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GIORDANO BRUNO Cause, Principle and Unity

CAMBRIDGE TEXTS IN THE HISTORY OF PHILOSOPHY

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GIORDANO BRUNO

Cause, Principle and Unity

TRANSLATED AND EDITED BY

ROBERT DE LUCCA

Duke University

Essays on Magic

TRANSLATED AND EDITED BY
RICHARD J. BLACKWELL

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WITH AN INTRODUCTION BY

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Introduction

Giordano Bruno was born in Nola, near Naples, in 1548. He entered the Dominican Order and, following publication of some works that are now lost, he left Italy in 1579 for Switzerland, France and eventually England, a move perhaps due to the oppressive climate in his own country, where the church felt itself threatened by the new science which he attempted to propagate. Having acquired a great interest in Ramon Lull (c. 1232-1316)1 and the art of memory, he presented in London his vision of an infinite universe in which he sought to re-unify terrestrial physics with celestial physics on the basis of a principle of universal becoming. He also reflected on the causes of the religious wars and tried to determine the origin of the theological disputes of the period. Beginning with the metaphysics expressed in De la causa, principio e uno (Cause, Principle and Unity), which reflected the objections he encountered in England, he derived a new concept of the divinity which evolved from his cosmology and was to assume a radically anti-Christian character. The magical, animistic vision of everything which he adopted throughout all his writings, not just those of the last period of his life, is evident here. In addition to his specific contributions to the scientific revolution, he presented a general metaphysical vision that contributed significantly to the development of Renaissance philosophy.

Having returned to Italy in 1591 during the debate about the legitimacy of combining ancient knowledge with orthodoxy, Bruno was perhaps deceived by the experience of Francesco Patrizi,² who was lecturing in

¹ Lull designed an ars combinatoria, a code for representing reality such that its elements could be combined in different ways to represent various items of knowledge, from astronomy to theology. Mastery of this code and its permutations provided the person trained in its use with a sophisticated mnemonic device.

² Francesco Patrizi (1529-97) was one of the leading Platonists of the Renaissance; his major work, A New Philosophy of the Universes, was condemned by the Congregation of the Index in Rome.

Platonic philosophy at the University of Sapienza at Rome. He thought he might be able to find a role for himself by renouncing or concealing the most heterodox features of his own teaching. This was an illusion, and he fell foul of the Inquisition and was executed at the stake in the Campo de' Fiori in 1600.

I

La Cena de le Ceneri (The Ash Wednesday Supper) was the first of the dialogues in Italian which Bruno published in 1584/5.3 The striking feature of this work, in which the author proclaims his Copernicanism, is the immediate connection established between the annual motion of the earth around the sun and the infinity of the universe. This, however, was quite different from the position of Copernicus, who, having given new dimensions to the traditional cosmos, recognized the immensity of the heavens but left to the natural philosopher the ultimate decision about whether or not the universe was infinite. In *The Ash Wednesday Supper*, on the contrary, we find a clear affirmation of an infinite universe with infinite solar systems similar to our own. Suns and earths are composed of our own elements, they are living and inhabited beings, they are stars which are recognized not only as living things but also as divinities.

Bruno was led to these conclusions, in particular the thesis of the infinity of the universe, by a number of factors. In Copernicus' work, the earth was construed as a celestial body rotating round the sun like the other planets; it was implicitly elevated to the status of a star, thus breaking down the rigid separation between the sublunary world and the celestial world, although Copernicus did not want to confront the enormous physical problems which derived from his heliocentrism. It is significant that, in his *De revolutionibus orbium celestium (On the Revolutions of the Heavenly Bodies*), the sphere of fixed stars no longer had a specific physical function and no longer constituted the principle of motion. This was a conclusion that could have been strengthened in Bruno's eyes by some developments in Italian philosophy of nature, especially those of Bernardino Telesio (1509–88). Bruno now went further and called into question the very

³ References to Bruno's Italian works are in the *Dialoghi italiani*, 3rd edn edited by G. Aquilecchia, reprinted with notes by G. Gentile (Florence: Sansoni, 1958: reprt. 1985). The Latin works, *Opera latine conscripta*, were edited in Naples between 1879 and 1891 in three volumes (in eight parts) by F. Fiorentino, F. Tocco, G. Vitelli, V. Imbriani and C. M. Tallarigo. References to the Latin works are identifed as *Op. lat.*, with the volume, part and page number.

existence of such a sphere, which seemed to him merely the result of an optical illusion which made all the stars appear to be at an equal distance from the earth.

