgimus haec paucis, vulgus procul esto prophanum,
Ne liceat laico sacrum conscendere montem.*

The method by which Bruno sought to know the nature of the souls of the worlds is one which the course of modern philosophy has rendered familiar to us in other connections. It rests upon the argument from the part to the whole. “Whatever we find in a part of the world belongs, in a higher sense (*sublimius*), to the whole, and must be attributed to it. All the capacities of each part are attributed to the whole—that is, their perfections and activities, not the qualities they possess as parts, and as less than the whole in any respect.” Thus the hindrances to which lesser individuals are exposed, the necessity of taking in and giving out matter as their forms change, exist in the greater individual in a minimal degree. But in all parts of the earth Bruno found signs of life, sensation, and even intelligence. Stones of different kinds were universally believed to have a kind of sensibility and instinct: to move of their own accord, attract other bodies to themselves, act upon our human spirits and senses. The phenomena of animal instinct were a constant object of interest to Bruno, who saw in them the expression of a deeper intelligence than the merely human. It is true the observations on which he built may not always have been exact; but that does not detract from the value of his principle. Thus the porcupine (*istrix*) moved his admiration because of its careful storing up of a stock of darts in its back, with which to protect its life; it could, with unerring aim, cast one at its enemy, hearing, it is said, with its skin; and its precision far surpassed all that the cunning of man, with his many instruments, could do. With perfect skill it threw its darts, yet sparingly, so that no part of its body was ever defenceless, the spirit directing all its actions from one centre, to which, from every part of the

body, report was made! "With how much higher reason will the *star* be endowed, of the body of which animals are made, by whose spirit they flourish? So the earth from one centre directs all its actions and those of its parts; it never errs, neither it nor any of the worlds which dwell in the immeasurable ether."^[373]

Bruno rejected^[374] the popular notion that the behaviour of ants, spiders, and other animals does not spring from their proper foresight and artifice, but from divine, unerring intelligence acting upon them from without, giving them those "*thrusts*" (*spinte*) which are called "natural instincts"—a term which he regarded as meaningless. "Is this 'natural instinct' sense or intellect? If the former, is it internal or external? Clearly it is not external; but if internal, where is the internal sense from which they could have their foresight, their arts and artifices, their precautions, expeditions, to meet various conditions, both present and future? There must be some proximate principle, *i.e.* a form of *intelligence* peculiar to each animal, which determines its actions. The divine and universal intelligence is merely the principle that *gives* it intelligence, through which it understands."^[375] The action of animals of a given kind were supposed to be after one perfect model, and to be undeliberate. Bruno therefore placed their intelligence higher than that of man, nearer the level of that of the world-souls. "The swallow makes its nest, the ants their cave, the spiders their web or nets, in one way only, than which they could not make them more admirably or suitably... Who knows whether the spirit of man is rising upwards, that of others moving downwards? At least it is to be referred to a defect of light and divine force that men hesitate and deliberate in all that belongs to the means of life, the modes of worship and defence, for if all knew perfectly, all would be governed in the best, and consequently in one way only." It is, then, on the analogy of these supposed higher, unerring faculties of animals that Bruno considers the souls of the worlds to think and act. They have perfect freedom, since their life and soul are their own, not borrowed, as ours. "Thus as we breathe, see, sleep, without labour or anxiety, and while our soul performs the function of life, the vital humours and spirits continually circulate, so these, the chief members of the world, divine animals, have no need to undergo any anxious toil, for all things with them are done for the best." Their fixed aim of life defines for them certain determinate orbits, "in which they move freely by the force of that soul which is much more certainly present in these high, perfect, divine bodies than in us, of more ignoble condition, who draw from them spirit and body, come forth living out of their bosom, are nourished by them, and at length are dissolved and received back into them."^[376]

It is to the internal spirit also that the spherical form of the worlds is due. The so-called mountains of the earth do not in the least detract from its spherical form. Bruno anticipated modern science in his discovery or intuition that the real mountains are not those we are accustomed to call such, but immense tracts of country,—the whole of France, for example. "I find the whole country of France to be one mountain, which rises gradually from the North Sea to Auvergne, where is its summit, marked on the west by the Pyrenees, where the Garonne flows, on the east by the Rhone, on the south by the Mediterranean Sea."^[377] The whole earth is, however, as smooth in reality as is to us the pumice stone, which to the ant seems furrowed with mountains and valleys. It is on teleological grounds that Bruno accounts for this sphericity. Composite things are preserved through the harmony and union of their parts, while decay arises from dissolution. But such harmony and union are best secured by the spherical form: towards this form, then, every soul aspires in the moulding of its body. The most perfect animals, the stars, having fewer limitations, have the greater advantages; being almost independent, free, self-sufficient, they are most closely united in themselves, *i.e.* tend most nearly to the purely spherical form.^[378]

However perfect they are, the stars are yet of mortal stuff. "You may say if you will that the worlds change and decay in old age, or that the earth seems to grow grey with years, and that all the great animals of the universe perish like the small, for they change, decay, dissolve. Matter, weary of old forms, eagerly snatches after new, for it desires to become all things, and to resemble, as far as may be, all being." The efflux and influx of atomic matter into the great bodies is continuous, and this is the only kind of motion which is unceasing.^[379] "As the conflux of native matter is greater, so the bodies grow more and more, and increase up to a certain limit, on touching which they grow weary and become subject to a contrary order; as about the seed atoms are gathered and added continuously until the body and its limbs reach their maturity, when the same parts are cast out from the centre, and the breaking up of the composite is presented to our eyes." Hence there are atoms innumerable roaming through the void, while infinite changes succeed one another in bodies. Those in one region receive the atoms repulsed from another: there is no danger of their straying infinitely without reaching a goal, for everywhere are great bodies to receive what is expelled from other stars.

Composite as the worlds are,—capable, therefore, of dissolution and destruction,—yet, as Timaeus had suggested, the power and providence of the divine purpose may maintain them eternally as they are.

THE LAST AND THE LEAST THINGS: ATOMS AND SOUL-MONADS

The reaction against Aristotelianism had, as one of its results, a renaissance of the atomic theory of Democritus and Lucretius; and one of the earliest adherents of the renovated doctrine was Bruno. Although a complete presentation of the theory was not given until his later works, the *De Minimo* and the *Articuli adv. Mathematicos*, appeared, yet already in the Italian dialogues there were frequent references to it. In the *Cena*,^[381] for example, it is said that in the physical division of a finite body infinite progress is impossible, and, as we shall afterwards find, in Bruno there is no distinction between physical and mathematical division. Again, in the *Cena* an animistic atomism is suggested, which presents a curious anticipation of some of Leibniz' characteristic views. "It is more than probable, as all things partake of life, that many or innumerable individuals live not only in us, but in all composite things; when anything "dies," as is said, we must believe it to be not death, but change only; the accidental composition or concord ceases, the things that enter into it remaining always immortal; and this is truer of those things we call spiritual than of those we call corporeal or material."^[382] Thus every body or organism, for all bodies are organisms to Bruno, is itself constituted by other living beings, the atoms—living atoms—being alike the origin and the end of all. So Leibniz wrote:—"Every living body has a presiding entelechy, which is the soul in the animal; but the members of this living body are full of other living beings—plants, animals,—each of which, again, has its entelechy or presiding soul."^[383] In the *Infinito* Bruno refers to the continuous changes of all composite bodies as arising from the ceaseless flux of atoms out of and into each body, even the greater "animals," the stars and planets, sending out particles, which wander through the universe from one to another.^[384] Again, when discussing the four elements, he ascribes to water the power of holding together the atoms of earth, or "the dry." "If from the earth all water were to be removed, so that there remained purely dry matter, this remainder would necessarily be an incoherent, rare, loose substance, easy to be dispersed through the air, in the form of innumerable discontinuous bodies; for while the air or ether makes a continuum, that which makes a *coherent* continuum is water or moisture."^[385] These indivisible "prime bodies," of which the worlds are originally composed, are spoken of as flying throughout space from world to world, in infinite movement, entering now into this, now into that "composition."^[386] Finally, in the *Spaccio*, we are reminded that "every trifle, however worthless, is of value in the order of the whole, the universe, for great things are composed of little, little things of the least, and these of the individuals (or indivisibles) or minima."^[387] In its main outlines, accordingly, Bruno's atomic theory was already formed in his mind when he wrote his earlier philosophical works, and even some of his peculiar applications of it had already suggested themselves. It is hardly possible, therefore, to find any very marked development in this regard between the London and the Frankfurt periods. There is elaboration and completion rather than development in any definite direction;^[388] and, as we have seen, the writing of the larger works, containing the developed system, was projected in London, and even carried out to a certain extent before Bruno left England.^[389] In the *Acrotismus*, which occupies a middle place between the two periods, the doctrine is equally in evidence, in reference both to the atoms and to the continuous ether in which they move. "There is a limit to the division of nature—an indivisible something; the division of nature arrives at ultimate minimal parts, unapproachable by human instruments. Of these minimal bodies every sensible body is composed, and such a body, resolved into its minima, can retain no semblance of complexity; for these are the first bodies out of which all others are made, and which are, in the truest sense, the matter of all things that have corporeal existence. Resolved into these parts, stone has no look of stone, flesh of flesh, bone of bone; in their elements, bone, stone, and flesh do not differ, but only when formed out of these, compounded, compacted, and arranged in diverse manners, do flesh, stone, and bone and other things become different one from another."^[390] And Bruno describes how, between the heavenly bodies, there is a substance, "ingenerable and incorruptible, the immeasurable air, a kind of spiritual body"—the ether.^[391]

Its full extension, however, the theory receives in the *De Minimo*, where the atom, or corporeal unity, is not the sole minimum discussed. The full title of the work is:—"On the threefold minimum, and measure, being the principles of the three speculative sciences and of many practical arts." We find nowhere any distinct statement as to what Bruno meant by the "threefold minimum," and the three speculative sciences to which its several members refer. It was supposed that the minima were (1) the monad or unity which is the unit of number, (2) the point, which is the unit of the line, and (3) the atom, which is the unit of body. But arithmetic and geometry can hardly be called speculative sciences, and Tocco has shown that Bruno had in view the triad of *God*, the *soul* and the *atom*—the three kinds of simple substance, each immortal and indestructible:—*God* as the supreme and most simple unity, Monad of Monads; *soul* as that which lives in each composite being and holds in unity the atoms which from time to time enter into its composition; and the *atom*, the most simple of material substances, in the sum of which, with their containing ether, the material universe consists. Had Bruno carried out his subdivision of the speculative sciences, he would probably have referred God, as the substance of all reality, to a speculative theology, of Neoplatonist type; soul as the simple substance of animate beings to metaphysics proper; and the atoms, the substance of body, to a speculative physics, dealing with the metaphysical presuppositions of the general theory of nature, which was set forth in the *De*

Object of *De Minimo*.

Immenso. The scheme, however, was never fully carried out,^[392] the times being not yet ripe for the complete separation of the speculative and the experimental or observational sciences. In referring the atomic theory to metaphysics, Bruno showed a true instinct, for while in one sense atomism is a scientific hypothesis capable of furnishing laws which explain the interaction of bodies,—the corpuscular theory,—and as such has proved its value by the brilliant developments of recent years, on the other hand, it is also a presupposition of knowledge, a ground of the possibility of our knowledge of body, and therefore has its place in speculative theory, or metaphysics, in the widest sense. Both points of view are presented in Bruno’s doctrine, but that from which he starts is the epistemological, following in this the guidance of Nicholas of Cusa.

Atomism a metaphysical doctrine.

Knowledge is measurement, and all measure implies a minimum in each kind of being. Were it possible to subdivide anything *ad infinitum*, the half would be potentially equal to the whole, and measurement frustrated. There must be a limit to division, an ultimate part, which itself has no parts, and which is the *substance* of the composition into which it enters, the composition on the other hand being an “*accident*” of this minimum. As it is primarily a condition of measurement, the minimum differs in the different spheres of measure or knowledge to which the category of quantity applies. In magnitudes of one or two dimensions it is the point, in bodies the atom, in numbers the monad or unity.

Knowledge implies the atom.

Relativity of minimum.

Thus number is accident of the monad, monad is the essence of number, as composition is accident of the atom, atom is essence of the composite. Again, the “sensible minimum” must be far greater than the natural or real minimum, for in so far as minimum is qualified by sensible, it is implied that the minimum is not absolutely such, but is a composite. The minimum of taste, touch, etc., must possess certain qualities, by which it has relation to sense, and these can derive only from some form of composition. In their primary form the minima of nature must be without difference; therefore that some are sensible, others not, must be due to some addition in the former.^[393]

Thus each species of existence, as light, moisture, vital force,^[394] has its own minimum, and the minimum is relative in this sense also, that there are different kinds of existence not resolvable one into another: the absolute minimum would be God, who is also the absolute maximum. The relative minimum, accordingly, is determined either by the thought and design of the observer, or by the species of existence to which the subject belongs; nature has set limits, both lower and upper, within which the individual of any species must stay, or cease to belong to that species. Accordingly, what *one* regards as great and composite, *another* may take as first and minimum: the unit of one science may be analysed in another into further elements. “Pythagoras in his philosophy started with the monad and numbers; Plato with atoms, lines and surfaces; Empedocles with the four elements; the physicians with the four humours, and so on; but the Pythagorean monad is prior to the placed monad (the atom), Plato’s matter of bodies to the qualified bodies of Empedocles, the four simple bodies of Empedocles to the four first combinations of these, the four humours. So to the universe the whole solar system, the sun and all its planets, may be a simple unit.”^[395]

Here Bruno suggests two principles for the classification and systematising of the sciences, to which it would have been well had he himself and his successors faithfully adhered. The one is, that the modes of measurement, *i.e.* the methods and laws of the sciences, must differ for the different kinds of existence studied: that a biological law, for example, cannot be adopted as an explanation of mental phenomena, nor the atomic theory account for the phenomena of life. On the other hand there are *orders* of existence, according to the complexity of the subjects involved. If we regard the science which deals with the more concrete subject as “higher,” then each higher science (*e.g.* psychology) must take for granted the principles and results of each lower science (biology, physics, mathematics),—each must adopt and retain a unit for itself, which it has not further to analyse.

In the same way the minima offer a ground for the distinction of the more abstract sciences one from another. The term “individual nature” (*atoma natura*) may, according to Bruno, have one of several uses. It may be applied either “negatively or privatively, and if negatively, then either accidentally or substantially.” His instance of the *accidental* use is a voice or sound, which expands spherically, is wholly wherever it is, *i.e.* the full content of the sound is heard, wherever its influence extends, not a part here, a part there, although the intensity may vary in degree. Of the *substantial* use examples are the spirit, which is wholly in the whole body of man, or that spirit which is in the whole extent of the life of the earth, by whose life we live and in which we have our being, or, above this substantial nature or individual soul, that of the universe, and supreme above all, the mind of minds, God, one spirit completely filling all things.^[396] The atom-nature is *privatively* so-called, when it is the element and substance of a magnitude which is the same in kind with it, and may be reduced to it, and it is distinguished from the atom *negatively* so-called, because it is not divisible, either in genus or in species, either *per se* or *per accidens*. Examples are, (1) in discrete quantities:—unity to the mathematician, the universal proposition to the logician, the syllable to the grammarian; and (2) in continuous quantities, varying with the species of continuum:—the minimal pain, sweetness, colour, light, triangle, circle, straight line, curve; in duration, the instant; in place, the minimal space; in length and breadth, the point; in body, the least and first body.

The “minima” in the classification of sciences.

In the second place, the atom or minimum is also a metaphysical ποῦ στῶ; not only is it the last result of analysis, but it is also the permanent substance

Minimum as substance.

of being, and again it contains all being in itself—it is essence of being. Thus such an individual nature “never comes into existence by way of generation, nor passes out of it by way of corruption or dissolution; only *per accidens* may we say that it now is, now is not.”^[397] Certain of them, however, the souls, deities, God, are in their intrinsic nature eternal, immortal, indissoluble. Of these it was Bruno’s intention to treat at large in a *Metaphysics* and a *De Anima* which he purposed to write “if God granted him time.”^[398] Unfortunately, it was willed otherwise.

Nothing that becomes, changes, decays, is real (*ens*). It is by meditating on this perpetual unity of nature, by conforming ourselves, and preserving ourselves in likeness to it, that we come to partake in the life of the gods, and to deserve the name of substance. That which time, movement, fate bring to us is nought; for while they are, they are not. “Let us then,” cries Bruno, “supply the mind with material, in the contemplation of the *minimum*, through which it may exalt itself to the *maximum*.”^[399] Since the real minimum, whether atom or soul, is immortal and indestructible, we know, as Pythagoras saw, that there is no death, but only transition; death is a dissolution which can occur only to the composite, for the composite is never *substance*, but is always *adventitious*. Otherwise we should be changing our substance every moment with the continuous influx of atoms into our bodies. Only by the individual substance of the soul are we that which we are; about it as a centre, which is everywhere in its whole being (*ubique totum*), the disgregation and aggregation of atoms takes place. According to a law of the soul-world, all bodies and forces tend to the spherical form; God, as monad of monads, is the perfect or infinite sphere, of which the centre is at once nowhere and everywhere; and in Him (as in all minima, simple substances, monads) all opposites coincide, the many and the few, finite and infinite; therefore that which is *minimum* is also *maximum*, or anything between these, each is all things, the greatest and the whole.^[400] Therefore, if contemplation is to follow in the footsteps of nature, it must begin, continue, and end with the *minimum*.^[401] In other words, the minimum in each sphere of being contains implicitly in itself the whole reality of that sphere. The minimum is its substance, not merely the ultimate of analysis, but the actual source, the dynamic origin of reality, as God is implicitly the whole universe and also the source of the universe as it actually exists. It is because the minimum is all reality, is the *maximum*, that the knowledge of it gives us that of the whole.

In the third place the atomic theory offers an explanation of the uniqueness of each natural existence, which Bruno’s philosophical theory already assumed. The ever moving atoms present a mechanism by which the infinite diversity and infinite succession of change in things may be brought about.

Uniqueness of all things.

The *appearance* of similarity, exactness, etc., is, as we have found, an illusion. Mathematically exact figures or bodies—a true circle, for example—are unattainable by sense, even if they exist in nature; but they do not exist in nature. Sense is the primary faculty, through which the material of all others must pass, so that what has not entered through that window of the soul cannot be known at all. But a single point out of place on the circumference of a circle makes it cease to be a true circle, and our sense-apprehension is necessarily so confused and indistinct that we cannot distinguish between the true and the false, where truth depends upon so inappreciable a difference. Moreover sense-knowledge is relative to the knowing subject, or to the subject’s position with regard to the object. What to the eye of one is too large is to another too small; a sound which is pleasant to one ear is not so to another; the food which to the hungry man tastes sweet, to the full man is nauseous; the ape to the ape is beautiful, but to the man is of laughter-inspiring ugliness. Hence the circumspect will not say “this has a good odour, taste, sound, this has a beautiful appearance,” but will add “to me,” “now,” “sometimes.” Nothing is good or evil, pleasant or painful, beautiful or ugly, *simply* and *absolutely*; but the same objects in relation to individual subjects receive from the senses contrary denominations, as they in fact produce contrary effects. In deciding what is to be called good or bad, honourable or base, nature and custom have been the chief agents, and alterations have issued from the slow rise and victory of different opinions. Among the Druids and Magi certain things were performed publicly at sacrifices which now, even when committed in privacy, are regarded as execrable, and are so by way of law, and in the present condition of affairs. Philosophy, as it teaches to abstract from particulars, to bring the nature and condition of things as far as possible under an absolute judgment, must define differently the useful and good in an *absolute* sense, from the useful and good as *contracted* to the human species. Objectively there is no definitely good or definitely evil, definitely true or definitely false, so that from one point of view we may say that all things are good; from another that all things are evil; from a third that nothing is good or evil, as neither of the contraries is true; from a fourth that all things are both good and evil, as each of the contraries is true. No sense deceives or is deceived: each judges of its proper object according to its own measure. There is no higher tribunal to which to refer its object, nor can reason judge of colour any more than can the ear; sensible truth does not follow any general or universal rule, but one which is particular, mutable, and variable. In the working of an external sense there may be different degrees of perfection or defect, but not of truth or falsity, which consist in the reference of the subject and predicate to one another. The faculty by which we judge this or that to be *true* colour or light, and distinguish from apparent colour or light, is not in the eye. To affirm that man is an animal, we must know both man and animal, know that animal nature is in man, and other things which, as means or circumstances, concur directly or indirectly in this knowledge. External sense can apprehend only one species or image of the object; from the colour and figure to pass to its name, its truth, its difference from other objects, belongs to a more inward faculty. Yet the latter is always based upon sense;—a deaf man can neither imagine nor dream of sounds which he

Sense and knowledge.

Relativity.

Judgment based

has never heard, nor a blind man of colours and figures which he has never seen.[402] This digression on the relativity of knowledge, and on the different functions of sense and reason, in which Bruno follows partly the teaching of Lucretius, partly the Peripatetic doctrine of knowledge, shows that even if a true or perfectly exact geometrical figure existed in nature, none of the faculties with which we are endowed could apprehend it, since it is not given by external sense.[403]

upon sensation.

But in the second place[404] reason tells us that no true circle, or other figure, is possible in nature: for there is in nature no similarity except in the atoms; a true circle would imply the equality of all lines from the centre, but no two lines in nature are entirely and in all respects equal to one another.

No exactness or similarity in composites.

The circle or part of a circle which appears most perfect to us—the rainbow—is an illusion of the senses, due to the reflection of the light of the sun from the clouds; so the circles made by a stone falling into water cannot be perfect, for this would mean that the stone itself is perfectly spherical, that the water is everywhere of the same density, that no wind is playing upon its surface. Sound is not equally diffused owing to differences in the density and rarity of the air, nor is the horizon ever a perfect circle, owing to differences of clearness in different directions. Object and faculty alike are in continuous change; all natural things are continually altering their form or changing their position; therefore although they seem to sense to remain fixed for a time, we know that this is impossible, from the nature of things.[405] Whatsoever falls in the scope of sense-perception, even the distant sphere and stars, we judge to consist of the same elements, therefore to be subject equally to perpetual variability and vicissitude. Thus—the atoms alone being simple, and remaining ever the same—no composite thing can be the same for one moment even, as each is being altered continually in all parts and on all sides by the efflux and influx of innumerable atoms.[406] “Hence nothing is perfectly straight, nothing perfectly circular among composites, nothing absolutely solid but the atoms, nothing absolutely void but the spaces between them.” The facet of a diamond appears to be a perfect plane, perfectly compact, yet in reality it is rough and porous.[407] In matter no two lines or figures are entirely equal, nor can the same figure be repeated twice.[408] No man is twice of the same weight, the very instruments by which we measure and weigh things are themselves in constant change, and the flux of atoms is never equal, but now denser, now rarer. In general no two things are of the same weight, length, sound, or number, nor are two motions or parts of motion ever the same. To say that ten trees are equal to ten others is to speak merely from a *logical* point of view, for in fact each is *one* in a peculiar and special sense.[409] “Equality is only in those things which are permanent and the same; changing bodies are unequal to themselves at any two instants.”[410] “Nothing variable or composite consists at two moments of time wholly of the same parts and the same order of parts, since the efflux and influx of atoms is continuous, and therefore not even from the primary integrating parts will you be able to name a thing as the same twice.”[411]

Number itself is not an absolute, but a relative determination: it does not touch the nature of the thing itself. Nature has no difference of number, as we have, of odd and even, tens and hundreds; nor do the gods, spirits, or other rational beings define the numbers and measures of objects by the same series of terms. Both numbers and the methods of numbering are as diverse as are the fingers, heads, and mental equipment of the numberers. That which fits in with the numbers of nature will therefore never fit in with our numbers. Thus ten horses and ten men, although determined arithmetically by one and the same number, are in nature, or physically, wholly unequal to one another.[412]

In order that men’s minds may be better disposed for the reception of truth, it is necessary first to demolish the foundations of error;[413] Bruno accordingly sets himself to disprove the infinite divisibility of the continuum.

The atoms.

[414] It was the common belief that there were no limits set to the dividing power of either nature or art, so that, however small a part might be arrived at, it was possible to divide it into yet smaller parts, on the analogy of the division of a fraction into tens of thousands of parts. Bruno denied this analogy to be justifiable, as in the latter case we are concerned not with division but with multiplication or addition, not with a continuum, but with discrete quantities, and it was part of his general theory that the addition of discretetes might be carried on *ad infinitum*; the inverse process he denied. He thus held opinions directly contrary to those of Aristotle, with whom the mass of the universe was finite, limited by its enclosing sphere, the parts of the universe unlimited. Aristotle had an upper but not a lower limit; Bruno a lower but not an upper. So time and space, which Aristotle had treated as *finite* in duration or extent, but as *infinitely divisible*, like the universe itself, are regarded by Bruno as

Time and space.

unlimited in their dimensions, but as consisting of discrete minimal parts. “In every point of duration is beginning without end, and end without beginning”; it is the centre of two infinities. Therefore the whole of duration is one infinite instant, both beginning and end, as immeasurable space is an infinite *minimum* or centre. “The beginning and source of all errors, both in physics and in mathematics, is the resolution of the continuous *in infinitum*. To us it is clear that the resolution both of nature and of true art, which does not advance beyond nature, descends from a finite magnitude and number to the atom, but that there is no limit to the extension of things either in nature or in thought, except in regard to the form of particular species. Everywhere and always we find the *minimum*, the *maximum* nowhere and never. The *maximum* and *minimum*, however, may in one sense coincide, so that we know the maximum to be everywhere, since from what has been said it is evident that the maximum consists in the minimum and the minimum in the maximum, as in the many is the one, in the one the many. Yet reason and nature may more readily separate the minimum from the maximum than the maximum from the minimum. Therefore the immeasurable universe is nothing but centre

everywhere; eternity nothing but a moment always; immeasurable body an atom; immeasurable plane a point; immeasurable space the receptacle of a point or atom.”[415]

The chief source of error on the part of the Peripatetics was their failure to distinguish between the minimum as a part, and the minimum a *terminus* or limit. Hence their idea that no combination of physical minima would give a magnitude, since two or more would touch one another with their whole surface, *i.e.* would coincide:—otherwise the minimum would have parts, a part of each touching the other, and a part not touching. On their theory it would follow that magnitudes do not consist of parts, or at least not of elementary parts. This is inconsistent with nature, for existing magnitudes must have been built up out of nature’s elements, and with art, for art can measure only on the assumption of first parts. It is true that what is posited as first part in one operation may be the last result in another, for the *minimum*, as we have seen, is a relative conception, but *some* first part is always assumed in any operation. And as the operation of art is not infinite, so neither is there infinite subordination of parts.[416] When two minima touch one another, they do not do so with their whole body, or any part of it, but one with its terminus or limit may touch several others; no body touches another with the whole of itself or a part, but with either the whole or the part of its *limiting* surface. The *terminus* of a thing is therefore no part of it, and by implication not a minimal part. Hence there are two kinds of *minima* concerned—that of the touching body, or part, and the minimum of that by which the contact is effected, the *terminus*.[417] The atom, which is the minimal sphere, touches in the absolutely minimal point, the smallest *terminus*. Other spheres do not touch in a point simply, but in more than one, or in a plane circle.[418] By adding limit to limit we never obtain a magnitude; the *terminus* is no part, and therefore if in contact it would touch with its whole self, so that magnitude is not made up of *termini*, whether points, atoms, lines, or surfaces which are *termini*; and this was the false ground on which the Aristotelians denied the possibility of the atom. It remained to ask if the *termini* were infinite, since the atoms were not; but it was clear that their number was determined by that of the atoms. For two limits do not touch one another:—“They do not cohere or make a *quantum*, but through them others in contact with one another make a *contiguum* or *continuum*.”[419] It may be added that if the parts of a divisible body were infinite in number, the parts of the whole would be equalled by the parts of the half, for in the infinite there can be no greater and less. In the infinite, as we have seen above, there is no difference between palms, digits, miles, between units and thousands, nor in the infinite time that has elapsed are there more months than years, more years than centuries. If any one set of these were less than the others it would be finite, and if one finite number may be applied to the whole, then the whole is finite.[420] The force of the Achilles dilemma was derived from the false idea that the *minimum* of one kind had some relation to that of another kind, *e.g.* that of time to that of motion, that of impulsive force to that of the motion produced. A thing of one kind does not define or measure a thing of another, and the duration of one does not compare in the same sense with the duration of another. Parts of different things are only equivocally called parts, and *minima* are *minima* only according to their proper (and diverse) definitions; therefore one is not measured by another, except in a rough way, for practical purposes.[421]

As the atoms come into contact with one another, not in all points of their surface, but in a definite number, it follows that there is a space between them, in the interstices; it was this thought which led Democritus to posit a vacuum.[422] The figure of the corporeal minimum must be spherical, for any mass which has projections can always be thought of as smaller, when these projections have been removed; and nature itself suggests this, by the gradual rounding off of substances through time, and the apparent roundness and smoothness of rough and jagged bodies when the observer is at a distance.[423] Diversity of forms of composite bodies results easily from spherical atoms, through differences in situation and order, differing amounts of vacuum and solid; but a simple vacuum with solid bodies is not sufficient,—there must be a certain matter through which the latter cohere together.[424] Although all other determinations may be abstracted from, figure at least must be predicated of the atoms; quantity cannot be asserted of that which is thought to be unfigured. These determinations of the minimum, though not given to sense, may nevertheless be made object of thought, by analogy or inference from the combinations of sensible *minima* in larger composites, the same forms of aggregation being repeated in the higher which occur in the lower forms.[425]

The vacuum. Atoms spherical.