Bruno's comparison between himself and Copernicus in *The Ash Wednesday Supper* throws further light on this issue. Although Copernicus is ranked in the history of astronomy as being comparable to Hipparchus or Ptolemy, his real significance is thought to lie in the fact that he is a hero of human thought who was able to oppose the force of common prejudice, the vulgar Aristotelian philosophy, the apparently self-evident view that the earth was immobile in the centre of the heavens. Nevertheless, his work is presented as having crucial limitations which open the way to what will be Bruno's specific contribution. Copernicus was primarily a mathematician – his interest was directed towards astronomy rather than towards natural philosophy, and in this sense his work needed to be further developed. Certainly he started from a correct and significant physical presupposition, the earth's motion, but he sought only a mathematical description of the movements of the heavens.⁴

In contrast, Bruno presents himself as a natural philosopher, as the one who is destined to become the authentic interpreter of Copernicus' discovery and is called to draw out the conclusions from it, beginning with the physical ones. The first of these, which is decisive for a correct understanding of the others, is the infinity of the universe. In the Narratio of Georg Joachim Rheticus, which Bruno was able to read in the 1566 edition of *De revolutionibus*. Rheticus had described the astronomer as a blind man who has a stick to help him on his way, and this stick was mathematics. In order to accomplish the theoretical task which he sets himself, a task which lies at the limit of human ability, the astronomer needs a hand to guide him and inspiration from above. Thus in *The Ash Wednesday Supper* Copernicus becomes the inspired one to whom the gods have entrusted a message, the importance and significance of which he has not realized; he is like a blind fortune teller for whom Bruno acts as the authentic interpreter. The philosopher, therefore, is summoned on a metaphorical journey across the heavens to discover that the traditional crystalline spheres are only a vain fiction, that there is no upper limit to the physical world and thus no end to his journey, and that what opens out in front of him is an infinite space. The philosopher shows us that the divinity is present in us and in our planet no less than in every other heavenly body, that it is not situated beyond the imaginary limit of a closed and finite universe, in a place which makes it accessible to man.⁵

Bruno's reform, therefore, is not only philosophically significant but also has religious consequences. It challenges the developments of the Reformation, calls into question the truth-value of the whole of Christianity, and claims that Christ perpetrated a deceit on mankind. In the pages which follow, he compares the negative consequences which have resulted from traditional philosophy – negative consequences which are apparent to everyone – with the positive fruits, both civil and religious, which the new philosophy is producing, revitalizing all those fields of knowledge and life in which the ancients had excelled.

The consequences of this new philosophy are wide-ranging and radical because this new vision of the cosmos changes our relationship with the divinity, and this, in Bruno's eyes, transforms the very meaning of human life. He claims that this new vision will reconcile us with the divine law which governs nature, and free us from the fear of imaginary divinities. cruel and unfathomable, who look down from heavenly heights, controlling the sublunary world in a mysterious way. Human beings believe that they are enclosed in an inferior world subject to generation and corruption, but this is a simple illusion. Within this world, as in Plato's cave, we can see only the shadows of reality which appear on its wall, the shadows of the ideas which take shape and form at the upper limit of the heavens. Bruno suggests that, on the contrary, we can now recognize the universal law which controls the perpetual becoming of all things in an infinite universe. Knowledge of this law reassures us in the face of the present and the future (about which, of course, we have only an imperfect knowledge), because it does not deny anything its existence in and of itself, but claims that everything is being ceaselessly transformed into something else.

More than any previous thinker, then, Bruno is aware of the fact that the fall of Aristotelian cosmology implies the end of traditional metaphysics. From this starting point he elaborates a philosophy which is new and original, despite drawing on views attributed to the Presocratics (the *ens et unum* of Parmenides, Anaxagoras' *omnia in omnibus*), whose voices are distorted by the fact that they are preserved only in Aristotle's refutations of their positions. Thus, in *Cause, Principle and Unity*, 6 he sets about presenting a

⁵ Ibid., 32-4.

⁶ See the critical edition of *De la causa, principio e uno*, edited by G. Aquilecchia (Turin: Einaudi, 1973).

metaphysics which is intended to constitute a more solid foundation for the interpretation of nature and for the consequent introduction of a new ethic, capable of establishing the outlines of the renewed relationship between man and God both at the level of civil life and at the philosopher's level of contemplation. The problem which immediately arises, however, is that of specifying how this new idea of the divinity is formed and in what sense Bruno's infinite universe radically modifies the relationship between God and the world, between God and human beings.

II

To clarify these issues, we must return to Bruno's earliest works, especially to De umbris idearum (The Shadows of Ideas) (1582). Here he tried to elaborate an art of memory which was based on magical foundations; and in doing this he identified the heavenly models, the exemplars of every sensible reality which the human mind can know, with the images of the thirtysix heavenly deacons which tradition attributed to Teucer the Babylonian and which he borrowed from the classic text of Renaissance magic, Agrippa's De occulta philosophia. In De umbris Bruno applies, in an apparently arbitrary way, Nicholas of Cusa's coincidence of opposites to the conception of the hierarchy of being which Marsilio Ficino explained in his Theologia platonica. 8 This doctrine, which is central to that work, is an attempt to define the special privilege assigned within the framework of creation to the rational soul, a genus which includes both the anima mundi (the world-soul) and the human soul. Ficino defines this privilege in cosmological terms. In fact, in his eyes the rational soul was at the centre of the hierarchy of being, as the very link between the sensible world and the intelligible world; descending from the former, it gave life and form to the latter.

The hierarchy of being extended between two extremes, pure act and pure potency, God and prime matter, in such a way that each of the intermediate levels of the hierarchy presented a different relationship between act and potency. One descended down the levels of this hierarchy, starting

⁷ Cf. E. Garin, 'Le «elezioni» e il problema dell'astrologia,' reprinted in Garin, *L'età nuova. Ricerche di storia della cultura dal XII al XVI* (Naples: Morano, 1969), 423–47, used, especially in ch. XI, by F. A. Yates, *Giordano Bruno and the Hermetic Tradition* (London: Routledge and Kegan Paul, 1964).

⁸ M. Ficino, *Theologia platonica*, XI in *Opera* (Basel, 1576) I, 221-2. Ficino's doctrine is comprehensible due to the theory of the *primum in aliquo genere*, according to which the last member of one genus coincides with the first member of the following genus.

from the pure act constituted by God and eventually reaching prime matter. Each step downward represented an increase in potentiality. Within this overarching hierarchy, if the sensible and the intelligible are analysed as two separate categories and if each one of them is considered as a unitary whole, complete in itself, it would be possible to discover something new, namely the way in which the sensible world and the intelligible world. despite being radically distinct by nature, were linked together. In the intelligible sphere, one descended gradually to the lowest level, which was constituted by the rational soul; it was purely receptive to the levels above it, and could thus be considered as pure potency in relation to them. In the sensible sphere, on the other hand, one moved up within the hierarchy of being, from prime matter, through a sequence of more complex forms of corporeal organization until one reached an absolute limit. That limit was heavenly matter, which because of its purity and spirituality could be defined by Ficino as corpus quasi non corpus (a body that is almost not a body). This kind of matter, sometimes called 'spirit' and sometimes 'ether', could be considered to be pure act in comparison with prime matter. Here it seemed as if the pure potentiality which defined prime matter was transformed completely into its opposite, pure actuality. In conclusion, the more the act transformed itself into potency with respect to the superior levels in the intelligible world, the more the opposite process seemed to take place in the sensible sphere and potentiality seemed to be transformed progressively into actuality.