From the consideration of mathematical figures as consisting of *minima*, Bruno attempted both to remodel and to simplify the existing mathematical theory, and, unfortunately fell foul of the new analytical mathematics, the theory of rationals and of approximations, which at that time was receiving marked extensions, and which has since justified itself so completely by results. It is true he did not entirely reject it, but he regarded it as merely an artifice for rough practical measurements. The true measure is always the *minimum*, inferred by analogy from the combinations of greater parts, which are perceived by sense. Thus the minimal circle, after the atom itself, consists of seven minima, the minimal triangle of three, and the minimal square of four, and as each figure increases not by the addition of one atom merely, but by a number determined by the original number of atoms in the figure, it follows that no one figure is ever equal to another. Thus the second triangle is of six minima, the second square of nine, the second circle of nineteen. The “squaring of the circle” is therefore impossible,[426] although it may be approximately reached through the ultimate coincidence of arc and chord, by which the circle becomes equal to a polygon with an infinite number of sides.[427] This, however, is only an approximation of sense, which fails to observe the infinitesimal differences that are caused by the existence of a few atoms, more or less, in a figure. They are visible to the eye of reason, which comprehends that no two figures in nature are ever exactly equal. In exact geometry the number

of one species of figure has nothing in common with that of another. It is clear, however, that even on his own ground Bruno was in error in this regard; for example, the seventh triangle and the fifth square are each composed of thirty-six minima.^[428] But it is hardly necessary to take seriously his teaching in this respect. He was wholly governed by the belief in the infinite diversity of nature, and the absolute incommensurability of any member of one species of beings with one of a different species. "Since a definite minimum exists, it is not possible either in reality or in thought for a square to be equalled by a circle, nor even a square by a pentagon, a triangle by a square, nor in fine any species of figure by a figure of another species; for difference in the number of sides implies also difference in the order and number of parts. As figures in this respect are as numbers, and one species of number cannot be equalled by another either 'formally' or fundamentally (*i.e.* either in idea or in fact), we can never make an equilateral figure of any kind equal to one of another by first parts."^[429] Where this transformation is apparently carried out, as where a cube of wax is moulded to another figure, the result is due to the varying degrees of density in the different parts of the material; no solid parts are added or subtracted, but the disposition and extent of the pores or vacua are altered. But no argument can be drawn from this rough method, for the principles of practice are different from those of science.^[430]

The latter principles are then applied boldly to geometrical science: thus it is shown that an angle, although it may be multiplied indefinitely, can be divided only into two parts; all its lines, it is understood, consisting of *fila* or rows of atoms;^[431] that the circle has not an infinite number of radii, for from the circumference to the centre only six such lines can be drawn;^[432] that not every line can be divided into two equal parts, for the physical line or *filum* may, naturally, consist of an odd number of atoms;^[433] in any case geometrical bisection can at best be a near approximation,—though the two halves be apparently equal, they may really differ by many atoms. On this basis, in the fourth and fifth books of the *De Minimo*, Bruno offers a simplification of the geometry of Euclid. As nature itself is the highest unification of the manifold, and the monad is the unity and essence of all number, so we are taught to pass "from the infinite forms and images of art to the definite forms of nature, which the mind in harmony with nature grasps in a few forms, while the *first mind* has at once the potentiality and the reality of all particular things in the (simple) monad."^[434] In accordance with the method of simplification suggested by this doctrine, Bruno sets himself to show that the greater part of Euclid may be intuitively presented in three complicated figures, named respectively the *Atrium Appollinis*, *Atrium Palladis*, and *Atrium Veneris*. He hoped that by this means, "if not always, for the most part at any rate, without further explanation, the demonstration and the very evidence of the thing might be presented to the senses of all, without numbers,—not after the partial method of others, who in considering a statue take now the foot, now the eyes, now the forehead, now other parts separately,—but explaining all in each and each in all."^[435] It is no part of the purpose of this book to go at length into the mathematics of Bruno, which unfortunately have not yet met with a competent exposition. Apart from the difficulty of the matter itself, the poetical form and setting of his theorems is an additional stumbling-block in the way of understanding. Bruno was put to many shifts in order to give a poetical colouring to the most prosaic of subjects.

We have gone thus fully into the detail of Bruno's atomic theory, more so perhaps than its intrinsic value seems to demand, because this aspect of his doctrine is the most important philosophically, and has exercised the greatest influence upon the course of speculation. It also provides most clearly an exemplification of the return which was made, or thought to be made, by the Renaissance to the older pre-Aristotelian philosophy and science. The rejection by Aristotle and his scholastic followers of the atomic theory of Leucippus and Democritus had been based upon the identification of space and body. The possibility of a vacuum in the corporeal world was denied, on the ground that discreteness was inconsistent with the continuity which was felt to be a necessary condition of space. Accordingly, the reintroduction of the atom was possible only in one of two ways—either by the distinction between body and space, or by the application of the atomic constitution of body to space itself. The former and truer solution was not open to Bruno. His time was still too much under the domination of Peripatetic thought for him to be able to take the important step of critically separating these two notions. The latter way, therefore, was that which he followed. Hence the curious attempt to remodel mathematical theory on the basis of the atom, which we have described above, and the reduction of mathematical certainty to an illusion of sense. Figure is to be found only in the combinations of atoms; and owing to the spherical form of the atom, the infinite number of them existing in any body which is presented to sense, and the space which lies between their surfaces, mathematical equality and exactness are impossible. Neither straight line, therefore, nor perfect circle are to be found in reality. Mathematics, which should be based upon, or which presupposes, continuity, is confounded with physics, which presupposes the analysis of body into discrete, impenetrable atoms. Physical atomism finds its justification in the experienced fact of resistance, which is the primary quality of body as perceived by our senses. In mathematical space, on the other hand, we abstract from all qualities except that of dimension only. Resistance would be inexplicable were it possible to proceed *ad infinitum* in dividing matter; it implies an ultimate irreducible and indestructible unit, whether we regard this unit as a centre of force or as an inert substance merely.

The same influence of Aristotelian thought led Bruno to posit a subtle matter, the Ether, as filling up the interstices between the atoms. Space and body having been identified, it was seen that a vacuum was inconsistent with the nature of things. The Aristotelian *plenum* was reintroduced in this form, that there might be some reality where the discrete atoms were not. The bolder step of asserting the fact, and indeed, the necessity of a vacuum as a presupposition of knowledge of the material world, was not taken until there appeared the work of Gassendi, by whom the final blow was given to the old conception of body and space, and through whom the critical separation of

the one from the other was first rendered possible. It is curious that Bruno did not think of applying to the continuous ether any geometrical measure; had he done so, he would have understood the value of the new theory of infinitesimals and irrationals which he opposed so strongly. Again, had he carried out more fully the distinction which he draws between the atom and the *terminus* or limit, the same result would have followed. Pure geometry is the geometry of the limit; for the limit is not only between atom and atom, or body and body, but also between atom and vacuum or ether. In this sense it is both continuous and figured, the compatibility of which qualities Bruno had denied; the continuous is measured, not by making it discrete, but by making the number, the measure, fluid or continuous.

Lasswitz has shown that there are in Bruno's theory three distinct aspects, not, however, clearly separated one from another, of the atomic hypothesis: they may be named severally the metaphysical, the physical, and the critical aspects. From the metaphysical point of view the atom is the ultimately simple, indeterminate substance of things; its conception results from the effort to find the real substance which is outside of, and unaffected by, the change and decay apparent on the surface of things, but felt to be unreal. Simplicity, unity, substance, is that which is sought, an abiding somewhat underlying the flux of the universe, which is regarded as an illusory appearance to sense. From this aspect it is that the identity of *minimum* and *maximum*, of the least with the greatest, is to be explained. Number, plurality, and diversity no longer apply to the absolutely simple: all are determinations of human and finite origin which are here no longer valid. In the simple all contraries coincide, for the very reason that it has no determinations in itself; even the highest qualities which men would attribute to God, for example,—justice and goodness,—are improperly predicated of him, for as in him the greatest and the least coincide, so do goodness and evil and all other contrary qualities. In this respect Bruno was following closely in the footsteps of Nicolaus of Cusa.

Metaphysical
atomism.

From the second point of view, that of *physical* atomism, the atom is nothing more than a hypothesis to explain the constitution and qualities of nature as we experience it. We seek to account for the differences in material bodies and in their ways of acting upon one another by the interaction of ultimate elements of which the nature and laws may be variously interpreted. Of this point of view also there are traces in Bruno, although for it he had least regard. He does not attempt, for example, to apply the theory of the atoms to explain the four elements which had come down from Aristotle. He leaves them practically intact, and we have seen that they form a standing difficulty in the way of a consistent theory. The earth alone is atomic in its nature; water, air, and fire seem alike fluid and continuous in quality, but wherein their difference from one another consists he was unable, or did not care, to make clear. Perhaps, if we take his view at its best, we should say that all three represent strata, varying in density, of the one fluid and all-pervading ether. Had he worked out this conception, which was evidently present, on occasions, to his mind, he would have given an example of what is meant by physical atomism. But this was left for another century to fulfil. From the third or *critical* point of view, which inquires into the presuppositions or the possibility of knowledge, Bruno may be regarded as being, to some extent, a forerunner of Kant, in the stress he lays upon the relation of the minimum to measure or knowledge, and in his doctrine of the relativity of the conception of the *minimum*. The minimum, instead of a last of division, becomes a first of composition—a ground which we must necessarily assume in order to account for the experienced fact of composition. To know a composite is to measure it, and measurement implies the *minimum* or first part, without which quantity in any form cannot be explained. As the comparison of numbers with one another, their determination as greater or less, is only possible on the assumption of a unit, a common measure to which each may be referred, so the comparison of bodies with one another, as to quantity and quality alike, demands a corporeal minimum, to which their differences must be reduced. This relation to knowledge carries with it the relativity of the minimum according to the subject-matter with which the knower is for the time being concerned. If all knowledge is of the same type, then in each application of it—each subdivision of knowledge as a whole—there is presupposed the corresponding minimum. That which is least in one sphere may be greatest in another; that which is element of one science may be that which another seeks to analyse into lesser constituents. The celestial body, which is a highly complex combination of elements, may be the unit of astronomical science. The phrase, which is the unit of the rhetorician, is analysed by the logician and the grammarian into terms and words; these are analysed by another science into syllables and letters; these by the mathematician into lines and points. Thus every science has its own (relative) minimum. Only one *minimum* is *absolutely* so named,—God as the monad of monads. It is to be noted that the relativity of the monad is dependent upon the origin of its conception, in the conditions of knowledge; it is because quantity is universal that a minimum is necessary, and it is because quantity differs in kind, in each subject of knowledge,—because it is, in scholastic phrase, equivocally applied in the different cases,—that the minima differ from one another. The minimal number is no measure of the minimal body nor of the geometrical figure, and the numbers which are in use among men are not those which may be employed by other and higher rational beings. Thus, even number itself is a relative determination; ten horses, said Bruno, are not *really* equal to ten men, but only *conventionally*.

Physical Atomism.

Critical Atomism.

The ancient atomism upon which Bruno founded his theory was, at any rate in its traditional rendering, frankly materialistic. It admitted nothing but atoms and the void, all things else being dependent upon the *composition* of atoms, which itself, and all that results from it, is merely an appearance to sense, without corresponding reality in nature. All physical operations were

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explained by mechanical arrangement and movement of the atoms. The method which was pursued thus unscientifically, without consciousness of the extent of its validity, modern atomic theory has followed scientifically, with full comprehension of its bearings, and perhaps without due consideration of its limits. Bruno tells us that he had at one time been an adherent of Democritus' atomic theory, but on reflection had been unable to rest satisfied with his materialistic account of the nature of things. In this case also he showed himself unable to get rid of the ties which bound all the thought of his time—even that thought which most believed itself to be free.

Aristotle's distinction of form and matter in nature, of pure activity and pure passivity, had still sufficient influence to render even in Bruno's time a purely mechanical treatment of nature an impossibility. The opposing school, the Neo-Platonism which attracted so many minds of that period, because of its supposed inconsistency with Aristotle's system, was itself an offshoot, to some extent, of that system, and was still less scientific in its tendency. Mysticism, of which it was partly a cause and partly an effect, lent its weight also against any mechanical interpretation of nature. Thus even while apparently governed by scientific aspiration, Bruno gives a teleological scheme of the universe which renders any scientific explanation of it impossible. Not only, as we have seen, is the ether identified with the first substance, spirit, or soul of the universe, but also the greater and lesser organic bodies are governed each by its individual soul, which is somehow distinguished from the universal spirit, and within each of these is an infinite number of smaller living bodies. In other words, the atoms themselves are animated *virtually*, if not *actually*. This animistic interpretation is in direct conflict with the mechanical interpretation which science has followed, and which it must continue to follow if it is to produce any result. Thus, motion and the changes of composition that derive from motion are explained not by the mechanical impact of atoms and bodies upon one another, but by the action of the intrinsic soul in each being, which causes the motion of the body, in accordance with its need and desire of self-preservation. All motion, even the slightest, is thus explained by a final cause. In the whole universe also, the constantly occurring changes and transformations are due to a similar final cause—the need for each thing to become *explicitly* that which it already is *implicitly*, *i.e.* the whole of reality. It required once more a critical separation of the spheres of validity of the respective conceptions of nature and spirit, such as Kant attempted, before full scope could be given to mechanical interpretation on the one side, and teleology restricted to the domain of spirit only on the other.

CHAPTER VI

THE PRACTICAL PHILOSOPHY OF BRUNO

The distinctively ethical teaching of Bruno is contained in the two dialogues—the *Spaccio della Bestia Trionfante*, and the *Heroici Furori*. The latter describes the struggles and aspirations of the “heroic” or generous human soul in its pursuit of the infinitely beautiful and good—its efforts towards union with the divine source of all things. To this more constructive work, in which moral philosophy was to be treated according to “the inward light with which the divine sun of intelligence had irradiated” the soul of the writer, the *Spaccio* was to form an introduction. “It seemed well to begin with a kind of prelude, after the manner of musicians; to draw some dim and confused lines, as painters do; to lay deep bases and dark foundations, as do the great builders; and this end seemed best achieved by putting down in number and in order all the primary forms of morality which are the capital virtues and vices.”^[436] The *Spaccio*, with its shorter appendage, the *Cabala del Cavallo Pegaseo*, contained a bitter attack upon the prevalent forms of Christian religion; it especially attacked the doctrine of the all-sufficiency of faith, which, interpreted as it then was, might stand as the formula of mediaeval corruption and stagnation; and it was upon this dialogue, almost solely, that the reputation Bruno long enjoyed—that of being an atheist—was based. It is therefore well to remember the introductory nature of the work. Had not “atheism” been frequently synonymous with “unorthodoxy,” the *Heroic Enthusiasms* would have shown on how shallow a foundation the charge rested, for that dialogue breathes the purest religious emotion and aspiration. Bruno had, however, a premonition of the fate that was to befall his memory. He protested, perhaps with a touch of sarcasm, that nothing in his work was said “assertively,”—that he had no wish either directly or indirectly to strike at the truth, to send a shaft against anything that was honourable, useful, natural, and, consequently, divine.^[437] His own religion was that which had its beginning, its growth, and its continuance in “the raising of the dead, making whole the sick, and giving of one’s goods”; and not that in the spirit of which the goods of others were seized, the whole maimed, and the living put to death.^[438] The conclusions of the *Spaccio* were not therefore to be regarded as presenting a finished system, but as mere suggestions, to be tested “when the music should be given in concert, the picture finished, the roof put on the building.” On the other hand, it is clear also that in the *Spaccio* Bruno intended to present a popular moral philosophy, or to point out the degree of virtue which might be attained without the influence of the divine *afflatus* described in the *Enthusiasms*. As in the philosophy of Aristotle before Bruno, and in that of Spinoza after him, the perfection of this customary morality formed at the same time the ante-chamber through which alone entrance was to be gained into the inner chamber of divine love. This is the real meaning that underlies the bizarre and at times extravagant humour of the dialogue: it points out the purification to which the human soul must submit before it can become a fitting vessel for the divine enthusiasm.

Before a purer morality can be taught to any avail, there must exist a desire for it in the minds of those to whom it shall be revealed. In the way of Bruno’s proposed reformation there stood the attitude of the Church and of the religious orders towards “faith” and towards “works” respectively. Faith meant merely professed belief in, or acceptance of, their doctrines, and conformity with their practices—blind acceptance and unreasoning conformity—in contrast with which an earthly life that was simply moral was held to be of no value towards the blessed life hereafter. Under the influence of this spirit the worst vices were practised, condoned, and pardoned, even in Bishops and Cardinals, not to speak of the ordinary priests and monks. It is only as embodying this conception that Bruno attacked the Church. Thus Jupiter, in the *Spaccio*, complains that his powers are decaying:—“I have not vigour enough to pit myself against certain half-men, and I must, to my great chagrin, leave the world to run its course as chance and fortune direct. I am like the old lion of Æsop—the ass kicked it with impunity, the ape played tricks upon it, the pig came and rubbed its dusty paunch upon it, as if it were some lifeless log. My noble oracles, fanes, and altars are thrown down, and most unworthily desecrated; while altars and statues are raised there to some whom I am ashamed to name, for they are worse than our satyrs, fauns, and other half-beasts, viler than the crocodiles of Egypt; for these at least showed some mark of divinity when magically guided, but those are quite the scum of the earth.”^[439] Bruno is ironically contrasting the Christian ideal, as he interprets it, with that of the Greeks and Egyptians. The former is that of a being only half-human, half-free; on one side of his nature he is reduced to the level of the beast, the ass, the bearer of burdens, unquestioning, faithful. Again, one of the constellations, the *Corona Borealis*, is to be left in the heavens, escaping the general fate,^[440] until the time when it shall be given in reward to “the invincible arm that shall bring peace, the long-desired, to a miserable, long-suffering Europe, cutting down the many heads of that worse than Lernean monster that is scattering its fateful poison of manifold heresy, and sending it through every portion of her veins.”^[441] To this decision of Jupiter, Momus, the critic and wit of the assembly, adds that it would be enough “if a certain sect of pedants could be rooted out, who, doing no good themselves, as the divine and natural law bade, yet thought themselves, and desired to be thought by others, pious and pleasing to the gods; they said that to do good was good, to do evil, evil; but that men gained grace and favour with the gods, not through the good that they did, but through hoping and believing in accordance with *their* catechism. As if the gods, said Mercury, were anxious about nothing but their own vainglory, cared nothing for the injury caused to human society. And they defame us, Momus continued, by calling this an institution of heaven, decrying effects or fruits; while all the time they are doing no work themselves, but living on the

Faith and works.

works of others, who instituted temples, chapels, hospices, hospitals, colleges, universities, for quite other men than they. These others, even if they are not perfect, will not, like their usurpers, be perverse and pernicious to the world; they will be useful to the state, skilled in speculative science, studious of morality, fanning zeal and enthusiasm for doing good to one another, and maintaining the common weal for which all laws are ordained. The usurpers are worse than grubs, caterpillars, or destroying locusts, and should be exterminated accordingly.”[442] How is it possible, we read elsewhere, that men should regard that as the highest type of religion which holds behaviour, the doing of good deeds, to be unimportant, or even to be vice and error; or pretends that the gods do not care for good deeds—that through such, however great they are, men are not justified?[443] This creed was a disease that ran through a man’s nature and poisoned it for ever. “When one turned from any other profession or faith to this, his liberality was exchanged for avarice, mildness for insolence, humility for pride; formerly open handed with his own goods, he now became a robber and usurper of those of others; a good man became a hypocrite; a sincere one, cunningly evil; a simple one, malicious; he who was once conscious of his own defects became the most arrogant of men; he who was ready to do any good action, to learn any new knowledge, became prone to every kind of ignorance and ribaldry; he who had merely the makings of a rogue became the worst possible of men.”[444] Miracle-working was the universal means by which the supremacy of faith was maintained. Momus therefore proposed to send Orion upon the earth. “He can do miracles—can walk upon the waves of the sea without sinking or wetting his feet; let us send him among men to make them believe everything we would have them believe—that black is white, that the human intellect is blind where it thinks itself to see best; that what to reason appears excellent, good, best, is vile, wicked, evil in the extreme; that nature is a strumpet, the law of nature a ribaldry; that nature and divinity cannot work together for one and the same good end; that the justice of the one is not subordinate to that of the other, but that they are as contrary as darkness and light.”[445]

The attitude of mind which formed the ideal of the Church for its members Bruno typified frequently enough, as we have seen, by the Ass, after Cusanus’ *Docta Ignorantia* and Agrippa’s praise of Asinity in his work on *The Vanity of all Sciences*. But *they* were in earnest: Bruno bitterly ironical. In his *Cabala* Asinity is given the two places left vacant in the heavens by the council of the gods in the *Spaccio*: the place of *Ursa Major* is taken by Asinity in the abstract, that of *Eridanus* by Asinity in the concrete. The whole work is in praise of “the pure goodness, royal sincerity, magnificent majesty of ignorance, learned foolishness, divine Asinity.”[446] Asinity is in the sphere of practice as submission to authority in that of speculation, or pedantry in that of teaching. Against all of these Bruno casts the shafts of his irony, now broad and heavy, now fine, light and piercing.[447] The list of virtues which Bruno gives as adorning the soul of the renovated man does not present any novelty, except perhaps in the order assigned to the different virtues.[448] Along with each mythical figure of the constellations he names the various vices that are expelled, and into the place of which the virtues come. The Bear, the highest constellation in the heavens, is replaced by Truth, the Dragon by Prudence, Cepheus by *Sophia*, or Wisdom. The following table shows some of the virtues which occupy the different posts vacated by the mythical beings of the heavens, and their contrary vices.

Asinity.

CONSTELLATION.	VIRTUE.	VICES.
1. <i>Ursa</i>	Truth.	Deformity, Falsity, Defect, Impossibility, Contingency, Hypocrisy, Imposture, Felony.
2. <i>Ursa Major</i>	The place is left vacant, to be filled in the satire of the Cabala by “ <i>Asinity</i> in the abstract.”	
3. <i>Draco</i>	Prudence.	Cunning, Craftiness, Malice, Stupidity, Inertia, Imprudence (Envy).[449]
4. <i>Cepheus</i>	Wisdom.	Sophistry, Ignorance (of evil disposition), foolish Faith (Hardness).
5. <i>Bootes</i> (Arctophylax)	Law.	Prevarication, Crime, Excess, Exorbitance (Inconstancy).
6. <i>Corona Borealis</i>	Judgment.	Iniquity.
7. <i>Hercules</i>	Courage.	Ferocity, Fury, Cruelty, Slackness, Debility, Pusillanimity (Violence).
8. <i>Lyra</i>	<i>Mnemosyne</i> , and the Nine Muses, her daughters,—the branches of knowledge.	Ignorance, Inertia, Bestiality (Conspiracy).
9. <i>Cygnus</i>	Repentance.	Self-love, Uncleanliness, Filthiness, Immodesty, Wantonness.
10. <i>Cassiopeia</i>	Simplicity.	Boastfulness on the one side,

11. <i>Perseus</i>	Diligence or Solitude.	Dissimulation on the other (Vanity). Torpor, Idleness, Inertia, Foolish Occupation, Perturbation, Vain solicitude.
12. <i>Triptolemus</i>	Humanity or Philanthropy.	Misanthropy, Envy, Malignity.

There follow as “virtues”:—Sagacity, judicious election or choice, affability, magnanimity (*Aquila*); divine enthusiasm or rapture (*Pegasus*); hopefulness, faith and sincerity (the *Triangle*); virtuous emulation, tolerance, sociability (and friendship—the *Pleiades*); love (peace and friendship—*Gemini*); conversion or emendation, heroic generosity (or magnanimity, again—*Leo*); continence, equity (and justice—*Libra*); sincerity (observance of promises—*Scorpio*); contemplation, the love of solitude (freedom of mind), temperance (*Aquarius*); just reserve and taciturnity, tranquillity of mind, industry, prudent fear, vigilance for the state, kindness, liberality, judicious sagacity (*Hydra*); divine magic (and soothsaying), abstinence (the *Cup!*), the divine parable (the sacred mystery,—*Chiron*); sincere piety and wise religion (the *Altar*); honour, glory, and, finally, health, security and repose, as the due reward of the virtues, and remuneration for zealous work and endurance.[450]

It will be seen that the list is redundant, and it is more so in the text, where several virtues are usually given under each head. Several of the names do not denote virtues in the ordinary sense (*e.g.* knowledge of magic, ability to interpret the divine parables): they are merely qualities which it is desirable for the good man to have. Others refer to qualities which could not be acquired by any one destitute of them (*e.g.* hope, love, piety), while others represent rather the outcome of the virtuous life than any one of its constituent elements, *e.g.* Knowledge, Divine Enthusiasm, Contemplation, Honour. There remain the familiar virtues of Greek philosophy:—Courage; prudence and sagacity; temperance (continence and abstinence); wisdom (or the love of truth); justice, including submission to law, active justice or judgment, and equity; sincerity, with truthfulness, simplicity, faith, the observance of promises; sociability and friendliness, with humanity, affability, tolerance, kindness; liberality; magnanimity and heroic generosity; tranquillity or gentleness. More modern are the virtues of solicitude, diligence or industry, of emulation, and of love of solitude, or “Monachism.” There is accordingly nothing of value to be derived for systematic ethics from this or from any other work of Bruno. It is in the digressions from the main argument that his philosophy of practical life is revealed.[451]

The two things which seemed to Bruno for his time the most desirable were *peace* and *freedom*—freedom alike of thought and of speech. The characteristics of the Church which he consistently condemned were on the one hand its violence, the dissension and strife it stirred up, on the other its tyranny over mind and tongue. Hence the aim of the moral life, from the lower plane on which we stand in the *Spaccio*, is to secure the prosperity of the state, the peaceful common life of its members, and the avoidance of all interference with the individual, except where the positive end, security, appears endangered. Of the nine muses, the daughters of Mnemosyne,[452] *Ethica* is at once the last born and the most worthy. Her task is to institute religions, to establish ceremonies, to posit laws, to execute judgments, with prudence, sagacity, readiness, and generous philanthropy; to approve, confirm, preserve, defend whatever is well instituted, established, posited, executed; adapting, as far as may be, both passions and actions to the worship of the gods, and the common life of men.

Peace and liberty.

—The function of *Law*, the daughter of wisdom, is to prevent the powerful from making undue use of their pre-eminence and strength, and in other respects vigorously to protect the common life and civil intercourse of men.

Law

[453] “The powerful are to be sustained by the weak, the feeble are not to be oppressed by the strong, tyrants are to be deposed, just governors and kings ordained and confirmed, republics fostered; violence shall not tread reason under foot, ignorance not despise knowledge, the poor shall be aided by the rich, virtues and studies necessary or useful to the community be promoted, advanced, maintained. No one is to be put into a place of power that is not superior in merits, by force of virtue and talent, either in himself, which is rare and almost impossible, or through communication with and counsel of others, which is due, ordinary and necessary. The two hands by which any law is strong to bind are *justice* and *possibility*, one moderated by the other, for although many things are possible that are not just, nothing is just that is not possible. Whether it come from heaven or from the earth, no institution or law ought to be approved or accepted which does not tend to the highest end, viz. the direction of our minds and reform of our natures so that they produce fruits necessary or useful for human intercourse.”[454]

Judgment.

Judgment shall make a scale of virtues and of crimes, the greatest in either class being that which affects the Republic as a whole; next that which affects other individuals than the agent; a crime committed between two who are in accord is hardly a crime, while there is no crime if the fault remains in the individual—does not proceed to bad example or to bad deed. *Repentance* is to be approved by it, but not set upon the same level as *innocence*;^[455] *belief* and *opinion*, but not placed so high as *deeds* and *work*; *confession* and *admission* of fault, but not as *correction* and *abstention*. It shall not place one who to no purpose mortifies the flesh on a level with one who bridles his spirit, nor compare one who is a useless solitary with another who is in profitable intercourse^[456] with his fellows, nor applaud so highly one who, perhaps unnecessarily, subdues his desires, as another, who refrains from evil-speaking and from evil-doing; not make so great a triumph over one who has healed a base, useless cripple, worth little if any more when whole than maimed, as over another who has liberated his fatherland, or reformed a mind diseased.^[457] The *Roman people* was the type of the best-

governed state, "more bridled and restrained from the vices of incivility and barbarity, more refined and willing for generous undertakings than any other; and as their law and religion were, so were their customs and deeds, so their honour and happiness." How different from the pedants of the Church, who flourish throughout Europe: while saluting with peace they bring wherever they enter in the sword of division, and the fire of dispersion; taking son from father, neighbour from neighbour, citizen from fatherland, and causing other divorces more abhorrent and contrary to all nature and law; calling themselves ministers of one who raises the dead and heals the sick, they more than all others on the earth are maimers of the sound, and slayers of the living, not so much with fire and sword, as with the tongue of malice.[458]

Under the *Scales*, Bruno describes some of the reforms he believes necessary: in courts, offices and honours are for the future to go by merit; "in republics, the just are to preside, the wealthy to contribute, the learned to teach, the prudent to guide, the brave to fight, those that have judgment to counsel, those that have authority to command; in states, the scales represent the keeping of contracts of peace, confederations, leagues, the careful weighing of action beforehand; in individuals the weighing of what each wishes with what he knows, of what he knows with what he can, of what he wishes, knows, and can with what he ought; of what he wishes, knows, can, and ought, with what he is, does, has, and expects." [459]

The scales.

Underlying this cult of humanity one cannot but feel the robust naturalism of the Renaissance, which in Bruno's mind is apart altogether from the mystical exclusive intellectualism of his more characteristic philosophy. It is with man as a natural being, living out his earthly life, and gathering such fruits as may be of kindness and love from his fellow-creatures, that the practical philosophy is concerned. The religion attacked was one that struck at the root of this human love, and made of earth a purgatory for the sake of the uncertain life to come. Hence the emphasis laid on *sincerity*, *faithfulness*, or *truthfulness*, as high among the virtues. "Without it every contract is uncertain and doubtful, all intercourse is dissolved, all social life at an end." Bruno is as rigid as Kant in regard to the keeping of faith; even promises made to the wicked may not be broken. It was "a law of some Jew or Saracen, brutal and barbarian, not of civilised and heroic Greek or Roman, that sometimes, and with certain kinds of people, faith might be pledged for individual gain, and for an opportunity of deception, making it the servant of tyranny and treachery." [460]

Sincerity.