Here it is important to note how this analysis underpins Ficino's doctrine of the world-soul, which linked the corporeal and the spiritual, giving life and form to the entire inferior world. Bruno saw this as an instance of Nicholas of Cusa's coincidence of opposites: two spheres were gradually losing their essential characteristics by somehow transforming themselves into one another. He also saw in doctrines of this type the theoretical basis for a distinctive kind of art of memory and the foundation for an authentic astral theology. Through these it seemed possible that man, endowed with a rational soul and a spirit to mediate between the soul and his elementary body, could link himself to that privileged cosmic point on the boundary between the sensible and the intelligible which would allow him to grasp the archetypal forms, the actual generating models of every sensible reality, if not in their purity, then at least in their shadows, the shadows of ideas.

As already mentioned, in *The Ash Wednesday Supper* the sphere of fixed stars began to lose all the functions which had been assigned to it within

traditional cosmology. Each of the movements which had been attributed to it was reduced to a mere appearance generated by the motion of the earth. Bruno thus denied the very existence of such a sphere, relegating it simply to an optical illusion. The first casualty of all this was Ficino's doctrine of the hierarchy of being, which Bruno had used in *De umbris*, where he interpreted it in terms of the coincidence of opposites; nevertheless, in this work he still tried to interpret the role of human beings, their origin and destiny, within the traditional cosmological framework. Certainly, he remained faithful even in his new cosmology to the Platonic world-soul, understanding it as an intrinsic principle of motion for all the celestial bodies which no longer needed any other forms of motion, and, as we shall see in Cause, he will speak of a universal soul which effectively shapes and gives life to everything. However, he is not able to refrain from attacking, in *De immenso* (*The Boundless*), those 'shadows of ideas' that men had believed in, all those mysteria platonica et peripatetica (Platonic and peripatetic mysteries) which resulted from the belief in two ontologically separated spheres, the heavenly world and the sublunary world. In particular, he summarizes and rejects all the characteristics attributed to the spheres of fixed stars which, among other things, made it the access route from the intelligible world to the sensible world.9

It is important, therefore, that he summarizes Ficino's doctrines of the hierarchy of being and of the meeting of the sensible and the intelligible in such minute detail in order to be able to reject them in a radical manner. ¹⁰ In the final, decisive book of the poem, he condemns both the theologian's empyrean heaven and the Platonic intelligible world, and undercuts the doctrine of spirit, conceived as an ethereal vehicle of the soul in its process of incarnation. The idea of a world of ideal moulds, of separated ideas, no longer has any meaning for him, and this rejection of a separate world of pure essences leads him to define as meaningless anything lacking a concrete, real existence, anything which, as a result of a process of abstraction, has been unjustifiably hypostatized.

Bruno's reflective transformation of Ficino's doctrine of the meeting between the sensible and the intelligible is essential for understanding the

⁹ Op. lat., I, II, 6: '... prima naturae genitura, simplicissima, capacissima, potentissima, activissima, animatissima, perfectissima, causa universalis ... cuius portae geminae ... divinarum animarum vehiculum, idearum characteribus signata ... nostro verenda metuendaque superincubans mundo, divinitatis potentia ... nunc spacii et aetheris natura, et magnitudine comperta ... e manibus, eque oculis evanescit, portentosa umbra sine corpore tandem fuisse convincitur.' For the reference to Macrobius, cf. Op. lat., I, II, 150.

¹⁰ Op. lat., I, II, 116-18.

development of thought in *Cause*. If one starts from the assumption that the universe is infinite, it no longer makes sense to conceive the coincidence between act and potency as the exclusive property of a fixed point in the hierarchy of being, a privileged point in a finite and physical cosmos conceived as distinct from the intelligible world. Bruno therefore tries to rethink such a coincidence on the assumption that space is infinite and homogeneous, and that there are no separate hierarchical orders of being, and he does this in the light of two key concepts, that of an infinite active potency and that of an infinite passive potency, which are directly associated with each other in the cosmos. On this journey, Nicholas of Cusa guides him.

Ш

Nicholas of Cusa maintained, in *Docta ignorantia* (*Learned Ignorance*), that it was impossible to explain in conceptual terms the passage from the *com*plicatio of everything in God to its explicatio in things; his recourse to the concept of 'contraction' to define the relationship between God and the universe has merely symbolic significance. It is not a real explanation, simply a suggestive way of referring to the inexplicable. The universe, maximum contractum (i.e. the limit of contraction), reproduces the unity of the divine in its proper form; it therefore is a coincidence between actuality and potentiality, although there is an insuperable limit to its actuality in the sense that the world can never realize its full potentiality. In fact, the only way the cosmos can realize its totality is through differentiation and spatial dispersion. The power to create and the power to be created coincide perfectly in the unity and absolute distinction of God; in contrast, the potentiality of the universe is a pale reflection of the infinite passive potency of God. And thus there will always remain an infinite difference between the 'contracted' existence of the universe and the unity and distinction which coincide in the divinity.

For Cusa, therefore, God and God alone was absolute possibility coinciding with absolute actuality. Despite its limits, the concept of contraction allowed him to conclude that the relationship between God and the world could never be explained by recourse to the philosophers' matter and the world-soul of the Platonists. Matter is possibility and if, as some have claimed, it is co-eternal with God, then it would become absolute possibility; it would then no longer be just something created by God, nor would

it be contracted, as it in fact is, so as to give rise to a world of distinct entities. Bruno assigns to the Platonists' world-soul the role which it had in traditional cosmology, as mediator on the cosmic plane. This mediating role cannot be understood as the distinct possession of the exemplary models of all things, because this would imply that it displaced the Word, the only place in which the ideal archetypes rest in both absolute unity and absolute difference. Thus, the traditional ways of construing the world-soul and the relation between matter and the vivifying action of a universal spirit fail.¹¹

Nicholas of Cusa outlines a cosmology which no longer recognizes ontologically separated levels in the universe. In the Cusan cosmos, everything is the centre and the circumference is nowhere – a distinction which Bruno considers a mere play on words. In this way, the earth loses the subordinate status which it had until now, in that it is thought to be no less central than any other star; it is subject to influences but is a probable source of influences itself. Cusa retains the traditional ontological inferiority of the heavens with respect to a divinity who holds them at an infinite distance from himself, and this is confirmed, in an apparent paradox, by the redemption of the earth. The fact that everything in the world is undergoing constant change implies that no absolutely precise relations exist and that we cannot have exact or real measures for any phenomenon, including motion.

This is the context for Cusa's Christology. If the distance between God and the universe is infinite, this can never be bridged by a mere man, even if he is exceptionally gifted; only the one perfect man, Christ, can achieve such a mediation through the Word, which leads creatures back to its source.

In *Cause*, Bruno drew the conclusion from his study of Cusa that nothing now prevents him from looking for the coincidence between the world-soul and the matter which belongs to an infinite universe as the coincidence of infinite active potency and infinite passive potency. Bruno conceives the hierarchy of being as having only ideal value, in contrast to Ficino's ontological conception of it, and he construes the world-soul and matter as the absolute opposites of this hierarchy. Starting from these assumptions, he tries to show how act and potency, absolute possibility and infinite actuality coincide. Thus it is only by starting with such a coincidence that he can apply the concept of 'contraction' to the relationship which is formed

 $^{^{11}}$ *N. Cusani De Docta ignorantia*, II, ch. VIII, IX, dedicated respectively to the possibility or matter of the universe, and the soul or form of the universe.

between the unity of the universe and the multiplicity in which this is structured.

Certainly, at the beginning of *Cause*, he warns that his discussion is meant to stay within the limits of pure natural reason, that it aspires to be only a philosophical discussion, leaving to theologians the more exalted task of defining the Prime Mover. But the route he follows is inevitably destined to hold some surprises in relation to such a cautious preliminary declaration. The coincidence between infinite active potency and infinite passive potency, which Nicholas of Cusa had recorded in *De possest* as a peculiarity exclusive to God, is transferred in *Cause* to the relation of absolute opposites in the cosmos, and knowledge of this coincidence gives us a proper understanding of the unity of substance.