The antipathy of Bruno towards the Jews is to be explained by the same principle of social life and progress; it is not, as Lagarde supposes, [461] an offspring of his hatred towards the Church, regarded as a direct descendant of Judaism. So far as it is not an expression of an unreasoning anti-Semitic wave of feeling, such as occasionally overwhelms some of the European peoples, it may have had three grounds: the reputed avarice of the Jew; [462] his exclusiveness, unsociability;—"a race always base, servile, mercenary, solitary, incommunicative, shunning intercourse with the Gentiles, whom they brutally despise, and by whom in their turn, and with good reason, they are contemned": [463]—or his religion, which appeared to Bruno a corruption of the nobler Egyptian religion. Thus in *Spaccio* [464] the punishment of the children for the sins of the fathers is said to be found only among Barbarians, and first among the Jews, "a race so pestilent, leprous, and generally pernicious that it should be effaced from the earth." [465]

Temperance, as a virtue, is rather the peace of mind that goes with civilisation—urbanity—than the more physical virtue: its opposites are intemperance, excess, asperity, savagery, barbarity. "It is through intemperance in sensual and in intellectual passions that families, republics, civil societies, the world, are dissolved, disordered, destroyed, swallowed up." [466] Again, Bruno's unorthodox standpoint with regard to the vows of *chastity* and of celibacy taken by nuns and priests is part of a healthy reaction towards naturalism from the false sentiment which condemned as unholy whatever pertained to the natural man. The place of *Virgo* is taken by chastity, continence, modesty, shame; the contrasting vices being lust, incontinence, shamelessness. "It is through these," Bruno adds, "that virginity becomes a virtue. In itself it is neither virtue nor vice, implies no goodness, dignity, or merit, and when it resists the command of nature it becomes a wrong, an impotence, a folly, madness express; while if it is in compliance with some urgent reason, it is called *continence*, and has the essence of virtue, because it participates in that courage and contempt for pleasure which is not vain or worthless, but benefits human intercourse and brings honourable satisfaction to others." [467] "The laws of the wise do not forbid love, but irrational love; the sycophancies of the foolish prescribe, without reason, limits to reason, and condemn the law of nature; the most corrupt of them call *it* corrupt, because by it they are not raised above nature to become heroic spirits, but are depraved, contrary to nature and below all worth, to become brutes." [468]

Temperance.

In the third dialogue of the *Spaccio* is a digression on *Otium*, Idleness, and the Golden Age, which had been brought into popularity by the pastoral poem of Tasso, the *Aminta*, and its imitators (e.g. Guarini in the *Pastor Fido*). *Otium* presses its claim to a place in the heavens as being more truly a virtue than solicitude or strenuous effort, to which the place of *Perseus* had been given. Its chief argument is that through it the golden age had been instituted and maintained, by the law of idleness which is the law of nature, while it was through solicitude, with its following of vainglory, contempt of others, violence, oppression, torment, fear, and death, that the age had departed. "All praise the fair age of gold, when I kept minds quiet and peaceful, safe from this virtuous goddess of yours. For their bodies, hunger was sufficient sauce to make a delicious and satisfying repast out of acorns, apples, chestnuts, peaches, and roots, which benign nature administered at a time when such

The Golden Age.

food was the best nourishment for them, gave them most pleasure, and kept them longest in life, which the many artificial sauces that industry and zeal have discovered cannot do.”^[469] Industry had introduced property, and divided up not only the earth, which is given to all its children, but also the sea, and perhaps the air as well; so that instead of sufficiency for all there is too much for some and too little for others. It had introduced an unnatural inequality, and confused together peoples whom nature had intended to live apart, with the consequence that the vices of one race were being implanted upon those of others. The right of the stronger had taken the place of the law of nature, violence that of the peace of nature, which are the law and peace of God.

O bella età de l’oro
 Non già perche di latte
 Sen corse il fiume, et stilló mele il bosco.

* * * * *

Ma ’n primavera eterna
 Ch’ hora s’ accende et verna
 Rise di luce, et di sereno il cielo,
 Ne porto peregrino
 O’ guerra, o merce a’ l’ altrui lidi il pino.

* * * * *

Ma legge aurea et felice
 Che natura scolpi. S’ ei piace, ei lice^[470]

Bruno was no imperialist. Nature seemed to him to have fixed definite boundaries to the extension of the different races, by which the special genius of each was kept pure. In the *Cena* (126. 9) Tiphys and his successors (Columbus, Vespucci, and others are meant, although not named) are said to have “discovered means of disturbing the peace of peoples, violating the natural trend of the genius of countries, confounding what foreseeing nature had distinguished, doubling, through commerce, evil feelings, adding the vices of one race to those of another, propagating new incitements, instruments, methods of tyranny and assassination, which in time, by the natural vicissitude of things, would recoil upon our own heads.”^[471] It was really, he thought, for the advantage of men themselves that the world-regions should be kept as distinct in their usages and customs as they are physically distinct by the natural divisions of mountains and tracts of sea. From region to region, vice and the poison of perverse laws and religions, the materials of discord and extermination, were propagated and disseminated to the suffocation of every good fruit; there were no advantages which could compare with these evils.^[472] It should be remembered that the colonists of the day were the Spaniards, with the corruption and cruelty of whose rule Italians were only too familiar; and their misdeeds were far greater in the new world.

The age of gold, however, of idleness, and peaceful happiness, was far from Bruno’s ideal; the reply of Momus to *Otium* showed that it had not made men virtuous in the golden age any more than the brutes were virtuous now—that men were perhaps originally more stupid than many of the latter; but in their emulation of divine actions and their attempts to satisfy spiritual desires, difficulties had arisen and needs sprung up; through these their minds were sharpened, industries had been discovered, arts invented; and so from day to day out of the depth of the human intellect necessity brought forth new and marvellous inventions.^[473] Thus more and more they advance, through pressing and earnest occupation, from the bestial nature, and approximate more and more nearly to the divine. That injustice and vice increase along with industries is only a corollary of the increase of justice and of virtue. If oxen or apes had as much virtue and spirit as man, they would have the same apprehensions, the same passions, and the same vices. So in men those that have in them somewhat of the pig nature, or of the ass or ox nature, are certainly less wicked, not infected by so criminal vices as more highly developed men might be; but they are not for that more virtuous, unless the brutes also are more virtuous than men, being infected with fewer vices.^[474] In this generous conception of human progress, and of its spur—solicitude, necessity, pain—Bruno is quite at one with modern theories of human evolution; it can hardly be said, however, that he anticipated the evolution theory so far as it involves an identity of origin for human beings and lower animals. The idea that different human beings express different animal types was not a new one. It means in Bruno that such men have animal souls, but this is not because their bodies have reverted to the animal type. It is the soul that moulds the body and gives, in these cases, the animal expression to the face—the look of wolf, or bear, or fox, or serpent. There is no question of a *physical continuity* between animal and man, but there is a *psychical continuity*, since a soul which is that of an animal in one generation may become that of a man in another.^[475] A much nearer approach to the evolution-theory is to be found in the *Cabala*,^[476] where it is said that if a serpent could have its head moulded into that of a man, its tongue widened, its shoulders broadened, arms and hands branching out from it, and, where the tail now is, a pair of legs, it would think, look, breathe, speak, work, and walk just as a man does, for it would be nothing but a man. Or if the reverse process occurred, in a man (*involution*), in place of talking he would hiss, in place of walking he would creep, in place

Progress.

Evolution.

Man and the animals.

of building a palace he would hollow out a hiding-place for himself. This is not, however, because the body of the one had been transformed into that of the other animal, function following structure; the soul with all its qualities is unchanged—it is one and the same in both; the differences are only in the power of expression. A serpent or any other animal might have a higher intelligence than man, yet remain inferior to him through poverty of instruments. If man had not hands, but two feet in their stead, however high his intelligence, family and social life would have been no more enduring with him than with the horse, the deer, or the pig; it would only have exposed him to greater danger and more certain ruin; and, in consequence, there would have been none of the institutions of doctrine, the inventions of discipline, the congregations of citizens, the raising of edifices and other things that represent human greatness and excellence, and make man the invincible superior over all other species. All this is referred not so much to his mind as to his hand, the organ of organs.[477] It is in the development of the hand, also, that modern anthropology has sought one of the chief conditions of human development. It is clear, however, that in these theories there are two positions not distinctly separated: one that the soul gives form to the body, the other that all difference comes from the body, the soul remaining apart, and in its essence untouched by the changes its body undergoes. We shall have to return to this question in the following chapter.

Another digression occurs under *Hercules*,[478] where Riches, Poverty, and Fortune contend for the place of honour that is finally given to Courage or Fortitude. Such personifications of the virtues had been familiarised in Italian philosophy by Petrarca (*Remedium utriusque fortunæ*), but Bruno refers back to Crantor's discussion of the relative value for the soul of Riches and other goods.[479] In our dialogue Riches is decided to be neither good nor bad in itself; it may be indifferently either, according to its possessor: therefore it is to incur neither disgrace nor honour, neither be condemned to Hades, nor raised up to Heaven, but to wander from place to place. It shall be found by no one who has not first repented of his good mind and healthy brain; he must give up, according to Momus, all thought of prudence, "not trusting in Heaven, regarding not justice or injustice, honour or shame, calm or storm, but committing all to chance. As a general rule Riches are to go to the most insensate, the most foolish, careless, silly—to beware of the wise as of fire. Poverty, on the other hand (in inferior or corporeal goods), may be conjoined with riches in goods of the mind, as riches in inferior goods may never be, for no one that is wise or wishes to gain knowledge can ever achieve great things by their means. To philosophy Riches are an impediment, while Poverty offers it a safe and easy road. He will be great who in poverty is rich because he is content; and he is a slave who in riches is poor because he has not enough. Not he that has little but he that desires much is really poor. The friends of *Poverty* are open, the enemies of *Riches* are secret; the poor man by repressing desire may rival Jove in happiness; the rich, ever spreading more and more widely the nets of cupidity, is plunged more and more into depths of misery. *Avarice* is the dark side, the shadow, of both Riches and Poverty, ever fleeing Poverty and pursuing Riches, but ever eluded by the latter, and ever caught by the former; far from Poverty in reality, she is ever close by it in imagination; it is this darkness or shadow that make Poverty and Riches alike to be evil. One may be poor in virtue of *affect* (feeling, emotion) as well as in virtue of *effect* (actual, material want). *Fortune* also is rejected, in spite of her claim to be absolutely just; as all things are ultimately or really one, no part of the world, she claims, should be treated as more worthy or unworthy than another, and fortune regards all equally, or does not respect any particular person more than another, which is really justice!

To the place for which these have striven succeeds *Fortitude*, the servant of the higher virtues: "Constant and brave must be he that administers judgment, with prudence, by the law, and according to truth. He shall be guided by the book in which is the catalogue of the things the brave man ought not to fear, viz.: those which do not make him worse, as hunger, nakedness, thirst, pain, poverty, solitude, persecution, death; and that of other things which, as they make him worse, must be avoided at all cost,—gross ignorance, injustice, infidelity, lying, avarice, and the rest." [480] Beside *Fortitude* may be placed *Simplicity*, [481] between the vicious extremes of Boastfulness on the one hand and Dissimulation on the other, the latter being the less hateful of the two: "sometimes even the gods must make use of it, and to escape envy, reproach, outrage, Prudence is wont to cover Truth with her vestments." Simplicity is pleasing to the gods, for it has in a manner the likeness of the divine countenance, being always the same and unconscious of itself. That which reflects upon or is conscious of itself, makes itself in a sense to be many, to be other and other, becoming both object and faculty, the knowing and the knowable, whereas in the act of intelligence many things concur in one. The most simple intelligence does not know itself, by reflection, because it is absolute, pure light: and again it alone knows itself, negatively, for it cannot be hidden.[482]

The transition from ordinary morality,—the virtue of the everyday life of human society,—to the divine aspiration of the "heroic" soul, is to be found in the virtue of *Solicitude*, and the primary triad of *Truth*, *Prudence*, and *Wisdom*. On the feet of *Solicitude* (Diligence, Endurance) "are the winged sandals of the divine impetus, through which she leaves beneath her the vulgar good, and contemns the soft caresses of pleasures, that, like insidious sirens, try to delay her in the pursuit of the works she seeks." On labour and fatigue she nurses the generous mind,—enables it not only to subdue itself, but to attain the highest state—that of not feeling fatigue, or pain, when fatigue or pain must be

undergone. In noble work fatigue is pleasure and not fatigue to itself, but in other than in such work or virtuous activity, it is not pleasure to itself, but intolerable fatigue. "Be with me" Solitude concludes, "generous, heroic, anxious *Fear*, stimulate me that I do not perish from the number of the illustrious before I perish from that of the living. Before torpor or death take from me my hands, grant that the glory of my works may not be in their power to take. *Anxiety*, grant that the roof be finished before the rain come: that the windows be whole before the winds of treacherous and unquiet winter blow. *Memory* of a well-spent life, thou shalt make old age and death destroy my soul before they disturb it. Fear of losing the glory acquired in my life shall make old age and death not bitter to me, but dear and desirable." The end which this strenuous virtue seeks is that of the intellectual triad placed in the highest part of the heavens by the gods,—Truth, Prudence and Wisdom, which in reality are one and the same.^[483] Truth is the unity which stands above the all of things, and the goodness which is pre-eminent over all things, for being, goodness, and truth are one:—in other words, it is the Eleatic One,—the "implicit universe,"—of the metaphysical works.^[484] It is *before* things as cause and principle, and things have dependence upon it: it is *in* things, as their substance, and through it things subsist: it is *after* things, for through it things are known without error. These three aspects represent metaphysical, physical, and logical truth respectively. What is presented to our senses and may be grasped by our intelligence, is not the highest truth, but only the figure, image, resplendence, or appearance of it. *Prudence* also is both above and in us. It is above as Providence, when it is also truth itself, and there Liberty, Necessity, Essence, Entity, all are one, the Absolute. In us Prudence is the virtue of the consultative and deliberative faculty,—"it is a principal form of reason dealing with the universal and the particular,^[485] has for its maid-servant *dialectics*, and for guide acquired wisdom, vulgarly called *metaphysics*, which deals with the universals of all things that fall within human knowledge."^[486] So too Wisdom, *Sophia*, is at once supra-mundane,—when it is one with Providence itself, light and eye in one,—and mundane, inferior, not truth itself, wisdom itself, but participant in truth and in wisdom,—an eye that is illuminated by a foreign light. The first is invisible, infigurable, incomprehensible; the second is figured in the heavens, reflected in finite minds, communicated by words. The earthly or inferior forms, however, as Bruno makes clear, are of value only for the sake of the higher unity, to attain which is the real end of the philosophic life. "He who pretends to know what he does not know, says Wisdom, is a wanton Sophist: he who denies knowing what he knows, is ungrateful to the Active Intelligence, insults truth, and outrages me, as do all those who seek me—not for myself, or for the supreme virtue and love of that divinity which is above every Jupiter and every heaven,—but either to sell me for money, honour, or other gain, or to be known rather than to know, or to detract from and be able to destroy the happiness of others.... They that seek me for love of the supreme and first truth are wise, and therefore blessed."^[487] Bruno's *Summum Bonum* is therefore *knowledge*, an intellectual comprehension of the All of things, as it is in the supreme Unity or source of the world. It is for the sake of this end of the few, the wise, that the many, the vulgar, and foolish, are to be kept at peace, in harmony with one another, following obediently their higher guides in religion or in the state. There is not in Bruno any more than in Spinoza any sense of the infinite worth, or the infinite pitifulness of man as an earth-born creature of hopes and fears, creeping towards the light, with the clogging darkness behind, groping in childish terror and childish trust, for the hand of a loving, human God. Therefore, although he lived in the midst of the Reformation, its true meaning passed him by.

Truth.

CHAPTER VII

THE HIGHER LIFE

We now turn to the higher moral life, which is at the same time the religious life, of the heroic soul in its struggle towards perfection. This perfection consists in comprehension of the world as infinitely perfect, in the union with God as the source from which the world flows, the spirit in which it lives, and in the Love of God as at once infinite beauty and infinite goodness.

We have seen that there are to Bruno, as to Plato and to Aristotle, two classes of men, the “vulgar” and the “heroic,”^[488] the lower or subject, and the upper or ruling classes: as in each of us there are two principles, a higher, intellect or reason or mind, and a lower, sense and sensual passion. The danger is as great to the world when the lower class attempts to usurp the place of the higher, as it is to the individual soul when passion overwhelms reason. The spread of pedantry, in the universities and in the churches, greater in his time and more menacing to human progress than it had ever been, was an illustration to Bruno’s eye of the results ensuing when lower minds tampered with divine knowledge.^[489]

The heroic soul is raised by the divine spirit within it out of the turmoil of the constant change and vicissitude, to which the vulgar soul is, in common with all living things, subjected. “The beginning, middle, and end, birth, growth, and perfection of all earthly things are from contraries, through contraries, in contraries, and to contraries; and where there is contrariety, there is also action, reaction, movement, diversity, multitude, order, degrees, succession, change.” “There is never any pleasure,” we read elsewhere, “without some bitterness;—nay, if there were not the bitter in things, there would not be the pleasurable, for fatigue makes us to find pleasure in repose, separation causes us to find joy in union, and so everywhere we find that one contrary is the reason of another being desired and pleasing:”^[490] and so it is with pain. None, therefore, are ever satisfied with their state, except the unfeeling or the foolish who have no knowledge of their own ill, but enjoy the present without fear of the future, can find rest in what is, and have no feeling or desire for what might be: “in short have no sense of contrariety, which is figured by the tree of the knowledge of good and evil.^[491]” Ignorance is the mother of sensual happiness and joy; hence “the heroic love (in its beginning) is a torment, for it does not rest in the present, as does sensual love, but feels ambition, emulation, suspicious fear for the future, the absent, the contrary.” Yet the wise man is neither happy nor miserable,—knowing that good and evil are alike relative, alike fading and temporary things, he is neither dismayed nor elated, but becomes continent in his inclinations, and temperate in his pleasures. Pleasure is not really pleasure to him, for he has present to him its ceasing; pain is not pain, for he has by force of thought its termination before him: all mutable things therefore are to him as things that are not.^[492]

Owing to the ever-moving cycle of change, the ordinary soul must of necessity fall back, in the course of the eternal process of its life, to the lowest stage, however high in the scale it may have risen; but this, although an evil for it, does not prejudice the whole, in which all things work together for good. Some few, however, may escape this danger, through becoming united with the eternal Mind or Source.^[493] They then cease to be subject to mutation,—Mind being immutable,—and persist in eternal blessedness and love. For such favoured ones of heaven, the greatest evils of this life are converted into goods, correspondingly great. It is suffering that compels the labour and the striving which lead most frequently to the glory of immortal splendour. *Death in one age makes to live in all others.*^[494]

There are, however, two kinds of *furori* (or inspiration). “In some there is only blindness, stupidity, unreasoning impulse; others consist in a certain divine abstraction by which some men become better in fact than ordinary men. These again are of two kinds, for some becoming the habitation of gods or of divine spirits, say or do miraculous things without themselves or others understanding the reason; these for the most part are promoted to this state from one of rudeness and ignorance: the divine sense and spirit enters into them as into a house swept and garnished, they being void of any spirit or sense of their own. Others being more habituated to or skilled in contemplation, and having innate in them a lucid and intellectual spirit, are moved by an internal impulse and natural fervour, with love of divinity, justice, truth, glory; by the fire of desire, fanned by the breath of purpose, they give edge to their senses, and in the sulphur of the thinking faculty enkindle the light of reason, by which they see further than ordinary men. These come in the end to speak and operate not as vases or instruments, but as principal artificers and agents—the first *have* worth or dignity, the second *are* worthy: or the first are worthy as an ass that carries the sacraments, the second as a sacred thing. In the first we see divinity in effect—we admire, adore, obey it; in the second we see the excellence of our own humanity.”^[495]

Kinds of furor.

The steps towards the highest peak of human excellence are compared, after Neoplatonist example, to the degrees in intensity of light, as we proceed from darkness, in which it is entirely absent, to shadow, then to the colours in their order from black to white, next to the brightness diffused from polished or transparent bodies, the rays outflowing from the sun, finally to the sun itself, in which light *is* most truly and most vividly itself.^[496] First of all it is needful for the soul to turn to the light, “by act of *conversion* to present the light of intelligence to its eyes, so to regain its lost virtue, to strengthen its sinews, to terrify and put to rout its enemies,”—the lower, sense-feelings and passions. The conversion seems to arise as by an act of grace from above; or, to express this

Ascent towards union with the divine.

in other words, the soul or spirit tends towards that with which it has greatest affinity, as the sun-flower tends towards the sun, and this affinity in the human soul is Love.[497] The symbol of love is fire, for love converts the object of love into the lover, as fire is of all elements the most active, the most potent to transform others into itself.[498] It is the divine in man that makes him or impels him to love God as He is in reality, and the goal or aim of that love is to take God into himself, to become one with God. No really divine or heroic love can ever rest satisfied in anything but spiritual beauty. For there are three kinds of love, as there are three kinds of Platonic rapture—the contemplative, the practical, the idle or voluptuous. One from the perception of corporeal form and beauty rises to the thought of the spiritual and divine; another enjoys the vision of beauty for itself, and for the grace of the spirit that is reflected in the grace of the body; while still another enjoys only the material pleasure that beauty provides; the last is the love of barbarous natures, incapable of raising themselves to love that which is really worthy of love.[499]

To the two higher kinds of love correspond the two kinds of beauty—*sensible* and *intelligible*. That in the body which calls forth love—its beauty—is a certain spirituality, which consists not in definite dimensions, “nor in determinate colours or forms, but in a certain harmony and consonance of members and colours.” Corporeal beauty is not, however, true or permanent beauty, and therefore cannot call forth true or permanent love. The beauty of bodies is accidental, “shadowy,” and like other qualities is absorbed, altered, and decays through the change of the subject-body, for the latter frequently from beautiful becomes ugly, without any change taking place in the soul. *Reason*, however, apprehends the more truly beautiful by conversion to that which *makes* beauty in body, the source of the beauty, and that is the soul, which has so moulded and formed it. *Intellect* rises still higher, sees that while the soul is incomparably beautiful above the beauty of bodily things, it is not beautiful in itself, or primitively, otherwise there could not exist the diversity that is found in souls—some being wise, lovable, beautiful, others foolish, hateful, ugly. Hence it must rise to that higher intelligence which of itself is beautiful and of itself is good. That is the One, the Supreme Captain, who when presented to the eyes of the thoughts militant, illuminates them, encourages, strengthens, and leads them to victory in the contempt of every other beauty, and repudiation of every other good. Its presence, therefore, is that which enables us to overcome every difficulty and conquer every force.[500] The Intelligence which is the truest beauty attainable by us, is not yet Divinity itself, but only the highest “intelligible species,” or form, the highest Idea. Divinity itself is the final, the most perfect object of thought and love, not attainable in our present state, in which God cannot become object to us, except through some image.[501] No image of the Divine, however, even the most inadequate, can be abstracted or otherwise derived by the senses, from corporeal beauty or excellence. Such can be formed only by the intellect, and on such the human intellect feeds, in this lower world, until it be allowed to behold with purer eyes the beauty of divinity itself. In a fine simile Bruno describes how one may come to some mansion, most exquisitely adorned, and as he goes about observing now this, now that, is pleased and happy, filled with delight and noble wonder. But if then he sees the living Lord of these beautiful forms, of beauty incomparably greater, he lets go all care or thought of them, intent wholly on this *one*, their source. Such is the difference between the earthly state, when we see the divine beauty in intelligible or abstract forms, derived from its effects, its works, masterpieces, its shadows and similitudes, and the perfect state, when we are allowed to behold it in its real presence.[502] The “intelligible species” of this conception, which Bruno derives from Neoplatonism, are simply the ideas of the “speculative sciences,” which include, however, what would now be called the natural sciences. Human Perfection consists in a form of knowledge, a system of thought, by which the knower becomes one with the mind in which this thought-system originated, the mind of God. Our knowledge—that is, our perfection—can never, however, be complete, since the object, the knowable, can never be perfectly comprehended. But it may be made complete so far as our vision extends; and herein lies a saving clause for the “ordinary” man. Few can reach the goal, but all may run; it is enough that each do his best possible. The generous spirit prefers to fail nobly in the pursuit of the highest rather than to succeed in inferior and baser enterprises.[503] *Acteon* typifies the human intellect in its pursuit of the divine wisdom and capture of divine beauty.[504] The wild beasts whom he tracks down are the “intelligible species” or ideal forms, rarely sought, and rarely seen by those that seek them. His dogs are the thoughts that issue outwards in search of goodness, wisdom, beauty beyond himself. The fate of Acteon—his death under the fangs of his own hounds—represents how the generous spirit, coming into the presence of that highest beauty, is ravished out of itself, is converted into the very prey which it pursued: itself is now the prey of its own thoughts, for it has contracted divinity into itself, has no longer to seek it outside of itself: as love converts into the thing loved.[505] His death means that he ends his life according to the world of folly, of sense, of blindness and of fancy, only to commence the new intellectual life, the life of the gods.[506]

Beauty.

The first step, however, in the desire of the infinitely beautiful is but the beginning of an endless series; the heart goes out on an endless quest, while the intellect cannot but follow. For the intellect cannot rest in any definite or finite idea or object, but is driven ever forwards towards the source of all ideas, the ocean of all truth and goodness. Whatever form may be presented to it and comprehended by it, it judges that there must be a greater above and beyond that. Hence it is in constant discourse and movement, for whatever it possesses is seen to be a *measured* thing, and therefore cannot be sufficient in itself, nor good in itself, nor beautiful in itself. It is not the universe, not absolute Being, but Being “contracted” to this or that nature, species, form, represented to the intellect, and presented to the mind (*animo*). Thus always from beauty comprehended, and therefore measured or limited,—the beautiful by participation,—we progress towards that which is truly beautiful,

The infinite process.

beautiful without any limit or margin.[507] On the other hand,[508] this infinite process is not in vain, for it is not from imperfect to perfect, but a “circular movement about the degrees of perfection, in order to arrive at the infinite centre which is neither formed nor form.” This paradox Tansillo (taking the part of the Nolan) refuses to explain. It probably hints at the idea, as familiar in Bruno as the infinite process itself, that in each form or degree of perfection, the infinite with all its perfection, is wholly present. It is a centre which is at the same time the circumference.

In a subsequent dialogue[509] the object alike of intellectual pursuit and of the heart’s desire is described as a positive or “perfective” infinite. The will cannot rest satisfied with a finite good; but if there is other good beyond, desires it, seeks it, because, as the common saying goes, the acme of one species is the foot and the beginning of the next higher species. The highest good being infinite, it is communicated infinitely, but also according to the nature of the things to which it is communicated. Neither to the universe, *e.g.* as regards mass and figure, nor to the intellect, nor to the heart, are any definite limits fixed; yet the intellect and the heart may still become perfect through or by their object, for that object is not merely a “privative infinite[510]” or potentiality, but a perfective or positive[511] infinite as being itself actuality and perfection. When the intellect conceives truth, or light, the good, the beautiful, within the whole capacity of its nature, and the soul drinks of the divine nectar and of the source of eternal life, so much as its vessel can hold, it is seen that the light (of truth) extends beyond, and that the intellect may go on and on, penetrating more deeply into it. The nectar and the source of living water are infinitely productive; the soul may quench its thirst in it again and again.[512]

Thus the blessed or perfect life for Bruno meant a permanent, continuous absorption of the individual soul in the divine goodness—a permanence or eternity which was also one with the instant of time. There was no greater value at any later moment than at the first union of the soul with its divine object: the soul was thereby removed, once for all, out of the constant flux of things, the incessant renewal and rebirth of the soul throughout the ages, and lifted up into the calm of the eternal and immutable.

Even the heroic soul, however, is, as other souls, on the border line between corporeal and incorporeal nature; in part it tends to rise towards the upper world, in part inclines towards the lower world. If sense ascends to imagination, imagination to reason, reason to intellect, intellect to mind, then the soul is wholly converted into God, and its dwelling-place is the intelligible world. In the contrary direction it descends through conversion to the sensible world, by way of intellect, reason, imagination, sense, and the vegetative faculty. Mind (the highest faculty in Bruno’s psychology:—the intuitive perception of unity with the supreme ideal world) is oppressed by its conjunction with the more material faculties of the soul; knowing of a higher state to which the soul might rise, it despises the present in favour of the future. If a brute had sense of the difference between its condition and that of man, and between the baseness of its state and the nobility of that of man, to which it did not feel it impossible to rise, it would prefer death which should put it on the way to that state, to life which held it fast in its present one. So the soul, compelled by its loftier thoughts, as if dead to the body, aspires upwards. Although living in the body, it “vegetates” there as dead—is present in it so far as animation is concerned, but absent from it in its proper action.[513]

Soul and body.

Thus the heroic soul, although present in the body, is absent from it with the better part of itself, and unites itself in an indissoluble bond with divine things. It feels neither love nor hatred of mortal things, considering itself too great to be the slave and servant of its body: the latter it regards simply as a prison-house within which its liberty is closed in; a snare that holds its wings entangled; a chain that binds its hands; fetters that hold its feet fast; a veil that bewilders its vision. Yet it is neither slave, nor captive, nor entangled, nor chained, nor held fast, bound nor blind, for the body cannot tyrannise over it further than itself allows. It has spirit allotted to it proportionally to its nearness to divinity, since the corporeal world and matter are subject to divinity and nature. So it may make itself strong against fortune, magnanimous against injustice, bold in face of poverty, disease, and persecution.[514]

The soul of man, in Bruno’s psychology, as in Aristotle’s, performs a double function:—“the one is to vivify and actuate the body, and the other to contemplate the higher world. It has a receptive faculty towards the spiritual, an active faculty towards the corporeal. Body is as dead, a thing privative towards the soul, which is its life and perfection, and the soul is as dead, a thing privative to the higher illuminating intelligence from which its intellect derives both its tendency or nature, and its actual form, its realisation.”[515] The soul is not locally in the body, but is related to it as intrinsic form, and as extrinsic giver of form: moulding the members, and giving shape to the composite result from within and from without. “Body is in soul, soul in mind, and mind either *is*, or is *in* God, as Plotinus said.”[516] The dualism of nature and divinity, of corporeal and spiritual, intellect and sense, permeates the ethical as it permeates the earlier philosophical thought of Bruno: nowhere is the Neoplatonist effort to overcome the dualism inherent both in Plato and in Aristotle less effective than here. Thus the body remains—in spite of the continuity seemingly maintained between the highest and the lowest of the emanations from the supreme, or the identity asserted between sense, imagination, reason, intellect,—the chief hindrance to the aspiration of the soul. For the body is in continual movement, change, alteration, and its faculties are conditioned by its inherent nature, its operations by its faculties. “How then can immobility, subsistence, entity, truth, be understood by that which is always different from itself, always acting and becoming in different ways? What truth, what representation can be depicted or impressed when the pupils of

The soul.

Distraction of the body.

the eyes are dispersed into water, the water into vapour, the vapour into flame, the flame into air—that into other things and again other, the object of sense and sense-knowledge passing endlessly through the infinite cycle of changes?” Thought and passion take their character from their object, or the sense-data on which they are based: but “that which has always before it now one thing now another, now in one way now in another, must necessarily be quite blind in regard to that beauty which is always one, and in one manner, which is unity itself, entity, identity.”[517]

Into the very life of the generous soul there enter, accordingly, the contrarieties by which on a lower plane the soul is governed:—“the skilfulness and art of nature cause it to faint with desire for that which destroys it, to be content in the midst of torment, to be tormented in the midst of all content. For nothing derives from principles of peace, but everything from contrary principles, through the victory and dominance of one side of the contrariety. There is no pleasure of generation on one side without the pain of corruption on the other; and the things that are becoming and those that are decaying are conjoined in one and the same composite being. The sense of joy and the sense of sorrow go ever together; it is called joy rather than sorrow if the former predominates and has greater force to solicit the sense.”[518] The life in death of the more divine soul is only an extreme instance:—“it is the death of lovers from an extreme of joy, the Cabalist *mors osculi*, and is at the same time eternal life, such as man may have potentially, *in disposition*, in this world, but actually, *in effect*, in eternity alone.”[519] Again it is the contrast of infinite desire and finite power:—“the weakness of the human mind which is intent on its divine enterprise, and suddenly is engulfed in the abyss of incomprehensible excellence. Sense and imagination are confused and absorbed, the soul can neither go forward nor backward, nor know where to turn, but loses its being just as a drop of water vanishes in the sea, or a little vapour thins out and loses its proper substance in the spacious immeasurable air.”[520]

As the height of our intelligence, so is the depth of our love or passion; the higher, *i.e.* the more comprehensive, the object of knowledge, the more absorbed become feelings and emotions in its contemplation.[521] The most complete absorption is that of the heroic mind in its infinite and all-comprehensive object. That is not perfect divine heroic love which feels the spur or the bridle, or regret or grief for any other love; but that which is entirely without sense or feeling of other passions. It is so deep in its delight that nothing can displease or divert it or cause it to stumble in the least, and this is to reach the highest blessedness in our present state—to have pleasure without any sense of pain.[522] The loss of sense is caused by the absorption of the whole being in virtue, in the truly good, and in felicity. Regulus, Lucretia, Socrates, Anaxarchus, Scaevola, Cocles, are instanced as noble human beings who had no feeling or sense of the greatest tortures, or what would be such to baser human natures.[523] “A keener joy, or fear, or hope, faith, or indignation, or contempt, turns the mind away from any present, less vivid, passion.” “One who is more deeply moved by the sight of some other thing, does not suffer the pangs of death. The truly wise and virtuous man, not feeling pain, is perfectly happy, so far as the present life admits, at least in the eye of reason.”

Intelligence and love.

In its aspiration the soul need not go beyond itself, need only enter into the depths of its own mind (*mens*); “for this it is unnecessary to open the eyes wide upon the heavens, to raise aloft the hands, to wend one’s way to the temple, to intone to the ears of idols, that one may best be heard; rather we should enter into the innermost heart of ourselves, for God is near to us, with us, within us, more truly than we are in ourselves; being soul of souls, life of lives, essence of essences.” Divinity is not more nor less present in the other worlds than in our own or in ourselves.[524] Therefore the heroic soul withdraws from the many, neither hating them nor seeking to be like them, associating only with those whom it may make better, or who may make it better; but aiming ever to be self-sufficient in its own wisdom. “The soul must come to the point when it no longer regards but despises fatigue, and the more the contest of passions and vices rages within, the struggle of vicious enemies without, the more it must aspire and rise, and pass, with one breath (if it may be) over this mountain of difficulty. Here there is no need for other arms or shield than the grandeur of an invincible mind, the endurance of a spirit which maintains the even tenor of its life, proceeds from knowledge, and is regulated by the art of speculating upon things high and low, divine and human, in which its highest good consists.”[525]

Aspiration.

To the love in the human soul there corresponds love in the divine nature, because love is of the essence of divinity. It precedes, in the mythology of the ancients, all the other gods. Hence there is a natural instinct or tendency of all things towards the beautiful and good. Love is that by virtue of which all things are produced, which is in all things, and is the vigour of all things; by its guidance souls rise to contemplation, by the power of flight it inspires, the difficulties of nature are overcome, and men become united with God.[526] To see God is to be seen by God; to be heard by divinity is to hear the voice of divinity; to be favoured by its grace is the same thing as offering oneself to it. The divine potency that is wholly in everything does not offer nor withdraw itself except through the conversion of the other, its object, to it, or aversion from it.[527] To love God is to be loved by God. It is only through love, again, that we can approach the inmost nature of God; we cannot reason or even think of the divine without detracting from it rather than adding to its glory.[528] To think of God is to limit Him, and, therefore, as we have seen, every conception of Him is inadequate: the deepest, the highest knowledge of divine things is by way of negation, never by affirmation. For the divine beauty and divine goodness can never fall within our understanding (our conceptual knowledge), but are ever beyond and beyond in absolute incomprehensibility. No finite intelligence ever perceives the substance of divinity, but always its similitude, its image; even the highest intelligences are, in the language of the schools, not *formally*, but only *denominatively*,

Love of God.

gods, or divine,—divinity and the divine beauty remaining one and exalted above all things.^[529] Being itself eternal, unchangeable, the divine truth reveals itself to the few to whom it is revealed—not as in the physical sciences, which are acquired by the natural light of sense and reason, proceeding from the known to the unknown, in successive stages, but—suddenly and at one stroke. There is no need of expense of time, laborious study, active inquiry, to secure it; but it enters into us as readily as the solar light is present, without lapse of time to him who turns to it, and lays himself open to receive it.^[530] When the soul is thus wholly turned to God—to the Idea of Ideas—the mind is lifted up to the unity above essence, and becomes all love, all simplicity and unity. The soul is permeated at once with the desire or love of the divine beauty in itself, “without similitude, figure, image, or form”—a desire or love which is its own realisation.

CHAPTER VIII

POSITIVE RELIGIONS AND THE RELIGION OF PHILOSOPHY

The hostility which the Italian and some of the Latin writings of Bruno showed towards the positive religions of his day, alike the Catholic, the Reformed, the Jewish, and the Mahomedan, had two grounds: his belief that religious or sectarian strife was the chief cause of the evils of war and civil discord that were rife throughout Europe, and the fact that one and all of these Churches claimed the right of limiting thought as well as of dictating practice, and in their exercise of this right formed an unendurable barrier in the way of human progress. Of the Roman Catholic Church, to which all his life Bruno belonged in spirit if not in outward conformity, he never expressly denied any of the essential doctrines, as he maintained before the Inquisition at Venice. On the other hand, he admitted that he had occasionally made indirect criticism of these doctrines, speaking or writing "philosophically," not "theologically." To the doctrine of the Trinity, for example, he had given a rationalist, half-mystical interpretation, seeing in it a figure or metaphor of the coincidence in God of the three highest principles—Mind (the Father), Intellect (the word, the Son), and Love, the creating, vivifying force of the Universe (the Comforter or Holy Spirit). It is quite clear that he did not accept as "philosophically" true the distinction of Persons, or the special divinity of Christ. Only once, perhaps, does he write seriously of Christ as the Son of God, and that in one of the posthumous works, the *Lampas Triginta Statuarum*.^[531] "Charity is the most perfect and consummate harmony, by which the soul in us becomes so harmonious in itself that it is attuned both to God and to all men equally, not only to friends but even to enemies; to this perfection we are drawn, impelled, invited by the Son of the almighty God, to raise us up to the likeness of the Father, 'who maketh His sun to rise upon good and evil, and sends His rain upon the just and the unjust,' uplifting us from the savage condition of life common to brutes and to the uncivilised, who love their friends and neighbours, but hate strangers and enemies." On the other hand, this very law is elsewhere spoken of as coming not from the "evil spirit or genius of any one race," but from God, the Father of all, as being in harmony with universal nature, and as teaching a general philanthropy; "that we should love our very enemies, not be like brutes and barbarians, but transform ourselves after the image of Him who makes His sun to rise upon good and evil, and makes the rain of His mercies to fall upon just and unjust. This is the religion which I observe, as beyond all controversy, and above all disputation, both from the conviction of my mind, and in accordance with the custom of my fatherland and race."^[532]

What Bruno rejected in Christianity was the whole mass of doctrine which suggested a miraculous or supernatural interference with the order of nature, for the benefit either of a particular person, or of a particular race. That is the nerve, for example, of his satire upon the popular idea of Providence in the *Spaccio*.^[533] There Mercury, on one of his visits to Sophia, relates a number of things he has to see carried out, by the order of Providence, about the little hamlet of Cicala. They are none of the cleanest—the number of melons that are to ripen in Franzino's garden and that are not to be gathered till over-ripe, of jujubes that are to be picked from Giovanni Bruno's tree, that are to fall to the earth, or that are to be eaten by worms; how Vasta, in curling her hair on her temples, is to overheat the iron and burn fifty-seven of them, but is not to scorch her head—and so on. These unpleasant details, however, are only a prelude to a philosophical conception of the divine action. God, it is said, does not provide for this and that individual as occasion arises.^[534] He "does all things without deliberation, anxiety, or perplexity: provides for innumerable species and an infinite number of individuals, not in any order of succession, but at once and all together: He is not like a finite agent, doing things one by one, with many acts, an infinite number of acts for an infinite number of things, but does everything, past, present, and future, with one simple and unique act."^[535] So the knowledge of God is simple, containing implicitly in itself all things that are or happen in the extended universe (the *explicate* unity). It is only to our confused vision that this divine government does not appear just and holy. Mercury advises Sophia to put more strength and warmth into her prayers, for to the mind of the infinite the small is as important as the great! "The least things are just as much a care to the gods as the principal things, for the greatest and chiefest cannot subsist without the least and lowliest." The minutest trifle in the order of the universe is important, for great things are composed of little, little things of least things, and these of atoms and minima.^[536] The act of the divine knowledge is the substance of all things: all are therefore known, ordained, foreseen. "Divine knowledge is not as human, which comes after things, but is before and in all things, and if it were not so, things could not be causes or agents, either proximate or secondary."^[537]

Thus the order of nature is fixed and eternal, ordained and foreknown from all time. We have seen that Bruno rejected the superstitious idea that comets and other heavenly wonders had a supernatural meaning; and that he found the truest signs of divinity in the orderly course of nature.^[538] Miracles he explained either through imposture or through sympathetic magic. Along with these he rejected also what may be called the morbid side of mediæval Christianity—its constant dwelling upon the physical, sensational aspects of Christ's life, sufferings, and death,^[539] its appeal to the hysterical in man. Against a religion of incoherent personal emotion and brute ignorance, he would set one of humane love and of reasoned knowledge. The chief value of the New Testament, in his eyes, was its preaching of "the Gospel law of mutual love," which the tyranny of Rome had violated.^[540] The religion to which he gave his adherence was that which raised the dead, healed the sick, gave to the poor; not the contrary form to which the Inquisition had brought the Church in Catholic lands.

With great boldness Bruno drew from his conception of the Infinite the consequence that there can be no action of the finite upon the infinite, no change or effect in God produced through man. A practical corollary of this was the argument for freedom of thought. The virtue of *Judgment*, in the *Spaccio*, has entrusted to it the defence of the true law, and the removal of unjust or false laws, dictated by enmity to the peace and happiness of the human commonwealth. It shall kindle and fan the appetite for glory in the human breast, as the only sure stimulus for inciting men to the heroic deeds that increase, maintain, or strengthen republics. But it shall not pay heed to what men *imagine* or *think*, provided their words and deeds do not corrupt the peace of the realm. Deeds are its only concern, and it has to judge the tree, not by the fineness, but by the goodness of its fruits. Heaven is not interested in any way in what does not interest man; it is moved and angered, not by anything done, said, or thought by men, except in so far as the welfare of republics is endangered. Gods would not be gods if they were either pleased or displeased, grieved or delighted, by what men did or thought; they would be more needy than men, would be as dependent on men as men are on themselves for utility and profit.^[541] The gods are beyond all passion: they have *active* anger and pleasure only, not passive. Therefore they do not threaten punishment or promise reward for good or evil that results in *them*, but for that committed on peoples and in the human societies which they foster by their divine laws and statutes, since human laws do not suffice. The gods do not seek the reverence, fear, love, worship, or respect of men, for any other end or utility than that of men themselves. Glory cannot be added to the gods from without; they have made their laws not to receive glory but to communicate glory to men. The sole sphere of justice is the moral actions of men with regard to other men; inward sins are sins only so far as they have outward effect, and inward justice is not justice without outward practice.^[542] In the *Cena* Bruno had already made practical use of this principle in maintaining that the Scriptures teach not science, but an ideal of conduct, and therefore that any argument from them as to the actual constitution of the world is devoid of compelling force, while, on the other side, no scientific theory or hypothesis can be ruled out simply because it is contradicted by any statement in the Scriptures. They were written, not in the service of our intellect to instruct us in philosophy, but for the grace of our mind and heart, ordaining by their laws what should be our behaviour in the moral life. The Scriptures were written in the language and adapted to the intelligence of the vulgar, the people of the time. "A historian making use of words which the ordinary man could not understand, would be absurd; and still more so would be one who desired to give to a whole people a law and model of life, if he were to employ terms which he alone or very few could understand, and should waste time over matters indifferent to the end for which the laws were ordained. For this reason Alghazel said that the function of the books of the law was not so much to probe the truth of things, or speculation, as to promote good customs," and to provide for the welfare of republics and of humanity. To use the terms of science where there is no need, is to ask that the vulgar, the foolish many, from whom only conduct is required, shall have a special comprehension,—to ask that the hand shall have the eye, whereas it is not made by nature to see, but to work, and to obey the eye.^[543]

Man and God.

The Bible,—not science but morality its aim.

The revelation of the Scriptures is accordingly reduced to that of a moral ideal, to be enforced upon the ordinary man by the threat of future punishment and promise of future reward; but it is an ideal which the wise man would acquire by the light of reason alone, and which he would pursue for its own sake.

On the other hand, the ceremonies and worship of the Church were never attacked by Bruno, nor did he ever place himself in open hostility to it; while he submitted, formally at least, to the rites of the Protestant churches in Geneva and Helmstadt. The grounds of this outward conformity may have been various: Bruno had no interest in speculative theology, and probably kept an open mind towards the prevailing dogmas and the ceremonies that symbolised the truths contained in them. He believed with Pomponazzi, and others after him, that religion is a good thing for the many, the foolish and ignorant of the world, while knowledge or philosophy takes its place with the wise. The former must be governed by laws which they have blindly to obey, hence the supernatural sanction required; the latter pursue the true good without this stimulus, by virtue of reason. But for the sake of the many, the few must conform in outward practice with the religion of their state.^[544] Brunnhofer goes so far as to see in this the idea of Lessing, that religion is a means whereby men are gradually educated upwards to a true knowledge of God,—leading them from the state of darkness and savagery to that of moral behaviour, at which point only the full light of science and philosophy takes the place of religion.^[545] There was a religion, however, for the few as well as for the many, for the wholly civilised as well as for the semi-barbarians of Europe,—the philosophical religion of the *Heroici Furori*. Another reason for his conformity was that Bruno regarded the historical religions as allegories, or metaphors, of truth. Not that it was for every one to say what was metaphorical merely, what truth or fact: in the hands of Jews, Christians, and Mahomedans, and the many sects of each, the same Scripture met with as many interpretations as the number of the sects.^[546] The interpretation of the divine words, uttered by inspired prophet or poet,—for the divine inspiration was not given at one place or one time only,—was again the work of the wise few.

Bruno's own leaning was towards Rationalism,—as in his interpretation of the Trinity, of Creation, of the Incarnation, of Immortality, of Providence.^[547] In this he was only following Lully and Nicolaus of Cusa, who also "demonstrated" some of the deepest of Christian doctrines, interpreted in their own way. Yet Bruno was by no means a thorough Rationalist: there remained always a sphere within which Faith only was available, to which neither reason nor intellect could penetrate. We remember that he ridiculed Lully for attempting to demonstrate some of the

particular doctrines which “are revealed to the worshippers of Christ (*Christicoli*) alone, are contrary to all reason, philosophy, other faiths or superstitions, and are capable of no demonstration, but admit of faith only.”^[548] It is improbable that any ironical meaning should be read into the words; for the distinction between faith and knowledge or science, between theological and philosophical discussion, between the supernatural light and the light of nature or reason, occurs again and again, not only in Bruno’s replies to the Inquisitors of Venice, but in the published works. Here and there he deprecates the taking of his statements, should they conflict with or tend to weaken the accepted faith, as “assertively” made, and claims, like Copernicus, the right of arguing for any thesis which is “more in harmony with our sense and reason, or at least less out of harmony with them than the contradictory thesis,” however high the authority of the latter may be.^[549] Discreet theologians would fix no limit to natural reasonings, however far these went, provided they did not determine against the divine authority, but subordinated themselves to it.^[550] Even the *Heroici Furori* disclaims any supernatural reasoning or revelation. “If there is another order, above the natural, which either destroys or corrects the latter, I believe in it, and may not dispute about it, for I do not reason in any other than a natural spirit.” He is dealing with Philosophy, not Theology.^[551] In other words, Bruno refuses to dogmatise, just as he condemns dogmatism in others; philosophy or science should be allowed to pursue its own course, irrespective of religion, and untrammelled by the Church, so long as it does not attack the authority of the Church, and thereby weaken the forces that make for peace and harmony among men.^[552] Short of that, entire freedom of thought should be allowed. Sometimes it might be well that the wise and heroic, as well as the others, should submit and humble the light of reason received from God, “the mark of divinity hidden in the substance of our nature,” if some higher light forbid or warn. But,—“In matters of philosophy at least, by whose free altars I have taken refuge from the threatening waves, I shall listen only to those doctors who bid us not close the eyes but open them as widely as we may.”^[553] It has been suggested that Bruno, like many others who were unstable in the Church, made use of the subterfuge of the twofold truth;^[554] in other words, that he professed to disbelieve theologically what he accepted as philosophical truth: or that he held one and the same proposition to be *true* to sense and reason, *i.e.* to harmonise with all other “natural” knowledge, and yet to be *false* to faith, *i.e.* inconsistent with revealed truth. But no theologian denied more strenuously than Bruno, in spite of occasional lapses, the possibility of two kinds of truth. There were indeed two kinds of *evidence*: “one from the light of our own senses and rational inference, such as we require in speculative sciences, in the arts, and in practical life, where true and false, good and evil, are apprehended by human reason and natural light;” the other, from light of a foreign, namely, a divine source. For as God neither deceives nor is deceived, and is not envious, but good in the highest degree—is indeed truth and goodness itself; so, when he speaks to us of occult things, of mysteries, it must be evident that everything he proposes for our belief is true, and that everything he proposes for our doing is good. But God is also the Author of nature, of our senses, of our eyes, and of that truth and evidence which is in them and according to them; truth does not contradict truth, goodness is not opposed to goodness. The word of God that is spread through the parts of nature, His hand and instrument,—for Nature is either God himself, or the divine force manifest in things,—is not opposed to the word of God, from whatever other part or principle it springs.^[555] There could be no clearer assertion of the right of philosophy and science to pursue their own way in the discovery of truth. Nothing revealed from above can conflict with truth acquired by the discursive, slow-moving human reason, nor on the other hand can any real truth arrived at by science ever contradict the pure, genuinely-revealed, word of God. The sphere of faith is separated from that of reason; faith follows the authority of revelation, is an infallible certainty equal to, if not greater than, that of sense-knowledge and the intuition of first principles. Revealed truths are outside the sphere of sense and reason, not, however, as opposed or contrary to the truths belonging to that sphere, but as above them. While *philosophical* faith enables us to act according to reason and human nature, guiding us by principles innate in ourselves, to the perfection of our *natural* condition, *theological* faith leads us by supernatural principles to a *supernatural* end, to become formed in the likeness and in the knowledge of God.^[556] Neither must we call to the bar of reason what is above reason, summon before our tribunal “cases” of eternity,^[557] nor on the other hand must faith be allowed to prejudice the discovery of truth by natural methods: if so, it becomes a danger and a snare.^[558] Bruno was therefore a Rationalist only in a limited sense: while he claimed for the philosopher entire freedom of interpretation of religious dogmas or legends, the interpretation was to be governed not by the facts of ordinary knowledge, but by the mystical intuition of divine truth, given, in inspired moments, to the heroic soul. There were two types of rationalism in mediaeval philosophy—that of Averroes, which sought to supplant the positive religions by a religion of philosophy, and that of Scotus Erigena, which aimed at upholding popular faiths while allowing the philosopher freedom of thought in interpreting the doctrines these faiths involved. Bruno’s rationalism is clearly of the second type, although personally he disliked all prevailing religions for the reasons already given.^[559] All positive religions expressed for him one and the same truth, some more, some less adequately,—that the supreme end of human activity is the union of the soul with God, whereby it becomes one with God and is raised above the sphere of sense and reason, above nature, out of the ordinary cycle of human life and human death. That which of all others most nearly approached his ideal was the half-mythical religion of the Egyptians, from whom indeed he believed the later religions, as well as the earlier philosophies, to have been inspired. The Egyptian worship of the gods in the form of living animals was symbolic of the truth that God is in all things: “Animals and plants,” says Jupiter in the *Spaccio*, “are living effects of nature, and nature is nothing but God in things. Diverse things represent diverse deities, and diverse powers.”^[560] God is in all things, but not fully expressed in each, “in some more, in some less excellently,” in

Egyptian religion:
Animism.

some one divine attribute or power predominates, in some another. Thus the viper or the scorpion represents *Mars*, the cock or the lion the *Sun*, because of their greater affinity, respectively, with these deities, or rather with the divine powers which the deities embody. For as divinity is communicated in a divine scale downwards to nature, so from the light that is reflected in natural things we may rise to the divine life that is above them. It was on these sympathies between animals, plants, metals, on the one hand, and the various attributes of divinity on the other, that genuine magic and divination depended. The *Magi* ascended by the same scale of nature to the highest divinity, by which that divinity itself descended to the least of things, in its self-communication. Their ceremonies were not vain imaginations, but living voices that reached the very ears of the gods. "These wise men knew God to be in things, divinity to be latent in nature, acting in and scintillating diversely from diverse subjects, and making them to participate in itself, as in its being, life, and intelligence."^[561] Of Jupiter, Venus, and the rest is said what Bruno no doubt thought of Christ, and other founders of religion, that they had been mortal human beings. What men adored was not Jupiter, as a divine being, but divinity, as expressed in Jupiter: in this or that man were worshipped the name and symbol of a divinity which in their birth communicated itself to men, and with their death was thought to have completed its work and to have returned to heaven.^[562] But divinity is communicated not only through these divinely chosen human vessels, but through earth, and sun, and moon, the planets, the stars, and all that is in them: one divinity under innumerable names, according to the innumerable modes in which it is diffused. Endlessly varied also are the methods by which it must be sought, under conditions appropriate to each thing, while it must be honoured and worshipped with endlessly different rites, because the kinds of favour we seek to obtain from it are beyond number. Later religions had transformed for the worse what to the Egyptians was merely a fable or metaphor, by which a mystery above the reach of sense was expressed, or presented to the mind in a sign or symbol.^[563]

How Bruno understood the relation of the finite human soul to the divine mind, or to the soul of the universe, it is not easy to determine, and it is doubtful whether he ever made it clear to himself. Men, as natural beings, enter into the determinate order of *Nature*, which, as we have seen, is the divine power that moves matter to life. This divine power is the soul in all things, everywhere "one mundane spirit, wholly in the whole and in every part of it, producing all things in each according to the conditions of matter, time, and place." Men, for example, are not descended from one parent only, but have come to life in the ordinary course of nature, in different places and at different times; hence the difference between the races.^[564] We have seen that Bruno also reverts repeatedly to the idea that various men present in their expressions various animal characters, which are an index to their inward nature, and at the same time point to a transition from a previous or towards a future state.^[565] And again it was shown how animals differed from men not necessarily in degree or quality of mind, but only in the outward organism through which alone the mind could express itself. It is clear then that man should have no higher place than any other animal, should stand no nearer God than they; yet in a sense he does, for the human state appears to be the only one from which the soul may raise itself out of the incessant flow of earthly vicissitude, and enjoy the calm of eternal intellectual union with God.^[566] The soul of any animal (or plant?) may in time, however, take the body of a man, when this outlet is given to it, just as that of a man, should he refuse his opportunity, may sink back, and indeed must sink back, to the animal state, in the never-ceasing cycle of change. But what precisely is this soul that passes from one body to another, perhaps from one star to another? In one passage we read that as in corporeal matter the body of the ass does not differ from that of the man, so in spiritual matter the soul of the ass remains the same as that of the man; the soul of either is not different from that which is in all things, *i.e.* the soul of the universe.^[567] We should then have to assume that it is *matter*, not the form or soul, that differentiates individuals. According to the differences of the organised bodies are the souls that are in them; or, it is one and the same soul which constitutes the vital and cognitive principle in different animal bodies, and in different "worlds" or stars. The individual human and animal souls would be merely modes of the one earth-soul, just as the different star-souls would be merely modes of the one soul of the universe, the first and highest emanation of divinity. The immortality of the individual soul would mean accordingly its reabsorption, at the close of its bodily life, into the eternal; but it would be impossible then to ascribe any continuity or identity to the souls of two beings which succeed each other in nature. This impersonal immortality is that which is most prominent in the Italian dialogues; it gives place, so far as prominence is concerned, to quite another standpoint in the later Latin works. Thus we find in the *Causa* the comparison of the presence of the spiritual in matter to that of a voice in a room: it is wholly in the room and in every part of the room, yet it is only one utterance that is so heard in the different parts.^[568] It might be added that the different degrees of perfection or of divinity in different things would correspond exactly with the differences in the intensity, vividness, of the sound in nearer and more distant parts of the room. As matter itself is ultimately one with spirit,^[569] the outcome of this theory is an extreme Pantheism; especially as in the *Causa* the transcendent Unity, elsewhere distinguished from the soul of the universe, is disregarded. Divinity constitutes both existence and essence of all things, and all things are ultimately one—God, in whom individual beings have their reality, and in whom each is one with all other beings. "We have not to look for divinity at a distance from us, for we have it with us, more truly intimate to us than we are to ourselves"; and so with all other finite things.^[570] It has been shown also that death from this standpoint is merely the dissolution of a composite thing into its immortal elements, spirit and matter;^[571] death is a change of "accidents" to the substance (*i.e.* of qualities, conditions), never a change of substance itself.^[572] Not only we, but all other substances, spiritual and corporeal alike, are beyond reach of death; but as all

The finite and the infinite.

substances are ultimately one, this does not mean a peculiar, personal immortality for each of us as separate beings.

It follows also from this aspect of Bruno's philosophy, that as all things are divine, so all are good. The forms of all living things—men, animals, metals, even those of deformed creatures—are beautiful and perfect in heaven (*i.e. sub specie aeternitatis*).^[573] All things being subordinated to the will of the best, everything is good, and tends towards good; the contrary is only apparent when we refuse to look beyond the present, as the beauty of a building is not manifest to one who sees only a part of it, a stone, a piece of cement, a partition wall, but is clearest to one who can see the whole, and is able to compare part with part.^[574]

Optimism.

But there is another aspect of Bruno's theory of the relation of the finite individual soul to the universal spirit, according to which every finite thing has an infinite worth from the very fact of its existence as a member, or part of the universe. It is in this phase, later in time than the other, but never completely dissociated from it, that the real contribution of Bruno to the history of philosophy appears.

The worth of the finite individual.