IV

From this perspective, the logic which guides Bruno in *Cause* is clear. He conceives the intellect as a superior faculty of the world-soul that produces forms. This represents a significant lowering of the status of the intellect, albeit to the highest kind of faculty which can exist. The world-soul possesses intellect and does not therefore need a superior principle from which to draw forms. It should be added that it operates as an art which is intrinsic to matter, in contrast to human art which inevitably acts on the surface of matter already formed. The world-soul, therefore, shapes matter from inside because it possesses the actual models which allow it, as an authentic efficient cause, to be also a formal cause. Since it animates an infinite universe, and there is no part of the universe that is not animated or that does not possess at least a spiritual principle always capable of being actualized by it to some degree or other, differences in nature between the forms it gives are inevitably to be found.

The world-soul is therefore the authentic form of forms; it contains them all in act within matter and can therefore be considered either a cause or a principle, depending on whether we think of the forms as its possession or as superficial configurations that matter assumes now and again according to its dispositions. What is at issue here are the constantly changing forms of matter which the Aristotelians can only arbitrarily call forms in a strict sense. That is one of the constant features of the anti-Aristotelian polemic in *Cause*, because it becomes essential for Bruno to maintain that

these are only appearances, which are constantly changing, compared with substance, which cannot be annihilated and is the active principle and producer of real, rather than transient, forms. This polemic against the supposed substantial forms of tradition is therefore already a vindication of the authentic active potency of an infinite universe, and opens the way to Bruno's special treatment of matter considered as potency. Then the confrontation with Nicholas of Cusa's theses becomes direct, although his name is never mentioned in this particular context.

Certainly, for Bruno, as for Cusa, it is only in God that infinite actualization of infinite possibility can be achieved. In the universe, on the other hand, things are constantly changing, and matter is inescapably subject to these changing forms. Despite this, the universe can be said to be completely infinite, to be all that it can be, provided one considers it as extended through all of time rather than at a single instant or from the point of view of eternity. However, the difference between God and the universe represents only the starting point of Bruno's discussion.

The power to be, if considered as passive potency, moves towards its infinite actualization only in God; in Him alone, act and potency, power to create and power to be created, are superimposed speculatively without reference to time and place. If, however, one considers matter absolutely as passive potency, if one abstracts it from the relationship which it has, at different times, with both corporeal and incorporeal substances, one notices a significant factor. There is no difference between the passive potency of these substances except for the fact that corporeal matter is contracted into dimensions, qualities, quantities, shapes, etc.; these accidental determinations (dimensions, shapes, etc.) are what the Peripatetic tradition, struggling to understand them, confused with genuine substantial forms. Dimensions, qualities, etc. do not, however, modify pure passive potency as such, and it is possible to conclude, therefore, that the matter which is conceived in these terms can be considered common to both the spiritual and the corporeal.

Bruno clinches his argument by referring to the Neo-Platonic doctrine that intelligible entities were composed of a very particular kind of intelligible matter. Such intelligible entities, which are forms of acting, must have something in common, although it cannot be anything that generates a distinction between them or involves any passage from potency to act. In the sensible world, where becoming involves such a passage, is not matter best understood as potency, which includes in its complexity all the dimensions

and qualities, and does this not mean that this matter, rather than not possessing any form, in reality possesses them all? Could it be that matter, which appears not to produce distinctions, seems thus to be formless only because it is the origin of more deep-seated but less apparent distinctions – distinctions which it can be seen to possess only in a higher unity? Furthermore, this allows Bruno to claim that the two matters, the intelligible and the sensible, seen from the perspective of potency, can be reduced to a single genus, since the former is differentiated from act only by a distinction of reason and the latter can be considered act in comparison with the ephemeral and transient forms which appear and disappear on its surface. It would be impossible, then, to distinguish matter understood as potency from the world-soul.