It is foreshadowed in the *Heroici Furori*,^[575] where the pursuit of an infinite object by a finite intelligence is justified from the infinite potentiality of the latter, as eternal and unlimited in its capacity for delight and blessedness. The infinite desire is itself a pledge of its fulfilment in an eternal life.^[576] The individual, finite as it is, must realise in itself the whole nature of the universe to which it belongs; each thing, each substance or monad, realises in the course of its life all other possible existences. Each takes on successively all possible forms, just as at every moment all possible forms are actually realised in the universe as a whole. Each thing, and every part of each, present to us the "similitude," the image of the universe. It is precisely the thought which afterwards loomed so largely in the philosophy of Leibniz, that each monad is a mirror of the universe. The *transmigration* of the earlier philosophy appears in a far nobler light in this phase. The soul of man does not change in itself as it passes through its innumerable forms; now it is endowed with the "instruments" or members of the human body; anon it will take up the members of another body; "for the soul which has now the bodily organs of a horse there await the bodily members of a man and of all other kinds of being, in regular series, or in confused order; the death of the present members has no bearing upon the future life and its innumerable forms. The soul would not suffer if this were known to it; the wise soul does not fear death, sometimes desires it, and goes to meet it. Before every substance lies eternity for duration, immensity for place, omniformity for realisation."^[577] The soul is not limited to the earth alone, but has the infinite worlds before it, for its dwelling-place. It is owing to this individual (indivisible, therefore unchanging) substance—the soul—that we are what we are; about it as a centre there occur in each life continuous "massing and unmassing" of corporeal atoms, through which the changes of form are brought about. "By birth and growth the spirit-architect expands into this mass of which we consist, spreading outwards from the heart. Thither again it withdraws, winding up the threads of its web, retiring by the same path along which it advanced, passing out by the same gate through which it entered. Birth is expansion of the centre, life consistency of the sphere, death contraction to the centre." It is the soul that gathers about it, groups and vivifies the atom-mass; and the strongest argument for its immortality is that it cannot be of less value, of inferior condition, than the atoms themselves of which it avails itself to its own ends, and which are in their nature imperishable.^[578] Each soul exists apart in its own unity and individuality; the soul of the universe does not impart anything of itself to the souls of its members.^[579] The hierarchy of souls is not a scale of beings within beings, but a multitude of realities, co-existent to all eternity, the *Monas Monadum* at their head, representing perfectly, completely, at every moment (*i.e.* timelessly), the reality of all the others, yet separable from them. Of the others *that* is higher which knows more perfectly, and in closer unity—that is, more adequately—the universe to which it belongs. Thus there is the daemon or soul "which is wholly in the whole extent of the life of *the earth*, by the life of which we live, and in the being of which we are;" above it is the individual soul or substantial nature which is in the wider extent of the *solar system* to which the earth belongs; above it again the soul of the whole system of the *universe*; and highest of all the mind of minds—*God*, the one spirit filling all things wholly.^[580]

So in the *Lampas* the *Intellectus primus* is said to be separable from particular finite intelligences. It does not belong to their substance: it works in them, but not as a part of them. It does not gradually leave the being to which it has presented itself when that begins to decay, but simply ceases to operate, just as it comes also *suddenly* to each, if at all.^[581]

It follows that each of the lower monads is so far imperfect that it is never at any one time all that it has the possibility of being; the eternal essence of humanity, for example, the truth of humanity, its ideal, is realised not in any one individual, but only in the species as a whole,^[582] and this is true of the perfection of every other species. But Bruno's optimism surmounts this difficulty. The evil, the imperfection, is so only to the individual, and in that particular phase of its life. Each thing has a double tendency and a double striving—to remain in the state in which it is, and to press beyond that to realise new forms. But each thing has in itself the nature of the whole—is therefore in its inmost nature perfect. It is imperfect only in its explicit nature—on its outward side. The striving after new life is due to the felt conflict, or want of harmony, between what it has in it to become—its inner self—and what it has actually become, the limited form in which it appears. On the one hand evil is necessary for good, for were the imperfections not felt, there would be no striving after perfection; all defect and sin consist merely in privation, in the non-realisation of possible qualities. "It would not be well were evil non-existent, for it makes for

the necessity of good, since if evil were removed the desire of good would also cease.”[583] In its whole life, however, the soul will realise all good, and therefore is only *per accidens* imperfect. On the other hand, however mean in itself at any moment, it is a necessary part of the whole, and therefore, relatively to the whole it is good. “If we look to the order of the universe it will appear that every action and effect is good by way of necessity, for even the things which appear the most trifling and sordid are parts of greater and more noble things, as the formless are parts of the formed, the least are necessary elements of the great, the great of the greatest; and as the less cannot subsist without the least, so neither can the greatest without the great. All beings, therefore, of whatsoever nature, are good, if they are rightly considered, not less good than greater things, if we take into account the fact that the goodness of the whole depends on the goodness of its parts.”[584]

Every part, every individual in the universe, differs from every other; each has its own inalienable individuality by which it stands out from all others and is *itself*. So far was this principle carried by Bruno that, as we have seen, he denied that any body could ever occupy the same place twice; the planets moved not in circles or regular paths, but ever in spiral course, so that at each moment their places were other than at any prior or later moment. No two circles, no two lines in nature, were ever exactly equal; hence there was never a perfect circle nor a perfectly straight line. The principle is not at all an epistemological one. It does not mean that *we* could not distinguish between two precisely equal things, but that two such things could not exist, not even in the minutest forms of nature, since the infinite variety of the infinite all must reflect at every moment the infinite, eternally realised, thought of the One Mind.

There are accordingly three aspects of God in Bruno’s philosophy—three different standpoints from which He may be approached. The first is that of natural religion—God in Nature. Nature is “the omniform image of the omniform God—His great living semblance (*simulacrum*).”[585] Its order reveals the mind from which it springs—the stars “declare the glory of the majesty of God and the works of His hands. Thence we are uplifted to the infinite cause of the infinite effect.”[586] Nature is God in things, [587] His infinite mirror, the *explicate*, unfolded, extended, immeasurable world, and He is *implicitly* everywhere in the whole.[588] There is, however, no argument from the world to God’s existence. From the first the infinite power and goodness are assumed, and the universe, in Bruno’s thought, is simply a broad general revelation of what each one of us may find in himself. [589]

God in nature.

The form which the cosmological argument takes in Bruno is that as individual things, taken singly, must be referred each to a finite principle and cause, a finite effect implying a finite power; so from the point of view of the universe of things, the innumerable individuals in immeasurable space must be referred to an infinite first cause. But to our thought the universe is only an inciting cause; we cannot know God or anything of God’s nature from it further than an architect or sculptor can be known from one or all of his works. The beauty and majesty of external nature leads us to aspire to God, its source; but a nearer spring of knowledge is in ourselves. “We are led to regard divinity not as without us, separate or distant from us, but as within ourselves (since it is everywhere wholly), for it is more intimate to us than we can be to ourselves, since it is the substantiating and most essential centre of all essences and of all being.”[590] It is from these two aspects of his philosophy, the identifying of *nature* with God, and the identifying of the true being of each of us with God, that Bruno has been described as a Pantheist. So far, however, as this term implies the identity of the individual things with each other, the conception that all things are one, not in the sense of forming a unity of differentials, but in the sense of an indifference or uniformity of all, the term “Pantheism” would give a very false impression of Bruno’s religious belief. It is neither the Pantheism which reduces all to a lifeless one, in which all differences are merged, nor that which breaks up the one into a many in which all differences are lost; but the Pantheism of a living, self-manifesting One, which is throughout eternity unfolding itself in the diverse units of the world—a pantheism not different from that of any of the higher religions.

God in us.

Neither in nature, however, nor in ourselves, in the soul of man, is the whole being of God to be found. Could we indeed see the substance, the truth of ourselves, could our eye in seeing itself see all things, as the eye of God in seeing other things sees itself,—then it would be possible to understand all things and to create all things, for we should then in reality *be* God. We never penetrate to the deep-lying individual in ourselves, but see only the accidents, the externals; as we never see our own eye, but only its reflection from a mirror, so our intellect cannot see itself in itself, nor anything else in itself, but always some external form, semblance, image, figure, sign.[591] The truth of things—God—everywhere eludes our sense and our reason, our discursive intelligence. It is revealed, as we have seen, only to our intuitive, comprehensive glance—a sudden insight for which reason only prepares the way. Yet even this insight, “comprehension,” is not “comprehending.” We are brought, perhaps, through it into contact and into harmony with Him, but He is never, even to intuition, knowable. To be known would mean to be comprehended, limited, and therefore finite.

God in Himself.

First, then, God, the Monad, or Mind, is the true, *innermost* nature of things; “in themselves things are in motion, in matter, dependent, defective, are rather *non-entia* than *entia*, for as from not-being they become, so from being they may cease to be; hence they truly exist only where they cannot cease to be, *i.e.* in the first cause and unfailing principle, which has power to bring them forth when it will. Therefore they are more truly in the *Monad* itself, and consequently are more truly known in it, in simplicity and togetherness, where all things are *one* in an ineffable sense, without distinction, distribution, or number.”[592] God is the source of the determinations,

the forms of all things. "The first *measure* is Mind itself: for all measure receives its denomination from mind"[593] (*mensura, mens*). "One is *mind*, everywhere wholly, giving measure to all things; one *intellect*, giving order to all things; one *love*, producing harmony between all things."[594] The first section of the *Praxis Descensus* sums up the relation, the meaning of "creation," thus:[595]—"God is the universal substance, being, by which all things are; essence, the soul of all essence, by which whatever is, is; more intimate in every being than its form or its nature; for as nature is the ground of the being of each thing, so the deeper ground of the nature of each thing is God."

In the second place, the order and life of things has its source in God, as the *Monas ordinatrix*; the whole order of nature, both as it is simultaneously, as it has been, and as it shall be, lies "complicitly," grasped in one thought, and realised in one act, in his Mind. "What immutable substance wills, it wills immutably, *i.e.* it wills necessarily, not as determined by an alien will, which enforces the necessity, but of its own will; this necessity is far from being contrary to liberty; liberty itself, will, and necessity are one and the same" (in God).[596] Divine necessity differs from natural causation, the sequence of causes and effects, in that in nature the causes, will, and knowledge may be frustrated, the effect averted; but divine necessity is necessity in all respects—to will, to know, to act, are one. In the third place, God is above and beyond both natural things and their order in the universe as a whole. In the later works, it is no longer as a mystical being—inaccessible, because wholly abstract, empty of content, the sublimated unity of things—that God is posited. The Neoplatonism of the earlier works, although remaining in the language and even in much of the thoughts of the later, has been overcome in fact.[597] God is indeed transcendent, beyond the world, but He is so only as comprehending the world in Himself, its source, its truth—yet more than the source of things or of their order. In all other things we may distinguish between existence and essence (*i.e.* the fact of their being, their historical presence in the world, and their nature, through which they are what they are); in God alone these are one or indistinguishable. [598] God and things differ by a greater difference than substance and accident—*i.e.* things are not accidents, or "modes" of God. They differ from one another by their special *differentiae*, but resemble in other respects. God differs, not as marked off, limited by them, but as containing them all in essence, presence, power and eternity.[599] He is not apart from things, but in them; in *them* not as comprehended or contained by them, but as comprehending and containing them, and as the essential basis of all things, the centre of the universal life and substance.[600] He is all things in all, because He gives existence to all; He is none of them, because above all, transcending each and all in essence, nobility and power.[601] He comprises all things, not as excluded and, as it were, looking upon them from apart and from above, for He is also comprised by all things. He is comprised also not as included, contained, repressed within alien limits, for He also comprises all things. He is therefore within all things, as He who gives essence to all things; and is the basis of all being, the heart and source of all life. He comprises all things, as excelling them, governing, moving, disposing, limiting—Himself unlimited.[602] Hence, also, as we saw, He is nameless; names are for distinguishing, defining, separating from other things, but He is above all difference, otherness, diversity, multitude[603]; or again, all names, all predicates, attributes, are equally true of Him, because He comprises all in Himself. It is in this sense that He is *Monad of Monads, entity of entities*, "in whom are all things, who is in none, not even in Himself, because He is indivisible, and is simplicity itself." [604]

Theism.

Bruno's philosophical religion is in the end a theism, but theism of a purely intellectual or rationalist type. The natural world is after all nothing over against God who subsists in absolute simplicity—as Mind; in absolute immobility, changelessness—as Intellect (the World of Ideas); in absolute perfection, self-sufficiency, and self-satisfaction—as Love, or Holy Spirit. Over against this self-contained Trinity, the changing and passing world is a *non-ens*: as *it* changes not, neither can it know change: to know change would be a change in itself—its knowledge is as immutable, as simple as itself. "Although we see things come into being that before were not, and the world itself, as is believed, was produced out of nothing—a new thing, yet from this change and novelty of effects, no change in His action or power can be inferred, for He exists above all motion and all vicissitude, an unchanging agent in eternity; not as artificers, or material principles, moved by changing dispositions to new willing, new faculty, new effects, but from the instant of eternity, above time and above change, He creates all that which becomes in time, in change, in motion, in vicissitude. Before and above time and motion there is not always time and motion, but there we find divinity, immutable and invariable. He has from eternity willed that to be which now is." "There liberty makes necessity, necessity attests liberty." [605] "Past is not past to it (the First Intelligence), nor future future, but the whole of eternity is present to it as one whole, all together, in its completeness." [606] Seldom, even in recent idealist philosophy, has the World of Ideas maintained its hold so powerfully over a mind whose whole trend was towards a naturalistic interpretation of things. The religious instinct dominates to the last Bruno's thought; these passages are from the very latest of his works. Each and all of his speculations on nature, on its elements, its individuals, its general laws, bring him back to the all-embracing Mind, in which nature has its source, but which nature by no means exhausts. So his speculations on the nature of man, on the moral life, on the inspiration of the artist and of the generous human soul, the hunter after truth, point again to a thought, a world above nature, revealed neither capriciously nor yet to the natural faculties of the seeker, but to a divinely implanted power of intuitive insight. It was an attempt, more consistent perhaps and more thorough than any other has been, to combine the independence and freedom and worth of individual souls, of the finite many, in one thought with the absolute unity, necessity, eternity of God. And this, after all, is the one aim philosophy has to achieve.

CHAPTER IX

BRUNO IN THE HISTORY OF PHILOSOPHY

Perhaps no philosopher of equal originality and strength has had so little apparent influence upon contemporary or later thought as Bruno. His name hardly occurs in any of the writers of his own or the following century; when it does occur, it is mentioned only that the author may make sufficiently clear the discrepancy between the actual or reputed views of Bruno and those of himself. Yet it is easy to underestimate the influence his writings and his personality exercised; neither in France, in England, nor in Germany could his prolonged stay have failed to rouse, in some at least of his hearers, sympathy with his lofty conception of the universe and of man's destiny; through them Bruno's books must have passed into the hands of many philosophers, both before and after they were placed upon the *Index Expurgatorius* in 1603. A natural consequence of this public ban would be that Bruno was no longer quoted or referred to as an authority; but all thinkers of sceptical or liberal tendency would at least be eager to read his works when the opportunity offered itself. Owing to the great scarcity of the copies and their increasing costliness, this would become a chance less and less frequent as time went on. Even so, however, one may trace how his ideas filtered through many minds and helped to determine the course of modern philosophy, of which Bruno has as high claims as either Bacon or Descartes to be named the founder.

In English writers the only contemporary notices of Bruno which have been found are in two small works on mnemonics,—one by a professed opponent of Bruno's friend, Alexander Dicson, the other by the poet Thomas Watson. The former, the *Anti-dicsonus* of a certain Cambridge scholar, G. P., of date 1584, was dedicated to Thomas Moffat or Moufet, a well-known philosopher and doctor of medicine, from whom support was hoped against the "Dicson School." Of this school Bruno, who was then in England, must have been regarded as a member. The author is a follower of Ramus, and ridicules the art of memory which consists in *locis et umbris* and its "self-parading memoriographs, such as Metrodorus, Rosselius, *the Nolan*, and Dicson; these are the reefs and whirlpools in which the purer science of memory would have been wholly destroyed, had she not clung to her faith in the Rameans as a pillar of refuge." It is an interesting note, for it shows that Bruno's antipathy to Ramus was returned by Ramus' followers,—an antipathy so difficult to understand when we remember that both were reformers in philosophy, and that both zealously attacked Aristotle. The work against which G. P. writes is Alexander Dicson's *De Umbra rationis et iudicii, sive de memoriae virtute Prosopopoeia*, dedicated to the Earl of Leicester (1583). There can be no doubt that it is based upon Bruno's *De Umbris Idearum* (1582), with which it agrees both in substance and in metaphysical basis. Dicson, as already pointed out, was one of Bruno's mouthpieces in an Italian dialogue. Here at least is an avenue for influence from Bruno upon English thought. Unfortunately Dicson's work is not of great value, and, with the man himself, has long been forgotten. But G. P.'s reliance upon Moffat's support to repel "the attacks of Scepsius,^[607] and the wrath and violence towards me of the whole school of Dicson," shows that on the side, at any rate, of his mnemonic doctrine Bruno's teaching had not fallen on wholly barren soil. Again, he is spoken of with respect, if not quite with admiration, in Thomas Watson's dedication of his *Compendium Memoriae Localis* (n. d., but probably 1585) to Henry Noël, Queen Elizabeth's courtier. "I very much fear if my little work (*nugae meae*) is compared with the mystical and deeply learned *Sigilli* of the Nolan, or with the *Umbra artificiosa* of Dicson, it may bring more infamy to its author than utility to the reader." The scholarly poet, terse and brilliant Latinist, could hardly have felt in harmony with the passionate but confused thought, the virile but unscholarly style of Bruno; yet the art of memory he professes in this compendium is no other than that of Bruno and of Dicson, and the "Memoriographs," whom "G. P." attacks.

If we turn to Bacon, who was in London while Bruno was with Mauvissière, already in high favour with the Queen, and at home in the society of Burghley, Leicester, Walsingham, and Sidney, we find entire neglect of Bruno's philosophy. Only in one passage, perhaps, does Bacon mention Bruno's name; it is in the introduction to the *Historia Naturalis et Experimentalis*.^[608] After a list of the philosophers of Greece, and the remark that "all these made up at their pleasure feigned accounts (or "plots") of worlds, as of fables, and recited, published these fables of theirs—some more consistent certainly and probable, others harder of belief," he adds that among the moderns, through the instruction of schools and colleges, the imagination is kept within stricter bounds, yet men have not ceased imagining. "Patrizzi, Talesio, *Bruno*, Severin of Denmark, Gilbert of England, Campanella, have tried the stage, acted new plays which were neither marked by applauding favour of the public, nor by brilliancy of plot." The names are those of men with whom it is no shame for Bruno to stand side by side; and one and all are instances of Bacon's incapacity for grasping the true direction in which the thought of his time was flowing; but the mere mention of Bruno in such a context implies that his works were still read, and that they were estimated at a high value by the lovers of "philosophy." There are, however, many points of contact between Bacon and Bruno, suggesting an influence, indirect if not direct, of the latter upon the former. Bacon was perfectly at home in Italian literature, and it is unlikely that he omitted to read Bruno's dialogues. Two casual but significant proofs that he did so are, the legend related of Mount Athos and of Olympus, that men had written in the ashes of the sacrifices offered upon their summits, and had returned the following year to find the ashes and the writing undisturbed, the inference being that the summits of these mountains were in a region of perpetual calm;^[609] and the suggestion

that the movements of the heavenly bodies may be in spiral lines instead of in perfect circles.[610] The latter especially is a characteristic thought of Bruno.

Bacon, like Bruno, was a believer in a purified natural magic, the handmaid of metaphysics, “because of its broad ways and wider dominion over nature.”[611] They are united in their admiration for the Book of Job as a compendium of natural philosophy. Bacon writes that “if we take that small book of Job and diligently work through it, we shall find it full, and, as it were, pregnant with the mysteries of natural philosophy.”[612] Both recur with conviction to the saying of Solomon that there is nothing new under the sun. “As to novelty, there is no one who has thoroughly imbibed letters and philosophy, but has had it impressed on his heart that there is nothing new upon the earth.”[613] Deeper harmonies, if not more suggestive, exist between the two reformers of philosophy than these. One is the argument against authority, against general agreement, against antiquity of belief, as grounds or reasons *for* belief, and the special application of this argument to undermine the hold of the Aristotelian philosophy upon the minds of men. “It is the old age of the world and the fulness of years that are to be regarded as its true antiquity. For that age, with respect to us ancient and older, with respect to the world itself was new and younger.” “As we expect greater knowledge and maturer judgment from an old man than from a young, so from our own age we should expect (if it knew its strength, and were willing to make trial and to put it forth) far greater things than from old times,” etc.[614] So faith and religion are to be kept apart from investigation, science, or philosophy, although the latter does not on that account carry us away from God; the one shows the will, the other (natural philosophy) the power of God.[615] To faith are to be given the things that are of faith, to philosophy the things that are of philosophy.[616] It was on the same ground also—the use of other than natural principles to explain natural phenomena—that both Bruno and Bacon condemned the physical works of Aristotle. He “corrupted natural philosophy with his dialectics—gave the human soul, the noblest of substances, a genus from words of second intention; settled the business of the *dense* and the *rare*, through which bodies occupy greater or less dimensions or spaces, by the feigned distinction between act and potency; asserted a unique and proper movement of each body, being more concerned for an answer one might make in a discussion and to have something positive in words, than for the inward truth of things, as is best shown by a comparison of his philosophy with the others celebrated among the Greeks.” And Bacon, like Bruno and other innovators of the day, goes back to Anaxagoras, Leucippus and Democritus, Parmenides, Empedocles, Heraclitus, whose principles “have something of natural philosophy, and savour of the nature of things—experience, bodily existence, whereas the physics of Aristotle, for the most part, sound of nothing but dialectical terms.”[617]

The false straining after simplicity of explanation, the tendency to seek for similarities rather than differences, to expect order on the surface rather than at the root of things, is condemned as vigorously by Bruno as by Bacon, although not placed in the forefront of the theory of method, as it is by the latter writer. One of the Idols of the Tribe was—“the tendency to suppose greater order and equality in things than is actually to be found; although in nature many things are *monodica* (*i.e. monadica*, unique), and full of imparity, yet the mind feigns parallels, correspondences, relations which are not. Hence the erroneous idea, *e.g.* that ‘in the heavens all things move in perfect circles,’ rejecting utterly spiral lines and *dracones* (except for the name): hence the element of fire and its sphere were introduced to constitute a *quaturnio* with the other three that were actually perceived by sense,” etc.[618] These things were condemned also, and for the same reason, by Bruno, who, however, went further, and insisted on the uniqueness of every individual existence in the universe. Again Bacon retained (without, however, giving it a place in his philosophy) the scholastic distinction between divine or angelic, *intuitive*, knowledge, and the acquired piecemeal knowledge of man. “God, the inditer and worker of forms, and perhaps angels and (higher) intelligences, know forms immediately by affirmation, and from the beginning of their contemplation. But that is certainly above men to whom it is conceded only to advance in the beginning by negatives, to come to rest in the last place only, in affirmatives, after exclusion of every kind.”[619] In Bruno the same distinction is drawn, but it is made also *within* human knowledge, the intuitive knowledge of the heroic mind being the same in kind as that of the higher intelligences, and only different from that of God in that it does not *create* what it intuits. So the scholastic distinction of *natura naturans* as the form or immanent principle of things, and *natura naturata* as the sum of things actually existing, the outward expression in matter of the activity of the form—a distinction which, in Bruno, is transcended by the identification of one with the other, as two aspects of a higher unity—also reappears in Bacon’s theory of form. However different the “form” of Bacon may have seemed to himself from the scholastic “form,” it is still the immanent cause of the properties of the body to which it belongs, or in which it adheres, and as such is actually named by Bacon the *natura naturans*. [620] So with Bacon, as with Bruno, Campanella, and Telesius, all things are endowed with life, with sensation, with soul, which is the inward principle of their external movements. He

Method.

Omnia animata.

ridiculed Gilbert, who first suggested a scientific explanation of magnetism and electricity, and put forward on his own account as a theory of electrical attraction that “friction excites the appetite of bodies for contact, which appetite does not like air much, but prefers something else which is tangible.” The phenomena of chemical affinity and the like were also explained, precisely as Campanella or Cardan would account for them, by the delight in mutual contact, *i.e.* by an inherent sensibility, and desire or striving of like towards like.[621] In both Bacon and Bruno, also, this universal animism is combined with an atomistic theory of mechanical nature, and with the belief that no physical phenomenon is understood until it can be expressed in mathematical terms: “the more our inquiry inclines to simple natures, the plainer and clearer shall things become; for we shall have to deal with the simple instead of the manifold, the

computable instead of the surd, the definite and certain instead of the vague,—as in the elements of letters, and the notes of harmonies, and an inquiry is best conducted when the physical is defined by the mathematical.”^[622] The last result of analysis is not, with either Bacon or Bruno, the atom of the Epicurean physics, viz. an immutable substance floating in empty space; but Bacon’s *particulae verae* are much more confusedly thought out than the Italian’s theory—of a subtle ethereal matter diffused throughout the universe, and of the denser atoms which are in constant motion within it. There is, however, the same perpetual flux and reflux in matter with Bacon as with Bruno.^[623] In the last resort, Bacon took refuge in a hope of future explanation—always, however, by simple, positive, computable factors—regarding atoms and void, as on a par with *materia prima*, human abstractions, entirely unfruitful, not light-bringing “anticipations of nature.” In regard to the relation between the human understanding and nature, both had absolute convictions of the power of the former, directed by the rules of experience and limited by the data of sensation, to comprehend the latter; but while Bruno saw in the negative limits of the understanding a positive hint of a reality beyond, the more careful Bacon saw only a further ground for falling back from reason upon faith. Thus the incapacity of the mind to rest in any finite space, without thinking of a space beyond that and beyond, or of imagining a body than which none could be greater, was proof to Bruno that space itself was infinite, and that body or matter was immeasurable, *i.e.* infinite in extent and in quantity. Bacon also makes use of this impossibility in the human intellect of resting, acquiescing, at any point as a finality. “It must ever pass beyond—but it is in vain. Thus it is unthinkable that there should be any extreme or outermost rim to the world, our mind always of necessity thinks there may be something beyond: nor can we think how eternity could have flowed down to this day: the distinction between an infinity *a parte ante* and an infinity *a parte post* cannot be maintained, for it would follow that one infinite is greater than another, and that an infinite is used up, and declines into a finite. Similar is the subtlety about lines always divisible (however small parts we take), from the impotency of thought.”^[624] But the conclusion drawn is simply the positivist one, that such endless questioning after the unknowable is profitless and absurd. The one sees in it a metaphysical or cosmological argument—infinite capacity for knowing implies an infinite to be known, as infinite or endless desire implies an infinite or limitless good: the other a methodological argument against attempting to fly when we are born to creep. In two other cases Bacon rejected the work of Bruno, and rightly, viz. in regard to the Art of Lully, and the Art of Memory; and it is possible that he may have had Bruno in his mind in writing both passages. “Some men, rather ostentatious than learned, have laboured about a certain method not deserving the name of a true method, as being rather a kind of imposture, which may nevertheless have proved acceptable to some triflers. Such was the Art of Lully, simply a massed collection of technical terms. This kind of collection resembles an old broker’s shop, where many fragments of things are to be found, but nothing of any value.”^[625] Again, “there exists certainly some kind of art (of memory), but we are convinced that better precepts for confirming and extending the memory might be laid down than are contained in this art, and also that the practice of the art might be made better than as it has been received. As now managed, it is but barren and useless.”^[626]

On the Continent it was rather the cosmological theories of Bruno that attracted attention; and there, no less than in England, every suspicion of sympathy with the heretic was avoided. Only Kepler had the courage to complain (as a letter of Martin Hasdal to Galilei tells) that Galilei had omitted to make praiseful mention of Bruno in his *Nuntius Sidereus*.^[627] Galilei, a thorough diplomatist, would hardly have gone so far:^[628] yet in the metaphysical basis of his theory of the universe, and in his theory of knowledge, he only elaborates ideas already suggested by Bruno.^[629] But Kepler, fearless before men, shrank from the thought of the infinite world in which Bruno found a glorious freedom for the play of his mind. Kepler could not, and did not, give up his enclosing sphere of fixed stars, shutting in the solar system as comfortably as the orange-skin its seeds, not accepting the giddy hypothesis of Bruno that each of the stars is itself a sun, with a solar system of its own, and that beyond and beyond, in endless series, are other suns and other worlds.^[630]

Kepler.

Even *Vanini* the unfortunate, if light-headed, sceptic, who in 1619, at Toulouse, met with a fate similar to that of Bruno, but more horrible, mentions the latter only by indication in his earlier work,—the *Amphitheatre of the Eternal Providence* (p. 359)—“*Nonnulli semiphilosophi novi* have said that beyond the last sphere of the heavens there is an infinite created universe, as if from God no finite action could proceed.”^[631]

Of the philosophers who represent the main line of development of modern thought on the Continent in the seventeenth century,—Descartes, Gassendi, Spinoza, Leibniz,—there is not one who has not been accused of having borrowed his chief doctrines, without acknowledgment, from the Italian philosopher. Bishop Huet^[632] described Bruno as the *antesignanus* of the Cartesian philosophy, and pointed to the *De Immenso et innumerabilibus* as containing indications of almost all its ideas. The charge is of course absurd so far as Descartes’ characteristic philosophy is concerned—the ideas by which he created a revolution in modern thought. Bruno indeed begged men to throw over all prejudices, all traditional beliefs, before entering upon the study of nature: he agreed with Descartes therefore in rejecting wholly every authority but that of man’s own reason, in demanding complete freedom of thought, not only from outward, but also from inward, subjective fetters. Most nearly he approaches the “Cartesian doubt” in the preface to the *Articuli adv. Mathematicos*.^[633] “As to the liberal arts, so far from me is the custom or institution of believing masters or parents, or even the common sense which (by its own account) often and in many ways is proved to deceive us and lead us astray, that I never settle anything in philosophy rashly

Descartes.

or without reason; but what is thought perfectly certain and evident, whenever and wherever it has been brought into controversy, is as doubtful to me as things that are thought too difficult of belief, or too absurd." But this is still very far from the universal doubt of Descartes,—doubt, not of this or that particular opinion or belief, but of all possible beliefs. Bruno's aim was *knowledge*, to add to or correct the sum of general opinion as to the world as a whole, as to man's relation to it and to God; Descartes' was *certainty*, to find a basis from which a system of thought might be built up *de novo*, and from which at the same time a secure ground for morality and religion might be derived. The doubt was nothing without the certainty to which it led,—the certainty of self-consciousness,—which, as it has been said, is only the other side, the positive expression of the universal doubt itself. On the other hand, in the subsequent steps of the Cartesian philosophy,—the arguments on the nature of God, and the relation of the infinite to the finite substances,—many touches suggest the influence of Bruno's comprehensive attempt to combine a philosophical pantheism with a scientific atomism. It is unlikely that Descartes should have been ignorant of a writer well known to Mersenne and Huet. The former^[634] would have excused Bruno "had he been content to philosophise upon a point, an atom, or on unity,—but because he attacked the Christian religion, it is reasonable to decry him as one of the most wicked men the earth has ever produced!" Certainly the fact that Descartes nowhere mentions the guilty philosopher is of no importance in deciding as to the influence of the latter upon him.^[635]

It was only natural that Gassendi's critics should have placed him in a close relation to the Nolan. There is no improbability in the idea that Gassendi was attracted to the latter as an opponent of the Aristotelian philosophy, against which he himself had already written in his youth—although no part of the work was published until 1624.^[636] Both also approached the reform of natural philosophy from the same standpoint, that of sense-experience, and both arrived at an atomic theory of the ultimate constitution of nature. Bruno, before Gassendi, had attempted to place the ethical teaching of Epicurus in a fairer light than popular prejudice allowed, but while Gassendi followed Epicurus in his atomism only too strictly, Bruno was much more independent, and advanced much nearer to the modern view. So in his general theory of the system of the world, Gassendi stops half-way—with the conception of a limited matter, but in an endless space, of a beginning for the world, but in an endless time, of a plurality of worlds with the earth as centre of our system: here also it is Bruno that is the more advanced, and the more daring thinker;—yet, from the respect with which Gassendi writes of Copernicus, it is clear that his sympathies were with the new hypothesis. It may be added that although Gassendi rejected the notion of a world-soul, in the ordinary sense, as distinct from God, and that of souls of the individual worlds, or of stones, etc., yet he too was fain to explain the attraction of the magnet for the iron, of the earth for the stone, of atom for atom, by an influence passing from the one to the other, by which the one became aware of the other's existence, and was impelled towards it, *i.e.* by a kind of sense, or feeling, a soul, which was at the same time the principle of movement.