Thus in this way Bruno assimilates his treatment of matter to the tradition of Aristotelianism and Neo-Platonism, which took matter to be a substrate, that which remains constant beneath the transformations which take place between the elements. In his eyes, the permanency of matter comes to mean that it, too, as the world-soul, is a principle which is neither passing nor transient, a principle which cannot be annihilated and which is identified with the substance of beings themselves. Bruno reminds us that the Aristotelians, as soon as they realized that they could not accept the Platonic solution which placed ideas outside the field of matter, admitted that matter could generate forms. Bruno called these ideas 'ideal moulds', and was more able to accept them than the Peripatetics were. It must be added that these same Aristotelians, when they state that matter passes from potency to act, speak only of the composite when specifying what has really changed. On the basis of all these elements, it seems legitimate to think that, if it is recognized as a constant and everlasting principle, prime matter cannot be classified as that prope nihil (almost nothing) of uncertain reality which figured in the views of a number of previous thinkers who tried to devise definitions of substantial form. These definitions, contrary to their intentions, all turn out to be reducible to pure logical abstractions. On the contrary, the fact that this matter presents no form would be equivalent once more, for the reasons already mentioned above, to its possessing all of them.

If, however, a spiritual principle and a material principle are recognized as the very substance of our world, it seems evident that it is their coincidence that constitutes its permanent substance. An analogous identification could then apply to the superior world of exclusively spiritual

substance, which Bruno stated he would not discuss because he wished to confine his treatment to the limits of pure natural reason. This is the most ambiguous statement of the whole work, and understanding this ambiguity correctly is the key to understanding Bruno's philosophy. Bruno takes for granted here the separation which the whole dialogue tries to call into question, and at the most decisive point of the work, he refers to the notion of an intelligible matter of the superior world only to understand it in terms of corporeal substances seen from the perspective of potency. The ambiguity of such a statement allows him to leave an important fact in the background, that the relationship which he was establishing between infinite active potency and infinite passive potency created a relationship of reciprocal necessity between God and the world. 12 Thus Nicholas of Cusa's demonstration, in *De possest*, of the impossibility of separating, if only in God, the infinite potency of creating and the infinite potency of being created was decisive in forming Bruno's position. Bruno, however, came to the conclusion that these are present and inseparable in an infinite universe and that this involves not only their coincidence but, crucially, a relationship of reciprocal necessity between the unity to which they refer and the universe.

The solution rejected by Nicholas of Cusa and adopted by Bruno was, therefore, to return to the world-soul of the Platonists, and to a conception of matter as absolute possibility and as co-eternal with God, in order to explain the connection between all things in the cosmos. In fact, Bruno began from this conception of matter as absolute potency and from a world-soul which by now was the form of forms, and no longer required an ontologically superior principle to prepare exemplary models to inspire with its action. He thus discovered divine unity in their coincidence, a unity which preceded the distinction between the corporeal and the spiritual. This enabled him to set out the basic principles of his cosmology, which was different from Nicholas of Cusa's, but still based on the infinite distance, in terms of nature and dignity, between God and the universe. It thus became possible to imagine a mediation between the human and the divine which, moving through nature, would render unnecessary the solution adopted by Nicholas of Cusa and would in fact do away with all forms of Christology.

He will begin to develop this point in *De l'infinito, universo e mondi*, concealing it slightly beneath the discussion of the relationship between God's *potentia absoluta* and *potentia ordinata*. *Dialoghi*, 385-7.

V

Bruno's originality lay in his rejection of that world of pure, ideal and bodiless essences. Arguing with the Platonists in the great conclusion of De *immenso*, Bruno states that there does not exist a justice separate from that which is good and, most importantly, that there is no divinity which can be distinguished from its manifestations. 13 Any attempt to make these distinctions is an unjustified hypostatization arising from processes of abstraction originating in our intellect. These are his final conclusions on the subject, which, when combined with the necessary nature of God's link to the world, constitute important keys to understanding Cause. If the universe is not contingent in its nature, it is possible to speak of a divinity which coincides with the world itself; this divinity would be a substance which from time to time manifests itself in infinite and different composites, in its 'modes', as Bruno calls them, which are themselves transient. Certainly, the unity to which multiplicity points as its foundation and its source remains in some sense absolute and not contracted, but the very fact that each part of the infinite is limited points to something which is the real condition of its existence. This means that one must conceive this unity as an internal unity of the cosmos rather than as something which is above or beyond it. The principle of the universe, if it is unique, is therefore its own cause, and this means that we cannot speak of two separate worlds. Thus, Bruno can state that God needs the world no less than the world needs Him. 14 since if the material infinity of the corporeal were lacking, the spiritual infinity of the divine would also be absent. By linking the world necessarily with the divinity and vice versa, the divinity is established as that which is all in all and in everything. It cannot be 'elsewhere', since its coincidence of spirituality with infinite matter means that 'elsewhere' does not exist.