Gassendi 1592-
1655.

It is, however, on the development of Spinoza's^[637] thought that the most direct influence of Bruno can be shown. Sigwart^[638] and Avenarius^[639] have proved that in preparing the short treatise on "God, Man, and his Blessedness," Spinoza must have had the *Causa* and *Infito* of Bruno almost before his eyes. The treatise consists of several parts which are more or less independent of one another, and which represent tentative approaches towards the finished Ethics; but it differs from the Ethics in the far greater prominence of the mystical, Neoplatonist element. Pollock suggests that it may have been his free-thinking teacher Dr. Van den Ende who introduced Spinoza to Bruno's writings: there is no external evidence of the acquaintanceship, but that, it is needless to say, is of slight importance. Spinoza certainly read Italian, and he practised in other cases the same neglect of authorities, of whose substance he was making use: it was indeed the custom of the time—there were few who followed Burton's example.

Spinoza.

There are certain general resemblances between the finished philosophies of the two authors, so far as Bruno can be said to have a finished philosophy. The first principle of both is the unity out of which all things spring, to which all return, and in which all have their true nature, or highest reality,—a unity with which both identify nature and spirit alike, and which is for both God. God is accordingly beyond the reach of all human knowledge; determination is negation, limit, by which the infinite is untouched. All attributes in God are one only, or none; thought is one with extension, love with intelligence; yet in strictness God is neither thought nor extension, intelligence nor love, or he is these in another than our human meaning. So far as this central thought is concerned, it is Bruno that is the deeper thinker. In him the *One* is not a dead negation, in which real things are absorbed to the loss of all their reality and life, as it is with Spinoza: rather it is a living fountain, gushing forth in the infinite streams of living beings: the whole of nature is the expression of its own inward being. The One is in process; the whole, in which this process results, is a harmony every member of which has its own independent reality and worth, over against all others, as a manifestation of divinity. The life of the one is that of its members; all are necessary to it, as it to them. Carrière^[640] indeed places Bruno above Spinoza as having found in the one a self-consciousness, a *subject* infinite in that it knows itself and all things in itself, preserving all things, as necessary to its external enjoyment and love; while Spinoza is still within the bonds of *substance*—in God there is neither understanding nor will, in Him all difference vanishes, the modes are an illusion. So the Spinozistic parallelism between thought and matter finds its counterpart in Bruno, with whom all that is thought, all that is possible, is also real, or actual, *i.e.* has extended or material existence. It is true that this conception is much more precisely expressed in Spinoza, with his clean-cut distinction between the world of body and the world of mind or ideas, to which the possible belongs, but it was a

distinction which he could not consistently uphold; on the other hand, the universal animism, the doctrine that to every material thing or event there corresponds a spiritual reality or process, which is only the other side of the parallelism of soul and body, is more clearly and vigorously defended by the earlier philosopher. The natural and the spiritual, matter and form, are not two principles, or elements which combine to produce a given result, or which harmonise with one another: they are one and the same thing, and their truth is their life, their soul, their thought. Bruno was earnest with his animism, as his confident belief in magical correlations showed.

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From their principles both derived a conviction of the necessity[642] and of the goodness of all things, but it is Bruno rather than Spinoza who attempted to reconcile individual liberty with determinism in the universe as a whole, and individual moral responsibility with the necessary goodness of the all. The corresponding relativity of evil, the fallacy of “fortune” or “chance” (as anything but “uncertainty” of the finite mind), were already asserted by Bruno, and his ideas as to the relation between the religion of the Church, or the teaching of the Bible, and the investigations of science, are precisely those which Spinoza adopts.

In the *De Deo seu Homine*, however, the correspondences are much greater and more definite between Spinoza and Bruno, showing that the former passed through a phase of Neoplatonism, in which his pantheism was much less formal or abstract than it afterwards became. Thus the predicates applied in the *Ethics* to God are applied here to nature, as by Bruno also:—Nature is infinite in the sense of “without limits or bounds,” containing no parts in itself, and therefore not a whole over against other wholes; there cannot be two infinities, or boundless worlds.[643] The parallelism between outward nature and the thought or understanding of God is also more after Bruno’s mode of expression (ch. ii. § 11, 19). “Neither substance nor qualities can be in the infinite understanding of God, which are not *formaliter* in nature (1) because of the infinite power of God—there is no cause or ground in Him why He should create one thing rather than another, hence He creates all; (2) because of the simplicity of His will; (3) because He cannot refrain from doing what is good.” The thesis, and the first and third of the arguments by which it is supported, are all verbally close to Bruno’s argument in the *Infinito* and in the *De Immenso*. So the effort of all finite things after self-conservation,[644] and their consequent movement, are explained not mechanically, through the action of one material thing upon another, but rather spiritually, through the unity of nature in which all share. Thus even that possibility of an action of thought upon matter (extension) is allowed, which in the *Ethics* is, formally at least, denied. In the *Tractate* also there is more emphasis laid upon the *goodness* of God, as the source of the infinite world of finite beings, whereas in the *Ethics* a logical, mechanical necessity takes its place. It is in the second, more mystical and ethical part, of the treatise, however, that the influence of the Nolan philosopher is most apparent, and here it is the *Summa Terminorum* or *Heroici Furori* that seems to have formed the direct or indirect source of many of the conceptions—such, for example, as the distinction between *Ratio* and *Intellectus*. *Ratio* is discursive thought, building up knowledge by successive steps; *Intellectus* “intuitive thought,” direct and simultaneous perception of the whole of the object—the only adequate or complete form of knowledge, for which reasoning is merely a preparation in us. Our knowledge of God, so far as it is possible at all, is of the second type: we cannot know Him as he is, through His effects, His creation: it is only the few to whom He reveals Himself that can know Him as He is, by direct contact with Him. Yet this revelation is constantly open to all men; for each and all God is, always, intimately present, “more intimately than each is to himself.”[645] Other ideas which Sigwart has found common to the *Short Tractate* and the writings of Bruno, are those of the Love of God as springing from the knowledge of God; the correspondence between the degrees or stages of love and those of knowledge; the inability of our minds to rest in a finite object or finite good, the constant pressure onwards towards other and other objects; the contrast between sensible love and intellectual love; God as the highest, most complete object, the knowledge of Him above and embracing in itself all other knowledge, making the knower one with his object, transforming him into God himself; the divine Harmony in the soul which ensues; the love of God which is man’s highest blessedness, which is wholly disinterested, and blind to all earthly good or beautiful things; love which is unlimited in its possibility, as its object is infinite: with this limitless possibility of Love is the idea of immortality connected; but “Bruno deduces from the immortality of man the possibility of a love which increases infinitely; while for Spinoza, on the contrary, the infinitely increasing love of God is a ground of proof for immortality.”[646] When there is added to these many instances of doctrines in Spinoza’s earlier work which were later modified in the direction of greater rigidity and mechanical systematisation, the fact that the *Tractate* embraces two tentative dialogues, in one of which Spinoza is represented by a Theophilus (as Bruno in so many of his dialogues is represented), it is impossible not to feel convinced that Spinoza for a period of his life at least was a follower of Bruno. It is true that many of these ideas are not the property of Bruno alone, but of the school of Neoplatonism of which he like Spinoza was at any rate a partial adherent, but nowhere else than in Bruno is to be found the same “collocation” of these ideas as occur in this tractate of Spinoza. It is an open question whether the movement of the latter away from the Italian’s philosophy was entirely a progressive, and not in some respects a retrograde movement.

The short tractate.

Ratio.

At first sight it might seem much more natural to connect Leibniz with Bruno, because of the obvious correspondence of many of their fundamental ideas:—their analysis of the universe into a system of independent realities, each differing from every other—each mirroring the universe in itself from its own individual point of view; each therefore in a sense containing or comprising the all in itself, as each is again

Leibniz.

a necessary constituent of the all. In place of Spinoza's dead world, we find in Leibniz, as in Bruno, finite things in constant flow, constant change, each passing necessarily through every phase through which any other has passed—representing the universe as it is in time, as well as the universe as it is at any moment in actual existence; each experiencing, in other words, the life, the process, as well as the quality, the being of the all. Everything that is, *is* necessarily, everything that occurs, occurs necessarily, in Bruno because the whole flows out from the thought of God, as God thinks it (*i.e.* in the relations in which it stands in the one all-embracing thought of God); in Leibniz, because of the will of God, who in His goodness has chosen the best of all ideal systems, within which each thing or event has its necessary place. In both, all things are, from the point of view of the whole, good:—in Bruno because in God truth and goodness, will and understanding, are one; in Leibniz because of the will of God, which has chosen for the best: evil is finitude, or again is ignorance, an error of standpoint. In both freedom and necessity are one, because the necessity belongs to God's own nature; He wills out of Himself, undetermined, uninfluenced from without, and this is freedom. In both, as we have seen, the principle of sufficient reason is a ground both for the infinite number and infinite variety of the finite beings in the universe, and for the impossibility that two should exist which are exactly identical one with another. Were it known that Leibniz had studied Bruno before his system was formed, we might almost say that he had chosen that aspect of the Nolan philosophy which with Spinoza had been disregarded, *viz.* the aspect in which all rights are given to the finite individual, and to the world of finite beings, as each representing the infinite, containing the infinite in itself, and, so far as possibility goes, each of infinite divine worth. Whereas just that side which appealed to Spinoza would have failed to touch Leibniz—the side in which God appears as one with the universe, not as beyond or outside of it, but as immanent in the whole, and present in the fulness of His nature to each and every member of the whole. Philosophically Leibniz' mission was to develop the Cartesian doctrine of the three substances—God, finite spirit, and body—in a direction which identified the first and third with the second, broke up the unity of God into the immeasurable many of the monad spirits, and its infinity into indefiniteness. The God of Leibniz, even as the highest of the monads, is separate from, apart from, the other monads—a finite along with other finites. So each of the ordinary monads is a world by itself, shut up within itself, with no windows from which it can look out upon the world, and *really* be affected by what is passing without it. There is *no* without—each is, in a word, *God*, and so far as it is concerned there may be no other being in existence. Bruno, on the contrary, was fully conscious—at times—of the necessity of holding the balance between the infinite unity of God and the finite units or realities, which are the expression, the manifestation, the self-revelation of the one. Why this revelation? he does not indeed ask; but given it as actual, he finds the reconciliation in it at once of the necessity of the whole and the liberty of the unit, the goodness of the all and the moral frailty of the individual.^[647]

Interesting as this speculative comparison of the two philosophies may be, there is not, however, even the slightest ground for attributing any direct historical influence of Bruno upon Leibniz. If influence occurred at all—which is doubtful—it was through Spinoza or some of the minor philosophical writings of the time. Lacroze (in a letter of 1737) accused Leibniz of “having drawn his whole system” from Bruno's book *De Maximo et Minimo (sic!)*: he added that he had told Leibniz this fact himself, both by word of mouth and in writing, and that the reason why so few had noticed it was that the philosophical writings of Bruno were obscure and repellent. The same suggestion has been repeatedly made since—more especially as regards the name “*Monad*,” which Leibniz, after much searching and deliberation, gave to his “real unities” from 1696 onwards.^[648] Brunnhofer goes so far as to see both the ideas and the main formulas of Leibniz in Bruno—the monad-doctrines, monads as living mirrors of the universe, as fulgurations of God, the Pre-established Harmony—the future as involved in the present, “the present is pregnant with the future,”—the phenomenality of sense-objects—God as the highest monad, etc. He argues that Leibniz derived his idea that “the monads have no windows by which anything can enter or depart” from casual remarks by Bruno as to the “windows of the soul,” “the gates of the senses” by which images enter in, or “the chinks and holes” by which we gaze outwards upon the world. The *coup de grâce* was given to this legend, for so we must call it, by Ludwig Stein in his *Leibniz und Spinoza*.^[649] He showed that Leibniz was already in full possession of the *idea* of the monad at least ten years before he found the most fitting expression for it, and that after 1696 he used the word “Monad” always as the distinctive badge or typical name for his substances or forces; that before 1700 he knew of Bruno only one of the Lullian works (the *De Arte Combinatoriâ*, *v.* Dutens, ii. 367), and perhaps the mathematical articles (*adv. Mathematicos*, *ib.* iii. 147). Apart from these works, which could have no reference to his own philosophy, he was acquainted with Bruno only by hearsay, as a reputed forerunner of Descartes; even as librarian of the Brunswick Library, although some of Bruno's works were in his guardianship, he is not likely to have read them until his attention was called to them by their alleged resemblance to his own theory. And then, as we learn from the letter to Lacroze (11th April 1708),^[650] he hardly appreciated them at their true value—“Mr. Toland has not spoken to me of the *Specchio (i.e. Spaccio*, an error that does not show much familiarity with Bruno) *della Bestia trionfante* of Giordano Bruno. I think I have seen the book at some time, and that it is against the Pope. I have two works of his on the Infinite, one in Latin, the other in Italian. The author is not wanting in genius, but is not very profound (*ne manque pas d'esprit, mais il n'est pas trop profond*.” Elsewhere he speaks of Bruno only as believing in “innumerable worlds” with Leucippus and Democritus, and as having been burnt, not, as he believes, on account of his book the *De Immenso*, but for other opinions.^[651]

There is therefore little reason to suppose that Leibniz had great interest in Bruno, or that he had read his works so carefully as to have derived any sustenance or advancement for his philosophy from them. Stein has in any case shown that the term “Monad” came to Leibniz, not from Bruno

at all, but from the younger Van Helmont, in whose theory it plays almost as important a part as in Leibniz—although the difference between the two “Monads” was greater than the resemblance.^[652]

Meanwhile literature in France and England had not lost sight of Bruno.^[653] In 1633 there was published in the former a play, *Boniface et le Pédant*, which has been described as a refined and Gallicised imitation of the *Candelaio*; in its turn it suggested, perhaps, the *Pédant Joué* of Cyrano de Bergerac, and some of the pedant-scenes in Molière.^[654] In 1634 in England a masque by Thomas Carew—the *Coelum Britannicum*—was played in English by Charles I., which was based, partly at least, upon the *Spaccio*, with Charles I. in the place of Truth.^[655]

Pierre Bayle, by the article in his *Dictionnaire Historique et Critique* (1697), which had a very wide influence, probably damned Bruno’s reputation for a century. The article on Spinoza also did the same service for the Dutch philosopher, with whom, indeed, Bayle joined Bruno, as having held the same “abominable doctrine” of atheism. He had no real knowledge of Bruno, the biography is frivolous and inexact, and the philosophy—a garbled version—is reported on hearsay.^[656] It was Bayle’s authority which stamped Bruno with the sarcastic description of “a knight errant in philosophy,” which has sometimes been spoken of as a happy touch of Hegel’s invention, but really dates back to one Lionardo Nicodemo (1683), who described Bruno as “playing the part of a wandering knight (*i.e.* a travelling scholastic), now here, now there, at different universities in France, England, Germany, Switzerland, Italy, with shield pendant, and lance in rest, challenging the Aristotelians to learned combat.”^[657] In England the same aspersion upon Bruno’s name was stereotyped by an article in the *Spectator* of May 27, 1712 (one of Budgell’s). The writer, however, had the fairness, which Bayle had not, to read Bruno’s *Spaccio* before making reflections upon it. Contrary to his expectations, for Bruno was “a professed atheist, with a design to depreciate religion,” he found “very little danger” in it. This did not prevent him from taking Bruno as a text for a would-be humorous disquisition on Atheism. It was John Toland,^[658] the “poor denizen of Grub Street,” and once famous, or infamous, author of *Christianity not Mysterious*, who in England first paid Bruno something of the respect he deserved. His championship was not, perhaps, of the most discerning or of the most valuable, but it was honest. A copy of the *Spaccio* had come into his possession,—one which he believed to be the only one then in existence,—and as a result of his reading he claimed Bruno as the founder of free thought. He had studied the sayings on Divine Magic in that work, and had fastened on the fact that Bruno “regarded magic as nothing but a more recondite, non-vulgar, although perfectly natural wisdom.” This was certainly true; but Toland added, “So he sometimes calls the eternal vicissitude of material forms Transmigration,” which was at least misleading. Among his manuscripts Toland left “an account of Giordano Bruno’s Book of the Universe” (*De l’ Infinito*), along with a translation of the introductory epistle.^[659] And somewhat earlier, in 1713, a translation of the *Spaccio* was made into English by W. Morehead,^[660] who may have been one of Toland’s brethren, as the Quarterly Reviewer suggests. Toland himself was, however, believed to be the author. He had visited Lacroze at Berlin in 1706, and had defended the Nolan against that virulent searcher-out of atheists, deists, pantheists, and the like “miscreants and libertines.” To a fellow-enthusiast in Germany (Baron Hohendorf) Toland wrote three years later, giving the proofs of Bruno’s punishment, with a translation of Schopp’s account, and stating his belief as to Bruno’s real doctrine (*viz.* free-thinking).^[661] “The author,” he wrote, “gives full play to his spirit, which is always diverting, but at the same time very powerful; he is often diffuse, but never wearisome. In a very small space he has expounded a complete system of natural religion, the theory of ancient cosmography, history, comparison and refutation of different opinions, besides many curious observations on diverse subjects. But the author abounds in pleasantries, and in satirical traits: he is impious in a sovereign degree, and does not always keep himself within the limits of allegory.” And so Bruno, like Spinoza in this also, went down to posterity as a worthless, impious atheist, one of the reputed authors of the mythical work *De Tribus Impostoribus*, which no one had ever seen, but in which the three founders of the great religions of the world were attacked as conscious cheats! So far was the world as yet from understanding the martyr for truth and for “the religion of thought.”

It was from Germany that the reaction came. The story of the restoration of Bruno’s name (his *Ehrenrettung*) has been told by Bartholmèss, and needs but a very brief sketch here. Heumann^[662] repudiated Lacroze’s description of him as an atheist and forerunner of Spinoza’s pantheism, describing him as a martyr for the Lutheran faith and as an eclectic in philosophy. Brucker^[663]—without the historical sense, but a painstaking and learned, if diffuse, analyst, judging all philosophies by the standard of orthodox Protestantism and the Leibnizian philosophy—yet sympathised with Bruno, described him as an “eclectic, combining ideas of the Eleatics with those of Democritus and Epicurus, Copernicus and Pythagoras, not an impostor, but an intellectual enthusiast—*cum ratione insanivit.*” Throughout the remaining part of the century a number of monographs appeared, by Jordan, Christiani, Kindervater; with, on the *contra* side, Lessman and Lauckhard. Adelung thought Bruno worthy of a place in his *History of Human Folly* (1785). In the same year (1785) appeared F. H. Jacobi’s *Letters on Spinoza’s Philosophy*, which contained a “restoration” at one stroke of both Bruno and Spinoza to their place among the great names of the history of thought.^[664] This fine thinker—if not great thinker—penetrated by the beauty and calm of Spinoza’s pantheism, saw in Bruno a true forerunner. Bruno had “taken up the substance of the ancient philosophy, transformed it into flesh and blood, was wholly permeated by its spirit, without ceasing to be himself.” Naturally it was in the *Causa* that Jacobi found the greatest affinity with Spinoza, as in it the starting-point of Bruno is from the One, the

Highest, which is at the same time the All—the universe, the unity of the One and Many, of Spirit and Nature. Jakobi's friend, Hamann, the "Wizard of the North," the mystical critic of Kantianism, went a step further than Jakobi himself; Bruno's principle of the coincidence of opposites, he said, was of more value to him than all the Kantian criticism. In the pantheistic or monistic side of Bruno's philosophy he found sympathy with his own revolt against the excessive intellectualism and rationalism which seemed to him to be the chief danger of the Kantian philosophy.[665] Goethe also was carried away by the flowing tide of enthusiasm, and, indeed, his own philosophical conception had much affinity with that of the Nolan, although in their inner natures the two men differed *toto coelo*. [666] Buhle—first in his *Comment on the Rise and Progress of Pantheism* (1790), afterwards in his learned and careful *History of Philosophy* [667]—placed Bruno amongst the highest of pantheistic writers. Even Tennemann [667] grows eloquent over the brilliant effort of Bruno, by which he almost achieved a philosophy of the Absolute two centuries before Schelling and Hegel. [668] Fulleborn is more cautious and critical, but in his *Contributions to the History of Philosophy* he gives analyses and extracts from several of Bruno's works. [669] Schelling himself, as is clear from the dialogue which he wrote bearing Bruno's name, regarded the Italian as nearest to himself among his forerunners in the philosophy of the absolute. There is obviously a close analogy between the two; and Schelling may be said to take, with regard to the course of philosophy after him, the same place which Bruno took as regards the lines of development in the philosophy of the seventeenth century. Both had a wider view, and perhaps a deeper insight, than their successors, while lacking the power of strenuous thought necessary to carry out their views into the completeness of a philosophical system. It is doubtful, however, whether Schelling knew much more of Bruno than Jakobi's essay and his abstract of the *Causa* had to tell.

Hegel took a much less enthusiastic view of Bruno's philosophy than did his contemporary and sometime partner—to place Bruno on a level with Spinoza was to give him a higher reputation than he deserved: his doctrine was a mere re-echo of the Alexandrine. Yet Hegel, too, saw something to admire in this "Bacchantic" spirit, revelling in the discovery of its oneness with the Idea, and with all other beings, with the all of nature which is an externalisation of spirit. It was under the influence of Hegel or of the Hegelian philosophy that the first really complete and satisfactory studies of Bruno appeared:—Christian Bartholmèss' *Jordano Bruno*, [670] and Moritz Carrière's *Philosophische Weltanschauung der Reformationszeit*. [671] The quick and generous enthusiasm of the first, the wide philosophic comprehension of the second have probably done more to attract public attention to the forgotten Nolan, and to guarantee him a permanent place in the history of philosophy, than any other writings about him. Since their time the literature upon Bruno has steadily increased, and with it has grown the comprehension of and sympathy with the man as well as with the idea he so fearlessly proclaimed, and so strenuously defended. It is no part of the purpose of this work to parallel Bruno with any of the more modern philosophers. It is foolhardy to say, for example, as Brunnhofer does, that Schopenhauer alone reaches the same height of literary style in modern philosophy, "although the Nolan leaves the Frankfort philosopher far behind him through the strength of his philosophical conception of the universe, which holds its own against pessimism and optimism alike." [672] It is foolhardy, and it is misleading, to place him in comparison with philosophers who have nearly three centuries of thought, of social, industrial, and literary growth, between him and them. Like all the philosophers whom a touch of poetical imagination has redeemed, Bruno stands more or less alone, and he overtops all the others of his century. None of the ordinary rubrics of historical terminology in philosophy apply to him, not even that of "Eclectic." He is far more than that. His philosophy, as perhaps these pages have shown, bears the stamp of individuality, the individuality of a strong mind, fed with nearly all the knowledge, and all the out-reaching guesses at truth of its own time, and of the times that had gone before, striving to turn this difficult mass into nourishment for itself, and to transmit the achievement to others. He was an eclectic, just as every great thinker is an eclectic, but it is the bricks merely, not the style of architecture, that he has borrowed from others. He never founded a school, not merely because the circumstances of his life, and the fate of his writings, precluded him from being widely known or studied in any country, but also because his philosophy was too much a thing of himself to be readily attractive to many of his hearers or readers. Yet it has been a force making for the progress of thought and of liberty, and it is still an active force. Human nature has not yet lost the tendency to rest calmly in its "habit of believing," to shut itself up in its finite world, refusing either to look abroad, or to look at itself from an external point of view; it is still apt to think "geocentrically," to take its molehills for mountains, while "underlooking," if the term may be allowed, the real mountains that are before it, to hold doggedly to one contrary, reject utterly the other, whereas the truth always lies in their unity. To these recurring foibles of humanity, and more especially, perhaps, of philosophic humanity, the fresh and vigorous writings of the Dominican monk and martyr of the sixteenth century will ever form a healthy counterpoise.

ADDITIONAL NOTES

1. To p. 5 and p. 27, *Bruno's upbringing*.—In the *Infinito*, Lag. 362. 34, Burchio, the Aristotelian pedant of the dialogue, addresses Fracastorio in the following polite terms:—"You would be more learned than Aristotle—you, a beast, a poor devil, a beggar, a wretch, fed on bread of millet, perishing of hunger, begotten of a tailor, born of a washer-woman, nephew to Cecco the cobbler, *figol di Momo, postiglion de le puttane*, brother to Lazarus that makes shoes for asses!" It is almost incredible that any one should have taken these words as biographical or rather autobiographical. They are in the mouth of a pedant and enemy: they are addressed not to the Bruno-character of the dialogue ("Philotheo"), but to Fracastorio, who temporarily takes his place as a well-trained disciple. Yet Lagarde, that amazing editor, gravely wonders whether the Dominicans did not know that their novice had been "postiglion de le puttane," or whether they were glad to forget it when they saw the pure and attractive young face! (v. Lagarde's edition of the Italian works, pp. 789, 798).

2. To p. 10. *The Arian heresy*.—Before the Venetian tribunal Bruno explained his position with regard to the Arian heresy thus:—"I showed the opinion of Arius to be less dangerous than it was generally held to be, because generally it is understood that Arius meant to say that the Word was the first creation of the Father, and I declared that Arius said the Word was neither Creator nor Creation, but intermediary between the Creator and the Creation, as the word is intermediary between the speaker and what is spoken, and therefore it is said to be first-born before all creatures; through it, not out of it, have all things been created...." (Doc. xi. Bert. i. p. 403).

3. To p. 33. *Sidney and Greville*.—Greville had been a schoolmate of Sidney at Shrewsbury, but proceeded to Jesus College, Cambridge, while Sidney went to Christ Church at Oxford; afterwards they were constant friends at Court. When Sidney went to Heidelberg in 1577, the Queen would not allow the handsome Greville to accompany him, nor would she let either go with Drake to the West Indies in 1585, and Greville was kept at home from Leicester's Expedition to the Low Countries, in which poor Sidney met with a heroic death (Oct. 17, 1586). In a letter of 1586, Greville describes Sidney as "that prince of gentlemen": writing to Douglas after Sidney's death, he says that the name of Sidney's friendship has carried him above his own worth. The epitaph Greville wrote for himself is familiar, but will bear repetition:—"Fulke Greville, Servant to Queen Elizabeth, Councillor to King James, and friend to Sir Philip Sidney. *Trophaeum Peccati*."

4. To p. 35. *Vautrollier and Bruno*.—Vautrollier traded in Scotland as early as 1580 as a bookseller: he had already enjoyed the patronage of King James, and was even encouraged to return with a printing press, which he did in 1584. Thereafter he published in both London and Edinburgh till 1587. On the other hand some of Bruno's works were printed in 1585, so that the theory of Vautrollier's flight to Scotland owing to his being the printer of Bruno's works, falls through. The business in London was carried on during his absence by his wife, and the "troubles" out of which Mr. Randolph helped him were quite unconnected with Bruno, and may have arisen from his printing of John Knox's *History of the Reformation in Scotland*, which Archbishop Whitgift suppressed. The letter to Mr. Randolph is in L'Espine's *Treatise of Apostasy*, 1587 (Vautrollier: London).

5. To p. 51. *Mordentius*.—Fabrizio Mordente of Salerno was a mathematician of the sixteenth century, of whom only two works are known to have existed,—one published in 1597, the other written in conjunction with his brother Gaspar in 1591. He was the inventor of an eight-point compasses of which Bruno writes in the second of the Mordentius dialogues, and on which he bestows apparently extravagant praise. The peculiarity of the invention, as far as one can discover, consisted in the introduction of four "runners," two on either limb of the compasses, and secured by screws; but there seems to have been no gradation of the compasses, and it is difficult to perceive any great value in the novelty, without that essential addition. The first of the two dialogues suggests a possible origin for some of Bruno's ideas on atomic geometry, as we find, attributed to Mordentius, two ideas that were applied to some purpose in Bruno's own mathematical works. They are (1) that of the measurement of inappreciable subdivisions of continuous quantities by integration, and (2) that of the impossibility of infinite division, the continuous being composed of discrete minima, beyond which no division can go, and the *minima* (like the *maxima*) being relative, differing in different subjects, so that, for example, what in *astronomy* is a minimal quantity may in *geodesy* be greater than the diameter of the earth.

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THE END

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FOOTNOTES:

- [1] Brunnhofer, p. 321, Appendix.
- [2] Sigwart, i. p. 118 (note 5).
- [3] Berti, *Vita di S. B.*, p. 28.
- [4] Bartholmèss, vol. i. p. 26.
- [5] Lagarde, 452. 23.
- [6] V. additional note.
- [7] Lagarde, *Op. Ital.*, p. 101.
- [8] *i.e.* Heightening of normal powers.
- [9] *Op. Lat.* ii. 2. 184.
- [10] On Bruno's family v. Fiorentino, in the *Giornale de la Domenica* (Naples), for Jan. 29, 1882.
- [11] *De Magia*, *Op. Lat.* iii. Op. 430, 431.
- [12] *De Immenso*, v. *Op. Lat.* i. 2. p. 120.
- [13] *De Immenso*, iii. (i. 1. 313).
- [14] Ct. the punning line "*Domini canes evangelium latrantur per totum orbem.*"
- [15] Berti, p. 50.
- [16] Cf. *Spaccio de la Bestia*, Lag. p. 552, 1.
- [17] Venetian Documents, No. 8.
- [18] Docs. 8 and 13.

- [19] *Vide* additional note.
- [20] Doc. 1 (Berti, p. 378).
- [21] Tasso came about the same time, to be repulsed as plague-stricken from the gates.
- [22] Doc. 9. Berti, p. 393 (a line is omitted in the 2nd Edition).
- [23] Lag. 147. 21.
- [24] Fra Paolo Sarpi was at this time teaching philosophy in one of the monasteries in Venice, but Bruno does not seem to have met him.
- [25] *Sig. Sig.* (*Op. Lat.* ii. 2. 191).
- [26] *Cena*, Lag. 143. 40.
- [27] Doc. 9.
- [28] *Giordano Bruno à Genève* (1579), par Théophil Dufour: v. Berti, pp. 449 ff.
- [29] From the Register of the Council.
- [30] Register of Consistory, 1577–1579.
- [31] Bartholmèss, i. pp. 62, 63 (with note).
- [32] *Vide De Umbris* (*Op. Lat.* ii. 1. p. 65, cf. p. 87).
- [33] Brunnhofer's *Giordano Bruno*, etc., p. 25.
- [34] Introd. to *De Umbris*.
- [35] Bartholmèss, I. 74.
- [36] *Vide Acrot. Camoer.* Epistle to the Rector of the University (Filesac.). *Op. Lat.* i. 1. 56, 57.
- [37] *Artificium Arist. Lull. Ram.* 1615.
- [38] Cf. *Orat. Consol.* (i. 1. 32).
- [39] *Op. Lat.* ii. 2. pp. 76–8.
- [40] *Cena*, L. 176, 37 ff.
- [41] *Teulet Papers*, ii. p. 570 (May 16, 1583).
- [42] *Op. cit.*, p. 693.
- [43] Camden's *Elizabeth*.
- [44] The MS. of *Dido*, which was acted by Christ Church men, is still preserved in the library of Christ Church.
- [45] Lag. p. 120 ff.
- [46] L. p. 220.
- [47] 1546–1628. Studied at University College; President of St. John's, 1572–7; Dean of Christ Church (to 1584); afterwards Archbishop of York: "One of a proper person (such people, *ceteris paribus* and sometimes *ceteris imparibus*, were preferred by the Queen) and an excellent preacher"—(Fuller, quoted in the *Dict. Nat. Biog.*)
- [48] Warden of New, 1573–99; Dean of Chichester, 1577.
- [49] *Vide Trig. Sigilli*, Dedication.
- [50] *Vide* add. note.
- [51] Doc. 9, *Berta*, p. 305. "Castelnuovo, in casa del qual non faceva altro se non che stava per il suo gentilhomo."
- [52] Preface, L. 305.
- [53] Lag. 264, 20.
- [54] L. 143.
- [55] L. 226. 25 ff.
- [56] Mauvissière's successor was nominated in Nov. 1584, although he did not leave until a year later.
- [57] *Vide* add. note.
- [58] First pointed out, I believe, by Mr. Whittaker in *Essays and Notices*, 1895 (v. the note to *Giordano Bruno*, p. 94).
- [59] Cf. the *Quarterly Review*, Oct. 1902. The references are *Tschischwitz: Shakespeare-Forschungen—Hamlet*, 1868; *W. König, Shakespeare-Jahrbuch*, xi.; *Frith's Giordano Bruno*; on the other side *Beyersdorff, Giordano Bruno und Shakespeare* (1889); *Furness* in the *New Variorum Shakespeare*.
- [60] *Vide* add. note.
- [61] Lag. 223. 4.
- [62] *Vide infra*, part ii. ch. 9.
- [63] In the *Aminta*.
- [64] *Sigillus* is really a diminutive of "Signum" in Bruno's view; "Seal" therefore means much the same as "Sign."
- [65] "Venezia" on the title-page.
- [66] Again "Venetia." The Introduction is translated in *A collection of several pieces*, by Mr. John Toland, 2 vols., London, 1726.
- [67] "*Parigi*." Translated, except for the introductory letter to Sidney, in *Sp. dalla Best*.

Triom., or the Expulsion of the Triumphant Beast, London, 1713; attributed to W. Morehead.

The Spaccio was in its outward form, no doubt, suggested by Lucian's *Parliament of the Gods*. Fiorentino has pointed out that Niccolo Franco had made use of a similar idea in a dialogue published in 1539, in which he described a journey to heaven, where he was at first refused admittance; he had a parley with the Gods, until, with the aid of Momus, he obtained permission to enter, conversed with Jupiter, received some favours, and returned. Franco was impaled in 1565 by Pope Pius V., hence perhaps the absence of his name in Bruno. Perhaps the idea of the Spaccio was also determined by a prophecy of the Bohemian Cipriano Leowicz ("On the more signal great conjunctions of the planets," 1564), that about the beginning of April 1584 would occur a reunion of almost all the planets in the sign of Aries, and it should be the last in that sign. It was inferred that the Christian religion would also come to an end then. This would agree with the reason given above for Bruno's preface, viz. that he was leaving England in 1584, Mauvissière's term having expired.

- [68] Lag. 417.
- [69] *Ib.* 408.
- [70] *Parigi* is on the title page.
- [71] *Op. Lat.* ii. 3, 237.
- [72] Also *Parigi*. Translated in "The Heroic Enthusiasts," an Ethical Poem, by L. Williams, London, 1887. (The Argument or Summary, and the Apology of Bruno, are omitted.)
- [73] Lag. 123. 3. Cf. *Her. Fur.* 747. 19—"le belle et gratiose Ninfe del Padre Tamesi," 749. 40, "Leggiadre Nimphe, ch' a le' herbose Sponde del Tamesi gentil fatte Soggiorno," and 753. 10.
- [74] Lag. 144. 10.
- [75] Lag. 406. 17 (*Spaccio*).
- [76] Lag. 292.
- [77] 521. 27 ff.
- [78] 551. 38, 522. 23, 550. 2, 490. 3.
- [79] *Salisbury Papers*, iii. p. 112.
- [80] Doc. 9.
- [81] Doc. 17. Berti, p. 426, 427.
- [82] Landseck's *Bruno*.
- [83] *Vide Op. Lat.* vol. iii. Introd. p. xxxix.
- [84] *Centum et Viginti Articuli De Natura et Mundo*, adv. Peripateticos, Paris, 1586; and "J. B. N. *Camoeracensis Acrotismus*, etc." Wittenberg, 1588. "*Camoeracensis*" qualifies Bruni,—"of the College of Cambray." *Acrotismus* is barbarous Latinising of Ακρόαισις.
- [85] *Op. Lat.* i. 1. 63.
- [86] i. 1. 65.
- [87] *Ib.* 68, 69.
- [88] *Figuratio Aristotelici Physici Auditus*, Paris, 1586. *Dialogi Duo de Fabricii Mordentis Salernitani prope divina adinventione ad perfectam cosmimetrae praxim*, Paris, 1586. *Vide* add. note.
- [89] Doc. 9.
- [90] Eglin, a pupil of Bruno, was Professor of Theology at Marburg in 1607 (Brunnhofer, p. 60).
- [91] Sigwart. The university has since been united with that of Halle, the seat being at the latter place.
- [92] *De Specierum Scrutinio et Lampade Combinatoria Raimundi Lulli*, "the omniscient and almost divine hermit doctor." Prague, 1588.
- [93] Krell was imprisoned, and put to death ten years later.
- [94] *Vide Spaccio*, Lag. 516. 11, and 553. 21 ff.
- [95] *De Specierum Scrutinio*, *vide supra*, p. 54.
- [96] Published 1589, Helmstadt.
- [97] Bk. iv. ch. 10.
- [98] Cf. Frith's *Bruno*, p. 200.
- [99] *Vide* Brunnhofer and Sigwart.
- [100] Censor's Register: Frankfort Archives.
- [101] Sigwart, and *Op. Lat.* vol. iii. introd. p. xxix.
- [102] Bassäus Catalogue of Frankfort Books from 1564-1592, printed 1592 (Sigwart).
- [103] Doc. 6 (Ciotto's evidence).
- [104] Doc. 8 (Bruno's own statements).
- [105] Sigwart, *Kl. Schriften*, i. p. 302.
- [106] *Vide Op. Lat.*, vol i., introd. p. xx.
- [107] Bertano described him as lecturing at Padua to some German scholars (Doc. 7). On *Besler*, and Bruno's connection with him, v. Stölzle, *Archiv f. Geschichte d. Phil.*, iii.

- [108] Riehl, *Giordano Bruno*.
- [109] Doc. 15, Morosini's evidence.
- [110] Doc. 17 (Bruno). Cf. 16 (Ciotto re-examined), and 9 (Bruno).
- [111] Doc. 10.
- [112] Ambassador in Paris during Bruno's first visit (1582).
- [113] The Nuncio was sometimes represented by his auditor, the Patriarch by his vicar.
- [114] *i.e.* orthodox, right-thinking.
- [115] Bruno refers to the Pythagorean doctrine, quoting the *Æneid*, vi. 724 ff.: *Principio cœlum ... mens agitat molem*.
- [116] *De Monade* (*Op. Lat.* i. 2. p. 415).
- [117] Doc. 17.
- [118] Doc. 24. Venetian State Archives.
- [119] Doc. 25. State Archives.
- [120] Docs. 26, 27.
- [121] Roman Documents, III.
- [122] It must not be left out of mind that documents have occasionally been tampered with, and statements put into the mouths of witnesses which are in substance false, as Fiorentino hints concerning these reports of Bruno's trial. But there is no special reason for doubt here.
- [123] It is officially stated that there are no further documents.
- [124] Wagner's introduction to Bruno's *Opere Italiane*, p. 7.
- [125] *Conferenza*, p. 86.
- [126] For the part of this letter relative to Bruno, v. Bartholmæss (with French translation), Berti and Frith.
- [127] The letter was translated into English by La Roche, *Memoirs of Literature*, vol. ii., and by Toland, *Misc. Works*, vol. i. Schopp refers to Bruno's death in a work published in 1611 (*i.e.* several years before the letter itself was published) as having occurred ten years earlier (Berti, p. 10).
- [128] Berti, p. 326, n. 1.
- [129] Pognisi, *Giordano Bruno e l' Archivio di San Giovanni Decollato*, Torino, 1891, and vol. iii. of *Op. Lat.* introd.
- [130] *Metam.* xv.
- [131] Cf. *Her. Fur.* 623. 20 ff.
- [132] Lag. 564. 25.
- [133] *E.g.* cf. *De Umbris*, p. 10 ff., and *Magia Math.*, *Op. Lat.* iii. 5. 506.
- [134] Lag. 141. 5.
- [135] *Cena*, Lag. 125. 12 ff.
- [136] Juvenal, i. 3. 300.
- [137] Lag. 129. 7.
- [138] Lag. 318. 5.
- [139] Lag. 619. 20. Cf. also 700. 25, 717. 39.
- [140] Lag. 718. 26.
- [141] Lag. 223. 14 ff., cf. 242. 35, and *De Minimo*, bk. iii. 1.
- [142] *De Minimo*, *Op. Lat.* i. 3, 135.
- [143] In his *De Orbitis Planetarum*, 1801, Hegel "demonstrated" that the number of planets could not exceed seven. Before it appeared, Piazzi had discovered Ceres.
- [144] *Art. Adv. Math. Epist. Ded.* (i. 3. 4).
- [145] *Sig. Sig.* (ii. 2. 192.)
- [146] Works published during Bruno's imprisonment, and posthumously.
- [147] Cf. *Op. Lat.* vol. i. pt. 4. Also in Gfrörer.
- [148] Cf. p. 67, l. 11.
- [149] Brunnhofer (p. 81) suggests that the first part contains the exoteric, the second the esoteric teaching of Bruno. But as Tocco (*Opere Latine di G. B.*, p. 136) rightly points out, some such knowledge of Aristotelian terms as that in Part i. would form a necessary preliminary to the study of philosophy in Bruno's time. He makes use of the Aristotelian terms to express ideas quite different from those of Aristotle.
- [150] *Op. Lat.* ii. 2. 333.
- [151] *Vide* Tocco, *Opere Inedite di G. B.* Napoli, 1891.
- [152] *Op. cit.* p. 77.
- [153] *Vide Op. Lat.* iii., Introduction by Vitelli; but according to Stölzle (*Archiv für Gesch. d. Phil.* iii. 1890) and Tocco (*Op. Ined.*, p. 99) they belong to the first stay in Paris. The latter adds that they may have been repeated in Wittenberg.
- [154] Under the heading "Time" (*de tempore*) there is a short treatise on Astrology.

- [155] Doc. 8: the words suggest a special training in Latin, Greek, Philosophy, and Rhetoric,—not the whole Trivium and Quadrivium of the ordinary education of the day, as Berti supposes.
- [156] Cf. *Op. Lat.* ii. 2. 61; ii. 3; i. 4. 39, 65, 69; i. 1. 256, etc.
- [157] i. 4. 21; i. 1. 223; i. 1. 231.
- [158] A compendium of Aristotle's *Physics*.
- [159] *Op. Lat.* i. 4. 131 ff.
- [160] (*De Immenso*, iii. 3), *Op. Lat.* i. 1. 340.
- [161] Lag. 131.
- [162] *Op. Lat.* ii. 2. 133.
- [163] Lag. 239.
- [164] *Ib.* 252. Cf. Bacon's *Nov. Org.* i. 54:—"Aristotle, who altogether enslaved his natural Philosophy to his Logic, and so rendered it nearly useless and contentious," (*vide infra*, ch. 9).
- [165] Lag. 256.
- [166] *Ib.* 280.
- [167] *Nov. Org.* i. 62.
- [168] (*De l' Infinito*), Lag. 324.
- [169] Lag. 231.
- [170] *Ib.* 183. Cf. *Op. Lat.* i. 1. 282, 288.
- [171] Cf. *Op. Lat.* i. 1. 96, 3. 26, 3. 271; i. 1. 291; i. 3. 26; iii. 70, etc.
- [172] Lag. 282.
- [173] *Op. Lat.* ii. 2. 196, and (*Her. Fur.*) Lag. 722. 35.
- [174] *Cena*, Lag. 237. 9. Cf. *Her. Fur.* Lag. 722. 35.
- [175] Lag. 256. 25, 273. 25. Cf. *Op. Lat.* i. 1. 377.
- [176] i. 1. 272.
- [177] i. 2. 148.
- [178] i. 3. 140.
- [179] *Causa*, Lag. 247.
- [180] *Op. Lat.* i. 3. 169.
- [181] Cf. *Her. Fur.*, Lag. 636. If not by Iamblichus, this work issued certainly from his school, to which Julian the Apostate belonged.
- [182] *E.g. Op. Lat.* i. 1. 376.
- [183] *Ibid.*
- [184] *Op. cit.*
- [185] *Op. Lat.* i. 2. 409.
- [186] Lag. 532.
- [187] *i.e.* creative or original.
- [188] *Spaccio*, Lag. 533. Bruno was probably acquainted with the *De arte cabbalistica* (1517) of Reuchlin the Platonist, and with Pico of Mirandula's *Cabalistarum selectiora obscurioraque dogmata*. Of the Cabala itself the first part (Creation) was published in Hebrew at Mantua 1562, a translation into Latin at Basle 1587: the second part, *The Book of Splendour*, Hebrew, 1560, a translation, not, as it seems, until the following century. It is unlikely that Bruno read Hebrew, although he makes use of Hebrew letters among his symbols. But there were many writings on the Cabala from which he could have derived his idea of their teaching—*e.g.* Agrippa's *Occulta Philosophia*, to which he was indebted for much of the *De Monade*. The Cabala (*i.e.* "traditional teaching") is a collection of dogmas made about the ninth and thirteenth centuries; it was certainly influenced by Neoplatonism, and contained the interpretation of creation as emanation in graduated series of beings from the one supreme Being, of the Logos or Divine Word as intermediary between the Supreme and the lower beings (*viz.* the material world and all sensible objects): the elements of the Logos are the Sephiroth, the ten numbers of Pythagoras, corresponding to the chief virtues or qualities; next to these are the ideas or forms, then the world-souls, and last of all material things.
- [189] *Causa*, Lag. 231.
- [190] *Op. Lat.* i. 2. 196.
- [191] *Ib.* ii. i. 48.
- [192] Plotinus, *Enneads*, ii. 4. 4; cf. Bruno's *Causa*, Lag. 267.
- [193] *Causa*, Lag. 271; cf. Plot. *Enn.* ii. 4. 3.
- [194] i. 2. 117.
- [195] *Vide* Munk, *Mélanges de Philosophie juive et Arabe*, Paris, 1589; and *Dictionnaire des sciences Philosophiques*, Paris, 1844-52.
- [196] Ibn Sina, 980-1037 A.D.; cf. *Op. Lat.* iii. 458, 475.
- [197] *Op. Lat.* i. 1. 223, called by Bruno *Hispanus*, but really an Arabian, Ibn Badja,—d. 1138.
- [198] A Jew, Ibn Gebirol, fl. 1050.

- [199] Al Ghazzali, 1059-1111 A.D.
- [200] Cf. *Op. Lat.* iii. 696.
- [201] Vide Wittman, *Giord. Bruno's Beziehungen zu Avencebrol* in the *Archiv für Geschichte der Phil.* 13. 2 (1900).
- [202] *Causa*, Lag. 253; cf. 246, and *Op. Lat.* iii. 696.
- [203] *Causa*, Lag. 265.
- [204] Cf. Wittman, *loc. cit.*
- [205] *Cena*, Lag. 170.
- [206] *Her. Fur.* Lag. 742. Algazel is connected with Averroes by Bruno in another argument against authority,—that the mere habit of and familiarity with a given belief does not authorise its truth, for “those who from boyhood and youth are accustomed to eat poison, come to such a state that it is transformed into a sweet and good nourishment for them, and on the contrary they come to abhor what is really good and pleasant according to common nature.”
- [207] A Latin translation of Averroes' *Commentaries* was published in 1472, and one of his criticisms of Algazel (*Destructio destructionis*) in 1497 and in 1527.
- [208] *Causa*, Lag. 271, and *Op. Lat.* i. 2. 411.
- [209] i. 1. 370.
- [210] *Causa*, Lag. 271: on Averroes cf. *Op. Lat.* i. 1. 221, 224, 337, 338, etc.
- [211] *Her. Fur.* Lag. 677.
- [212] *Op. Lat.* i. 1. 16. Albertus lived from 1193 to 1280 A.D. There are frequent references to the spurious writings attributed to him, in Bruno's *De Magia Mathematica*, etc.
- [213] i. 2. 415. Cf. *Sig. Sig.* ii. 2. 190, for a reputed miracle related of Saint Thomas.
- [214] Cf. the ridicule in Lag. 361 and 563.
- [215] *Causa*, Lag. 246.
- [216] Tocco, *Fonti piu recenti*, etc., p. 538.
- [217] Besides the several works on the Art of Reasoning, Lully had written also on theology and on medicine, and Bruno, in his (posthumous) *Medicina Lulliana*, gave a compendium of the latter group of writings.
- [218] *De Lampade Combinatoria*, *Op. Lat.* ii. 2. 234.
- [219] Faber Stapulensis (c. 1500), and Carolus Bovillus (c. 1470-1553). Both were rather followers of Cusanus.
- [220] *Op. Lat.* ii. 2. 242.
- [221] ii. 2. 61.
- [222] *Op. Lat.* ii. 2. 329, 3. 297.
- [223] *De Comp. Arch.* ii. 2. 42.
- [224] i. 1. 17. On Cusanus v. Falckenberg, *Grundzüge der Philosophie des Nicolaus Cusanus*, 1880, Uebinger, *Philosophie des N. C.*, 1880, and *Gotteslehre des N. C.*, 1888, F. J. Clemens, *Giord. Bruno und Nikolaus von Cusa*, 1847, Scharpff, *Des N. von C. wichtigste Schriften*, 1862.
- [225] *Infinito*, Lag. 348.
- [226] Cf. Cusanus' *De docta ignorantia*.
- [227] *Spaccio*, Lag. 420.
- [228] *De docta ignorantia*, i. 7. *Alchoran*, ii. 7, 8.
- [229] *Doct. ignor.* ii. 7.
- [230] *De Possess.*
- [231] *Alchoran*, ii. 6.
- [232] Cusanus, *De Ludo globi*, bk. i.
- [233] Cusanus, *De Idiota*, iii. (*De Mente*, 9).
- [234] Cusanus, *De Conjecturis*, i. 4.
- [235] *Id. De Visione Dei*, 10.
- [236] *Id. De Venatione Sapientiae*.
- [237] *De occulta philosophia*.
- [238] *De Vanitate Scientiarum*.
- [239] Tocco. *Fonti piu recenti*, etc. p. 534.
- [240] Theophrastus Bombastes von Hohenheim, 1493-1541.
- [241] Lag. 247.
- [242] i. 1. 17. In the *Sig. Sig.* ii. 2. 181, he is put forward as an example of the value of the life of solitude:—“Paracelsus, who glories more in the title of hermit than in that of doctor or master, became a leader and author among physicians, second to none”—a reference to the title of *Eremita*, which Paracelsus took, however, from his birthplace Einsiedeln, and to his well known and strongly expressed contempt for the learning of books.
- [243] 1501-1576 A.D.
- [244] The first two books of the *De natura rerum* were published in 1565.

- [245] *Op. Lat.* i. 1. 17.
- [246] *Cena*, Lag. 124.
- [247] Bruno praises and gives long extracts from Copernicus in the *De Immenso*, bk. iii. ch. 9.
- [248] *De la Causa*, etc.
- [249] Lag. 229.
- [250] Lag. 229.
- [251] *De la Causa, principio et uno*, 1584.
- [252] Lag. 230.
- [253] *Ib.* The terms correspond to Aristotle's ἀρχή and αἴτιον, respectively; no clear distinction was drawn between their meanings by Aristotle, however. Bruno's aim is to contrast the inwardly active, *immanent* principle of life and of movement with the *transient*, outwardly active cause, and to interpret nature, as a whole, as the manifestation of some such inward principle, rather than as a mechanical system to which the impulse was given from without.
- [254] Lag. 231. 38. The *Intellectus* is identified also with the Pythagorean world-mover (Verg. *Aeneid*, vi. 726); the "World's Eye" of the Orphic Poems; the "distinguisher" of Empedocles; the "Father and Progenitor of all things" of Plotinus.
- [255] Lag. 232. 24.
- [256] Lag. 232. 33 ff.
- [257] On Perfection, *vide infra*, p. 199.
- [258] Lag. 233. 27. Cf. Arist. *De Anima*, ii. 1.
- [259] Cf. Arist. *De Anima*, ii. ch. 1 and 2.
- [260] Lag. 238. 34.
- [261] Cf. *Lucretius*.
- [262] Lag. 202. 40.
- [263] Cf. *e.g.* 238. 12, when the form or soul is said to be *one* in all things, and differences are said to arise from the dispositions of *matter*.
- [264] *Vide infra*, ch. 5.
- [265] Lag. 240. 28.
- [266] Lag. 242. 7.
- [267] *Epist. Proëm.*, Lag. 203. 19. When he wrote the *De Minimo* the question had at least presented itself to Bruno as requiring solution: *vide* bk. iv. (*Op. Lat.* i. 3. 274). Individual differences are referred to two possible sources—the different compositions of the forms or ideal types, and the varied dispositions of matter; and it is suggested that the latter of these may derive from the former.
- [268] Lag. 246. 37.
- [269] Lag. 248. 17. The apparent conflict between this and the preceding pages will resolve itself below.
- [270] Lag. 249. 35.
- [271] Pseudo-Timaeus, 94 A.
- [272] Lag. 253. 11.
- [273] Lag. 257, 258.
- [274] Lag. 258–260.
- [275] Lag. 261.
- [276] Lag. 266.
- [277] *Supra*, ch. i. Cf. Plotinus, *Ennead*, ii. 4. 4.
- [278] Lag. 269.
- [279] Lag. 268–271. Bruno refers here to Averroes, and especially to Plotinus, v. ch. i.
- [280] Compare the ambiguity in Spinoza's definition of mind in relation to body.
- [281] Lag. 273, 274.
- [282] Lag. 277.
- [283] Lag. 278. 4.
- [284] Lag. pp. 278–281.
- [285] Lag. 285. 35.
- [286] Lag. 288. 5.
- [287] Lag. 288, 289.
- [288] *Op. Lat.* i. 3. 147. 1.
- [289] *De Immenso: de l' Infinito: Acrotismus*, etc.
- [290] *Op. Lat.* i. 1. p. 202.
- [291] *Op. Lat.* i. 1. p. 203.
- [292] *De Immenso*, bk. i. ch. 6.
- [293] *Op. Lat.* i. 1. p. 222.

- [294] P. 227.
- [295] P. 231.
- [296] *Op. Lat.* i. 1. p. 232. On *Space*, cf. *Acrot.* Art. 31, 33–37 (Vacuum, Ether, etc.), and *Infinito*, Lag. 365.
- [297] P. 234.
- [298] P. 235.
- [299] Cf. *Infinito*, Lag. 322. 1 ff. for the argument.
- [300] Bk. ii. ch. 2.; cf. *Infinito*, Dial. v., Lag. 387.
- [301] *De Imm.* i. 1. 264; cf. *Inf.* 392. 15.
- [302] Bk. ii. ch. 4 (267 ff.).
- [303] Bk. ii. ch. 6.
- [304] Ch. 7. (p. 278); cf. *Infinito*, Lag. 335 ff.
- [305] *Vide infra*, ch. 5.
- [306] *Op. Lat.* i. 1. p. 279.
- [307] *Ib.* p. 281.
- [308] Bk. ii. ch. 8 (p. 283); cf. *Op. Lat.* i. 4. 216, and *Infinito*, Lag. 344 ff. 338.
- [309] *Op. Lat.* i. 1. p. 284.
- [310] P. 285.
- [311] Bk. ii. ch. 10. p. 293.
- [312] Bk. ii. ch. 11.
- [313] P. 300 ff.
- [314] Bk. ii. ch. 12. 302 ff.
- [315] Bk. ii. ch. 13.
- [316] Cf. also *infra*, p. 199 ff.
- [317] *De Imm.* bk. i. ch. 10. pp. 235–8; cf. *Infinito*, 312 f., 316. Bruno does not use the term “principle of sufficient reason”: his principle is the inverse of that of Leibniz—“whatever has not a sufficient reason for existing is necessarily non-existent,”—Bruno’s being that “whatever has not a sufficient reason for non-existence (*i.e.* whatever is possible) necessarily exists.”
- [318] *De Imm.* bk. i. ch. 11. p. 239; *Infin.* 314 f.
- [319] *De Imm.* bk. i. ch. 11. p. 241.
- [320] *Ib. Schol.* ch. 11. pp. 241, 242.
- [321] P. 242 ff.
- [322] Cf. *Infinito*, Lag. 316. 21.
- [323] No. 13 states that the worlds could not interfere with one another, since space is infinite.
- [324] No. 18 denies that the perfection of the world in *one* space should either add to or detract from the perfection of another world in other space or render it less necessary.
- [325] Bk. i. ch. 12.
- [326] P. 245.
- [327] *Op. Lat.* vol. i. pt. 2. p. 310.
- [328] *Ib.*, ch. x. p. 312 ff.
- [329] Cf. *Op. Lat.* i. 2. p. 259.
- [330] P. 260. On *Time* cf. *Acrot.*, Arts. 38–40.
- [331] *Op. Lat.* i. 2. p. 274.
- [332] *Op. Lat.* i. 2. p. 307.
- [333] P. 309 ff.
- [334] P. 311.
- [335] P. 312. Cf. Fiorentino’s *Telesio*, p. 85. On Perfection, and the Perfection of the Universe, cf. Bruno’s *Acrot.*, Arts. 17 and 51.
- [336] Cf. Spinoza.
- [337] Allusions to practices of the Black Art.
- [338] *Op. Lat.* i. 2. p. 316.
- [339] *De Immenso*, iii. ch. 1. (p. 313 ff.).
- [340] P. 317.
- [341] Bk. iii. ch. 2.
- [342] Ch. 4. p. 341 ff.
- [343] So Bruno explained the phases of the moon.
- [344] Bk. vi. ch. 17. p. 210.
- [345] Ch. 18. p. 218.
- [346] *Ib.* p. 220. If the flow of change were arrested at any one point in Nature, it would ultimately be arrested throughout the whole.

- [347] Bk. iv. ch. 1. (*Op. Lat.* i. 2. p. 6).
- [348] P. 7.
- [349] P. 8.
- [350] P. 152.
- [351] After Empedocles.
- [352] *De Imm.* bk. iii. ch. 5.
- [353] *Op. Lat.* i. 1. p. 353.
- [354] P. 354.
- [355] *Op. Lat.* i. 1. p. 329.
- [356] The saying of King Alfonso in this regard is worth repetition,—that “had he been consulted at the creation of the world he would have spared the Maker some absurdities.”
- [357] *Op. Lat.* i. 1.. 360.
- [358] P. 362, cf. *supra*.
- [359] P. 369 (ch. 7)—

“Promptius utque magis quâvis pernixe volucrum
Versum quaque meent, immensumque aera findant
Intima nempe animae vis concitat illa,” etc.

- [360] P. 372.
- [361] *De Imm.* bk. iv. ch. 3.
- [362] Ch. 8 (p. 42 f.).
- [363] Ch. 4, Schol. cf. bk. iv. ch. 13 (*Op. Lat.* i. 2. 67).
- [364] *De Imm.* bk. vi. ch. 19.
- [365] *Op. Lat.* i. 2. p. 230.
- [366] 1531, 1532, 1572, 1577, 1585. (Bk. v. chs. 9 and 13.)
- [367] *E.g. De Imm.* bk. iv. ch. 5.
- [368] *Ib.* ch. 7.
- [369] *De Imm.* bk. v. ch. 2 (p. 119).
- [370] *Op. Lat.* i. 2. p. 147.
- [371] *Cena*, Lag. 183. 30.
- [372] Lag. 184. 35; *Acrot.* Art. 68; *Infinito*, 370. 29, 375. 6, 390. 34; *Acrot.* Art. 80 (i. 1. 189), etc.
- [373] *De Imm.* bk. v. ch. 1.
- [374] *Cena*, Lag. 185. 4.
- [375] *Cabala*, p. 587. 23 ff.
- [376] On movements of suns and earths, as determined by the soul, and the need of mutual sustenance, cf. *Acrot.* Arts. 65, 66, 67, 72.
- [377] Cf. *Cena*, Lag. 166. 32, where it is suggested that the Alps and Pyrenees once formed the summit of a very high mountain, gradually broken up, through continuous geological changes, into the lesser forms we now call mountains. So the whole of Britain is a mountain, rising up out of the sea; its summit is the highest point, Scotland.
- [378] *De Imm.* bk. iv. ch. 18.
- [379] Cf. *Infinito*, Lag. 351. 30, on the gradual changes of the earth’s surface, which Bruno infers are present, although imperceptible, in other stars also. Cf. *ib.* 332. 15, and *De Imm.*, bks. iv. and vi.; *Acrot.* Arts. 48 and 74. In *Inf.* 353. 30, rocks, lakes, rivers, springs, etc., are compared to the different members or organs of the human body: the accidents or disturbances of them,—clouds, rain, snow, etc.,—to the diseases of the human body.
- [380] *Acrotismus: De Minimo*.
- [381] Lag. p. 158.
- [382] Lag. 164. 18.
- [383] *Monadology*, § 70. Cf. also §§ 64, 66, 67–69.
- [384] Lag. 332.
- [385] Lag. 357. 10; cf. 334. 24, 359. 13, 393. 5, and *Her. Fur.* 738. 17.
- [386] Lag. 367. 12, 375. 37.
- [387] Lag. 455. 37.
- [388] Contrast Tocco, *Opere Latine di G.B.*, part 5.
- [389] Fiorentino’s Preface to *Op. Lat.* vol. i. p. xxviii.
- [390] *Acrot. Cam.* Art. 42, p. 154.
- [391] *Acrot. Cam.* Art. 65.
- [392] *Vide De Min.* p. 211 (bk. ii. ch. 6).
- [393] *De Min.* bk. i. ch. 9.

- [394] *Ib. Schol.* (p. 170).
- [395] Ch. 10.
- [396] *Op. Lat.* i. 3. p. 209.
- [397] This thought recurs in Leibniz.
- [398] *Op. Lat.* i. 3. pp. 209-211.
- [399] *Op. Lat.* i. 3. p. 208.
- [400] P. 147. 1.
- [401] P. 149. 3.
- [402] *De Min.* bk. ii. ch. 3, pp. 191 ff.
- [403] P. 195. 20.
- [404] Ch. 4.
- [405] *Op. Lat.* i. 3. p. 199. 15.
- [406] P. 200. 20.
- [407] P. 200. 28, 201. 4; cf. 223. 11.
- [408] *De Min.* bk. ii. ch. 5.
- [409] P. 203. 27.
- [410] *Op. Lat.* i. 3. p. 207. 5 (cf. p. 302, bk. v. ch. 2).
- [411] P. 208. 9.
- [412] P. 207.
- [413] *De Min.* bk. i. ch. 5.
- [414] Arist. *Phys. Z.* 1. 231, a 23.
- [415] *De Min.* p. 153. 22 ff.
- [416] P. 158.
- [417] *De Min.* P. 173. 9; cf. 173. 7, 180.
- [418] P. 160.
- [419] P. 161.
- [420] P. 162.
- [421] *De Min.* i. ch. 8.
- [422] Ch. 11. p. 176.
- [423] Ch. 12.
- [424] Ch. 2. p. 140.
- [425] *De Min.* i. ch. 14. p. 184. 23.
- [426] ii, ch. 8. p. 214.
- [427] iii. ch. 12. p. 267.
- [428] Lasswitz, p. 26, note, where it is said the eighth triangle and the sixth circle are equal.
- [429] *Op. Lat.* i. 3. p. 217. 9.
- [430] Pp. 219, 221.
- [431] *Op. Lat.* i. 3. p. 243 (bk. iii. ch. 3).
- [432] P. 245 (bk. iii. ch. 4.), cf. p. 323 (bk. v. c. 9), 324. (c. 10).
- [433] P. 306 (bk. v. ch. 5.).
- [434] P. 270. 14.
- [435] Cf. *Art. adv. Math.* ii. The figures there are slightly different, and named *Figurae Mentis, Intellectus, Amoris.*
- [436] Lag. 407. 25.
- [437] Lag. p. 407. 7.
- [438] P. 406. 29.
- [439] Lag. 427. 19.
- [440] The constellations as typifying vices were to be expelled from the heavens and replaced by the personified virtues.
- [441] Lag. p. 445.
- [442] Lag. p. 446. 1 ff., cf. 447. "*Questa fetida Sporcaria del mondo,*" and 467.
- [443] P. 462. 30.
- [444] P. 468. 25.
- [445] Lag. p. 543. 35 ff., cf. 544. 20, 546. 16, and esp. 554. 13 ff. (*Chiron* the Centaur), for other references to the Church and its beliefs. Bruno could not have written the last passage while retaining any shred of genuine belief in the divinity of Christ. v. also 534. 32.
- [446] *Cabala*, p. 565.
- [447] Cf. the poem in the *Cabala*, p. 564. 25, *O' Sant' Asinita*, and *Cena*, Lag. 147. 21 (the Ark of Noah), etc.

- [448] The lists given in the argument are not quite the same as those in the body of the work, and both differ to some extent from the list of vices which is put in the mouth of Jupiter at the beginning, p. 439.
- [449] From Lag. p. 439.
- [450] Cf. also p. 488. Another list of virtues is in the eulogium on Julius in the *Oratio Consolatoria* (*Op. Lat.* i. 1. 47 ff.). There also the constellations typify different virtues.
- [451] In the *De Lamp. Comb.*, are two lists of virtues and vices, after Lully; with each virtue are given the two vicious extremes, in Aristotelian fashion. (*Op. Lat.* ii. 2. 257).
- [452] Lag. 489. 18 (*Sub Lyra*). They are *Arithmetica, Geometria, Musica, Logica, Poesia, Astrologia, Physica, Metaphysica, Ethica*.
- [453] Lag. p. 461. 11 ff.
- [454] Pp. 461, 462.
- [455] In contrast with *St. Luke* 15. 7.
- [456] Reading *conversation* for *conservation*.
- [457] Lag. pp. 464, 465.
- [458] Lag. pp. 465, 466.
- [459] P. 527.
- [460] Pp. 520, 521.
- [461] *Op. cit.* p. 794.
- [462] Compare the picture of Avarice in *Spaccio*, pp. 477, 478, with Shakespeare's *Shylock*.
- [463] *Cabala*, p. 576. 31.
- [464] P. 500. 40.
- [465] Cf. p. 535. 4, and 541. 35,—“*Escremento de l' Egitto*,” which may not mean more than outgrowth or offshoot of Egypt, although it has been interpreted otherwise.
- [466] P. 542. 18.
- [467] *Spaccio*, p. 526. 11; Clemens' translation (*op. cit.* p. 172) gives this saying an unnecessarily sinister meaning.
- [468] *De Vinculis in genere* (*Op. Lat.* iii. p. 697. 26).
- [469] Lag. p. 503. 20.
- [470] From Tasso's *Aminta*, act i. *sub fin.*—Bruno hardly ever mentions the authors of the poems in his ethical works, so that the layman in literature has great difficulty in knowing which, if any, are his own. Thus Rixner and Siber translate the above, and give it as Bruno's (*op. cit.* p. 230). In the fourth line Bruno reads “E 'n” for “Ma 'n.”
- [471] Cf. *Infinito*, p. 398. 16.
- [472] Cf. *De Imm.* vii. 16 (*Op. Lat.* i. 2. p. 278).
- [473] Lag. p. 507. 6.
- [474] P. 507. 14.
- [475] *Vide infra*, ch. vii., *re* transmigration.
- [476] Lag. p. 586. 11.
- [477] Lag. p. 586. 35 ff.
- [478] *Ib.* p. 469. 7.
- [479] *Sextus Math.* xi. 51–58. Crantor was one of the Old Academy, and wrote a commentary on the *Timaeus*, as well as some ethical works, of which that “On Mourning” seems to have been most in vogue. The goods of the soul were placed in the following order of merit by him:—Virtue, Health, Pleasure, Riches.—*Vide* Zeller, ii. 696.
- [480] Lag. p. 487, 488.
- [481] P. 492 (*Cassiopoeia*).
- [482] P. 493.
- [483] *Vide* Lag. pp. 457 ff.
- [484] *Vide supra*, ch. 2. and cf. *Cabala*, Lag. 578. 35.
- [485] A reminiscence of Aristotle's φρόνησις.
- [486] Lag. 458. 459.
- [487] Lag. 459. 460.
- [488] There is a mingling, in Bruno's use of this word, of meanings derived from ἥρωσ, and from Plato's ἔρωσ.
- [489] Lag. 717. 39 ff.
- [490] Lag. 634. 4.
- [491] 634. 22.
- [492] Lag. 635.
- [493] 649, 650.
- [494] 626, 20 *f.*
- [495] Lag. 639. 22 ff.; cf. *Sig. Sig.* § 48, for the first kind of furor (*Op. Lat.* ii. 2. 191).
- [496] Lag. 672. 1.

[497] Cf. the Sonnet on p. 631:—

Amor per cui tant' alto il ver discerno,
Ch' apre le porte di diamante nere,
Per gl' occhi entra il mio nume, et per vedere
Nasce, vive, si nutre, ha regno eterno,
Fa scorgere—quant' ha 'l ciel, terr' et inferno.

[498] Lag. 628. 18.

[499] Lag. 639.

[500] Lag. 672. 29.

[501] 646. 2 ff.

[502] Lag. 646, 647.

[503] 647. 34 ff.; cf. the Sonnet (Tansillo's) on p. 648:—

Poi che spiegat' ho' l' ali al bel desio,
Quanto piu sott' il pie l' aria mi scorgo,
Piu le veloci penne al vento porgo,
Et spreggio il mondo, et vers' il ciel m' invio.

* * * * *

Fendi sicur le nubi, et muor contento;
S' il ciel si illustre morte ne destina.

[504] *Alle selve i mastini e i' veltri slaccia Il grovan Atteon, etc.*, p. 651.

[505] Lag. 651, 652.

[506] 653. 6.

[507] Lag. 654, 655.

[508] 658. 16.

[509] 731. 9 ff.

[510] *E.g.* darkness is *privatively* infinite, although it has a limit in light, a positive something.

[511] *E.g.* light is *positively* infinite; its limit—darkness—is privation.

[512] Lag. 731.

[513] Lag. 662, 663.

[514] 701. 30 ff.

[515] Lag. 732. 23; the terms correspond to δύναμις and ἐνέργεια, or ὕλη and εἶδος, respectively.

[516] 647. 7.

[517] Lag. 744. 1 ff.

[518] 696. 24; cf. 681. 22.

[519] 705. 35.

[520] 716. 14.

[521] Lag. 663. 36; cf. 666. 5.

[522] P. 680. 2 ff.

[523] Cf. also *Sigillus Sigillorum* (ii. 2. 192), where Polemon and Laurentius are added to the above list. The highest kind of "contraction" or concentration is the subject, viz. that which is proper to philosophers. Cf. also *De Vinculis in genere* (vol. iii. p. 657). Diogenes the Cynic and Epicurus are placed side by side as having held that they had attained the highest good in this life possible to man, when they could keep the mind free from pain, fear, anger, or other melancholy passions and preserve it in a certain heroic delight. By this contempt of the ignoble things in this life, viz. those subject to change, they protested that they had attained, even in this mortal body, to a life similar to that of the gods.

[524] Lag. 700. 35; cf. 681. 19.

[525] P. 700. 14, 701. 4 ff.; cf. also 710. 11. The divine beauty excludes the possibility of our loving in its stead any other object. Also 713. 30.

[526] *Op. Lat.*, ii. 2. 195.

[527] Lag. 704. 10.

[528] Lag. 699. 3.

[529] P. 742. 24; cf. also 723. 28 and 724. 17.

[530] Lag. 741. 14.

[531] *Op. Lat.* iii. 158.

[532] *Op. Lat.* i. 3. 4 (Letter to Rudolph II., prefixed to the *Art. adv. Math.*).

[533] Lag. 452. 3 ff.

[534] Cf. Lucretius, ii. 1093 ff.

[535] Lag. 454. 6.

- [536] Lag. 455. 35. Cf. *De Immenso*, ii. 13. 310, 311.
- [537] Lag. 456. 7.
- [538] Cf. the mockery of *Momus* in the *Spaccio* (*sub Orion*, Lag. p. 543).
- [539] *Sig. Sig. Op. Lat.* ii. 2. 190.
- [540] *Orat. Consol. Op. Lat.* i. 1. 51; cf. i. 3. 4.
- [541] Cf. Lucretius, ii. 646: “*Omnis enim per se divom natura necessest*,” etc.
- [542] Lag. 463. 464.
- [543] *Cena*, Lag. 169. 17 ff.; cf. Spinoza, *Tractatus Theologico politicus*, esp. ch. 14 and 15, and preface, § 24: “*Scripturam rationem absolute liberam relinquere et nihil cum philosophia commune habere.*”
- [544] Cf. what is said of the danger of preaching determinism to the many, in *Inf.*, Lag., 317. 11, and *Her. Fur.*, Lag. 619. 20.
- [545] Giordano Bruno’s, *Weltanschauung*, etc., pp. 23, 24.
- [546] *Cena*, Lag. 171, 172.
- [547] *Vide* Berti, Docs. xi. and xii.
- [548] Comp. *Arch. art. Lull., Op. Lat.* ii. 2. 42.
- [549] *Op. Lat.* ii. 2. 78 (preface to *Triginta Sigilli*); cf. i. 1. 82 (*Acrotismus*), and the *Spaccio* (*supra*, p. 253).
- [550] *Causa*, Lag. 267. 7.
- [551] Lag. 693. 22.
- [552] Cf. the passage in the *Infinito* referred to above, Lag. 317. 11.
- [553] *Op. Lat.* i. 3. 6.
- [554] *E.g.* by Sigwart. Cf. *supra*, p. 75.
- [555] *Summa, Op. Lat.* i. 4. 100, 101 (sub. *Evidentia*).
- [556] *Loc. cit.* p. 99, sub *Fides*.
- [557] *Ib. s. Auctoritas*; cf. *Causa*, Lag. 271. 40.
- [558] *E.g. Inf.* Lag. 378. 16.
- [559] Cf. Tocco, *Conferenza*, p. 50 ff.
- [560] Lag. 529 ff.
- [561] *Spaccio*, Lag. p. 530.
- [562] *Spaccio*, 531.
- [563] *De Immenso, Op. Lat.* i. 2. 172.
- [564] *De Immenso, Op. Lat.* i. 2. 284 f.: “Every land produces all kinds of animals, as is clear from inaccessible islands, nor was there one first wolf, or lion, or bull, from which all wolves, lions, and cattle are descended and transported to these islands, but at every part the earth from the beginning has given all things,” etc.
- [565] Cf. *Spaccio*, Lag. 411. 9; *Her. Fur.* 662. 22; *Cantus Circaeus* (*Op. Lat.* ii. 1); *De Minimo* (i. 3. 207); *De Monade* (i. 2. 327), and iii. 261, 653.
- [566] Cf. Plato’s *Phaedrus*, § 61.
- [567] *Cabala*, Lag. 584.
- [568] Lag. 242. 3.
- [569] *Causa*, Dial. 4; esp. Lag. 265, 38 ff.
- [570] *Cena*, Lag. 128. 5; cf. *Spaccio*, 533. 16, 539. 2, and *Op. Lat.* i. 3. 146.
- [571] Lag. 164. 18 ff.
- [572] Lag. 202. 39 ff., 238. 27 ff., 303. 17, 317. 7, 409. 13, 547. 16; *Op. Lat.* i. 3. 142.
- [573] *De Umbris* (ii. 1. 46).
- [574] *Inf.* 303. 21.
- [575] Lag. 66. 7.
- [576] Cf. Bartholmèss (vol. i. p. 124), who refers to Cardan and Campanella as offering a similar “proof” of immortality.
- [577] *De Imm.*, *Op. Lat.* i. 1. 205.
- [578] *De Minimo*, bk. i. (i. 3. 143). There also it is said that the transformations are not fortuitous, but depend on the character of the life that has been lived, as Pythagoras and the Platonists taught.
- [579] Bruno “inclines” to this view only in one of his latest works, the *Lampas* (vol. iii. 59), but it is clearly implied in the *De Minimo*.
- [580] *De Minimo*, ii. ch. 6 (*Op. Lat.* i. 3. 208 ff.). Cf. i. 2. 80: “The seats of the blessed are the stars; the seat of the gods is the ether or heavens; for the stars I call gods in a secondary sense; the seat of God is the universe, everywhere, the whole immeasurable heaven—empty space, of which he is the fulness.” For Bruno’s *Demonology*, *vide* i. 2. 61 (*De Immenso*, iv. 11), and i. 2. 399 (*De Monade*).
- [581] *Lampas, Op. Lat.* iii. 48; cf. *Her. Fur.* Lag. 741. 15.
- [582] *Her. Fur.* Lag. 721. 33.

- [583] *Lampas*, *Op. Lat.* iii. 21; cf. 23.
- [584] *Ib.* p. 108.
- [585] *Op. Lat.* i. 1. 205.
- [586] *Op. Lat.* i. 2. 51; i. 1. 68.
- [587] i. 2. 151.
- [588] i. 1. 241.
- [589] *De Immenso*, bk. i. ch. 10–13.
- [590] *Op. Lat.* i. 1. 68, etc.
- [591] Cf. *Op. Lat.* ii. 3. 90 (*De Imag. Comp.*). “Intellect” is here used in a general sense, not in the special one of “intuitive thought.”
- [592] *Summa*, *Op. Lat.* i. 4. 117. It does not imply their formal identity.
- [593] *Art. adv. Math. Op. Lat.* i. 3. 16.
- [594] i. 2. 346.
- [595] i. 4. 73.
- [596] i. 4. 95.
- [597] For Bruno’s revolt against the mystical in Neoplatonism, cf. *De Imm.* v. 1. 1 (*Op. Lat.* i. 2. 118), and cf. viii. p. 298 ff. 313; *De Mon.*, p. 410.
- [598] *Op. Lat.* i. 4. 79.
- [599] *Ib.* 83.
- [600] *Ib.* 85.
- [601] *Ib.* 86.
- [602] *Op. Lat.* i. 4. p. 99. God is not, however, passively comprised: cf. iii. 509 (*De rerum princip.*): “*Mens eminentius tota in toto ita ut etiam sit tota extra totum et supra totum*,” etc.
- [603] *Op. Lat.* iii. 42 (*Lampas*), cf. i. 4. 85, 86.
- [604] i. 3. 146, 147 (*De Min.*)
- [605] *Summa*, *Op. Lat.* i. 4. 93, 95.
- [606] *Lampas*, *Op. Lat.* iii. 45.
- [607] “Scepsius,” behind whose authority Dicson shelters, is, according to G. P., Dicson himself.
- [608] Ellis and Spedding, ii. 13.
- [609] *Historia Ventorum*, Ellis and Spedding, ii, p. 51; cf. *Nov. Org.* ii. 12. The source of the Mount Athos legend is certainly Aristotle’s *Problemata* (xxvi. 39), while that for Olympus is either Solinus, or more probably Bruno, in the *Cena de le Cenere* (Lag. 167. 13). Bruno, on his part, refers to Alexander of Aphrodisias; it is not to be found, however, in Alexander’s commentary upon the *Meteorologica* (E. and S. refer to Ideler, i. 148).
- [610] *Nov. Org.* i. aph. 45.
- [611] *Ib.* ii. 9.
- [612] *De Augm.* i. p. 466; cf. Bruno’s *Cena*, Lag. 177. 27. Elsewhere, however, Bacon condemns the habit of “some of the moderns,” who have attempted to base natural philosophy upon the first chapter of Genesis and the Book of Job, and other sacred scriptures.—*Nov. Org.* i. ax. 65.
- [613] *De Augm.* i. 479, and Bruno, *passim*.
- [614] *Nov. Org.* i. ax. 84; cf. 77 (the argument *ex consensu*), and *De Augm.* i. p. 458. In their note E. and S. refer to Esdras, c. 14, v. 10: “the world has lost its youth, and the times begin to wax old”; and to Casmann’s *Problemata Marina* (1596), as well as to Bruno’s *Cena* (1584).
- [615] *Nov. Org.* i. 89.
- [616] *Ib.* i. 65.
- [617] *Nov. Org.* i. 63; cf. also 71.
- [618] *Ib.* i. 45.
- [619] *Nov. Org.* ii. 15. It was a scholastic distinction; E. and S. illustrate it from Thomas Aquinas’ *Summa Theologiae*, I^{ma}, q. 45 (E. and S. i. p. 259).
- [620] *Ib.* ii. 1.
- [621] *E.g. ib.* i. 66, where are added “the appetite a thing has to return to its natural dimension or extension (viz. Elasticity), the appetite to conjugate with masses of its own kind, as the dense to the sphere of the earth, the rare to the sphere of the sky.” These are described as really “physical” kinds of motion, not, as Aristotle’s are, “logical” and “scholastical.” Cf. the *Natural History*, E. and S. ii. 600, 602; and Bruno, *supra*.
- [622] *Nov. Org.* ii. 8.
- [623] *Vide* Bacon’s *Essay on the Vicissitude of Things*; and for his Atomism, the *Historia Densi et Rari* (E. and S. vol. ii.), and *Cogit. de Natura Rerum* (*ib.* vol. iii.).
- [624] *Nov. Org.* i. 48.
- [625] *De Augm.* vi. ch. 2.
- [626] *Ib.* v. ch. 5.

- [627] Berti, *Vita di G. B.* p. 9.
- [628] Vide Cay von Brockdorff, *Galilei's Philosophische Mission* (Vierteljahrschrift für Wiss. Philos. und Sociol., 1902).
- [629] Vide the *Discorsi*: and cf. the truculent Brunnhofer: "*Galileo, der Bruno Zugleich ausbeutete und ignorirte*" (*op. cit.*, p. 69).
- [630] Vide Sigwart, *Kleine Schriften*, vol. i., on Kepler: he refers to *Opera*, i. p. 688, and vi. p. 136.
- [631] *Fiorentino*, in Bruno, *Op. Lat.*, vol. i. p. xix. The full title of Vanini's work is, "Amphitheatrum aeternae providentiae divino-magicum, christiano-physicum, necnon astrologo-catholicum, adversus veteres philosophos, Atheos, Epicureos, Peripateticos et Stoicos. Auctore Julio Cæsare Vanino, Philosopho, Theologo, ae Juris utriusque Doctor. Lugduni, 1615." With his remark compare Campanella, *Quidam Nolanus* (Metaphys. ii. 1. 5).
- [632] *Censura Philosophiae Cartesianae*, 1689.
- [633] *Op. Lat.* i. 3. 4.
- [634] *Contre l'impiété des désistes, athées et libertins de ce temps* (1624, p. 229, 234, etc.).
- [635] Vide Bartholmèss, i. pp. 257, 259. Descartes, like Galilei, was careful not to prejudice himself in the eyes of the Church. For Gassendi, v. Gentzken, *Hist. Phil.*, p. 154.
- [636] *Exercitationes paradoxicae adversus Aristoteleos*.
- [637] Cf. Brunnhofer, p. xix: "The longer I consider the question, the more probable it appears to me that Spinoza would have been impossible, historically, if Bruno had had time to develop the rich fulness of his ideas in a systematic form." Cf. p. 81, where, however, he lays too much stress on verbal analogies between Bruno's *Summa* and the *Ethica* of Spinoza.
- [638] Spinoza's *Neuentdeckter Tractat von Gott, dem Menschen, und dessen Glückseligkeit*, Gotha, 1866, and his translation of this, *Kurzer Tractat*, with introduction and notes. Tübingen, 1870.
- [639] *Die Beiden Ersten Phasen des Spinozischen Pantheismus*. Leipzig, 1868.
- [640] Moritz Carrière, *Weltanschauung der Reformationszeit*, p. 470.
- [641] Cf. Tocco, *Conferenza*, p. 15; Sigwart, *Neuentdeckter Tractat*, pp. 110-113.
- [642] E.g. Bruno's *Acrot.* (*Op. Lat.* i. 1, 108).
- [643] *Short Tractate*, ch. i. § 9, and Bruno's *Causa*, Dial. v. Sigwart, *Neuent. Tract.*, pp. 115, 116.
- [644] "*Il desio di conservarsi*" of Bruno. Pollock (*Spinoza*, p. 109) refers to Descartes, *Prin. Phil.* 2, chs. 37 and 43, and Spinoza's *Cog. Met.* (pt. i. ch. 6, § 9), where the "effort" is "the thing itself," whereas in the essay it is providence, i.e. God. Cf. part i., ch. 5, with *Ethica*, iii. 6 and 7.
- [645] Sigwart, *Neuent. Tract.*, pp. 120-124.
- [646] *Ib.* p. 129.
- [647] Cf. Carrière. *Op. cit.* p. 471 ff.
- [648] *Thesauri Epistolici la Croziani*, 1746; Hansch, *Prin. Philos. Leibn.*, 1728; Thes. ix., xxxi., lxxi. Cf. Steffens, Clemens, Dühring, Brunnhofer, *op. cit.*, and also in G.B.'s *Lehre vom Kleinsten, als die Quelle der prä-establierten Harmonie von Leibniz*, 1890; also Tocco, etc.
- [649] *Ein Beitrag zur Entwicklungsgeschichte der Leibnizschen Philosophie* (1890), v. pp. 197 ff.
- [650] In Dutens, v. 492; cf. also a letter of 1st May (p. 493).
- [651] In Dutens, v. 385 (June 1712), and v. 369.
- [652] It appears that the term *Monas Monadum* used by Bruno of God does not occur in Leibniz at all.
- [653] In Burton's *Anatomy of Melancholy* (1621) *Brunus* appears with *Copernicus* as author of "some prodigious tenent or paradox of the earth's motion, of infinite worlds in an infinite waste" (vol. i. p. 11 of Shilleto's edition). In the "Digression on Air," the *Cena* is referred to (ii. p. 46),—the changes of sea and land, the fixed stars as suns with planets about them, the air of the heavens as identical with that of the earth, the infinite worlds in an infinite ether (*ib.* 47, 57, 62). Bruno, *infelix Brunus* as Kepler had called him, is classed with atheistical writers in a later part of the work (vol. iii. p. 447).
- [654] Bartholmèss, i. pp. 261, 262.
- [655] Vide *Quarterly Review*, October 1902: "Giordano Bruno in England," and the biography of Carew in *Encycl. Britan.* (by R. Adamson).
- [656] Cf. Bartholmèss, i. p. 263.
- [657] Vide Rixner und Siber, *op. cit.* heft v. p. 234.
- [658] Janius Junius Toland (1669-1722); v. Leslie Stephen's *English Thought*, etc., vol. i. ch. 3.
- [659] Vide *Collection of several pieces of Mr. John Toland, with some memoirs of his life and writings*, London (1726), vol. i.
- [660] According to the *British Museum Catalogue*. No name is on the title page of the work —"*Spaccio*, etc., or the Expulsion of the Triumphant Beast." To the chequered history of this title and its various interpretations may be added a modern instance from the *Dictionary of National Biography*, sub *Vautrollier*: "Bruno's Last Tromp"!
- [661] Vide *Toland's Miscellaneous Works*, London (1747), vol. i.

- [662] *Acta Philosophorum* (1715 ff.), parts iii. ix. xi. xv., cf. Zimmermann in *Mus. Helvet.* T. v.
- [663] *Kurze Fragen aus der Phil. Hist.* (1736), and *Hist. Crit.* (1742-1744).
- [664] Cf. his *Werke*, t. iv. pt. 2.
- [665] Cf. Carrière, *op. cit.* p. 475.
- [666] Brunnhofer has suggested an active influence of Bruno upon Goethe—v. Göthe—*Jahrbuch* (1886), Göthe's *Bildkraft* (1890), Leipzig; also Carrière, p. 487.
- [667] *Geschichte des neueren Philosophie*, 6 vols., Göttingen (1800-1805), vol. 2.
- [668] *History of Philosophy*, 11 vols. (1798-1819), vol. 9, pp. 372-429.
- [669] *Beiträge*, vii. 4 and xi. 1.
- [670] 2 vols., Paris, 1846, 1847.
- [671] Stuttgart, 1847, pp. 365-494. 2nd edition, enlarged, Leipzig, 1887, 2 vols. Both of the above works were preceded by a translation into Italian (by Florence Waddington) of Schelling's *Dialogue*, with an introduction by Terenzio Mamiani (on Bruno), Firenze, 1845; 2nd edition, 1859.
- [672] *Op. cit.*, *Vorrede*, xi. A bibliography of the more recent works on Bruno is given at the beginning of this volume.

Transcriber's Note:

This e-text is based on the 1903 edition of the original book. Minor punctuation errors have been tacitly corrected. Inconsistencies in hyphenation, ligatures, and accented forms, such as 'sun-flower/sunflower', 'formulæ/formulae', 'Combinatoriâ/Combinatoria', etc., have been retained. Missing footnote numbers have been added according to sequence.

The Table of Contents has been changed regarding the content of the first section 'Biographies, Works, and Essays.'

The following passages have been corrected:

- p. 16: 'Beza' → 'Béza'; 'before Venetian tribunal' → ' before the Venetian tribunal'
- p. 18 (sidenote): 'Circuæs' → 'Circæus'
- p. 30: 'Artic' → 'Arctic'; 'terrestrial' → 'terrestrial'
- p. 37: 'Mauvissère' → 'Mauvissière'
- p. 64: 'aquaintance' → 'acquaintance'
- p. 71: 'bann' → 'ban'
- p. 131: 'fanastic' → 'fantastic'
- p. 252: 'philosphy' → 'philosophy'
- p. 295: 'allmighty' → 'almighty'
- p. 330: 'intuites' → 'intuits'
- p. 330: 'doctrine' → 'doctrine'
- p. 353: 'Carrière' → 'Carrière'
- Index, ['Bartholmèss, Christian'](#): 2, 16, 20, ...' → '5, 16, 20, ...'

*** END OF THE PROJECT GUTENBERG EBOOK GIORDANO BRUNO ***

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