Thus we arrive at the problem of understanding the unity of the All as an understanding of its laws in so far as they are laws of nature. Bruno is not mistaken here in claiming that the new departure he has initiated is radical. On the one hand, he believes he can demonstrate that both Aristotelian philosophy and the Christian religion, and not only the latter's most recent developments under the Reformation, have been linked to an erroneous cosmology. We need only consider the contemporary discussions on the ubiquity of the glorious body of Christ and the polemics concerning the

nature of his presence in the Eucharist, both of which originated, according to Bruno, within the framework of this old erroneous cosmology. It is, therefore, understandable that this new philosophy should eventually reveal the full extent of its consequences and call for a healing of the division between nature and divinity decreed by Christianity; that it should search for laws, most notably in Lo Spaccio de la bestia trionfonte (The Expulsion of the Triumphant Beast), to constitute a new ethic, capable of guaranteeing peaceful civilian co-existence in the rediscovered harmony between human needs and the divine will. This same development of civilization can thus be reconceived according to those natural foundations which constitute its indispensable precondition. However, it is only by separating himself from these foundations, through a combined intellectual and physical effort, that man has been able to distance himself from the animal condition (symbolized in the myth of a terrestrial paradise) and bring himself gradually closer to God through science and the arts. It is not without significance that the fundamental error of Christianity, long before the Reformation, was the desire to begin with a divinity conceived in its absoluteness, arising from the illusion that in this way one could enter into contact with it and enjoy its favour, without respecting the intervening natural and cognitive levels. This general framework implies that Christ practised a deception when he promised men a transformation through which they could become sons of God, while in reality he was making them risk falling back into a purely animal condition by making the consumption of earthly food part of the sacrament of the Eucharist.

From this point of view, *Eroici Furori* (*The Heroic Frenzies*) acquires a particular importance, and also a religious one, in relation to the metaphysical theses of *Cause*. The contemplation of divinity which is realized in this work through the medium of nature is certainly destined by definition never to attain its final goal, the actual possession of the infinite. However, it is justified in that the 'enthusiast' encounters no upper limit to his contemplative ascent. Thus, *The Heroic Frenzies* concludes with one final philosophico-religious illumination: a vision of the kingdom of God and paradise, in which the human is transformed into the divine, in a metamorphosis to which not everyone can have access.¹⁵

The 'heroic enthusiast' comes to realize that he can translate everything into the species of his intellect, in a seemingly endless process of actualization. This is due to the bond of love which elevates him ever higher in this

¹⁵ 'The sursum corda,' recalls Bruno polemically, 'is not in harmony with everyone.' Dialoghi, 1116.

process, eventually causing him to realize the infinite (and thus apparently illimitable) potentiality of his intellect. The process thus becomes an agonizing experience for the enthusiast because the more he retreats into himself, the more he is constrained by the magical force of love to come out of himself, to transform himself and live in the other, in a never-ending succession. In this way, the two opposites, act and potency, reveal not only their own coincidence but also the coincidence between intellect and love. Therefore, knowledge and love coincide with their object in the infinite; the intellect is transformed into the intelligible, the lover into the object of love. Knowledge and love are thus revealed as the two cosmic forces which are apparently separate in nature but which spring from the same potency and source.

VI

Given Bruno's earlier interest in magic and astrology, it is not surprising that the development of his new cosmology should introduce elements of uncertainty into his beliefs on these topics. In the notes left to us (which have been given the title *De magia mathematica*), he reconfirms, in a disagreement with Agrippa, his rejection of the traditional cosmic role attributed to the world-soul and to its ideas, and he rejects the physical action of stellar rays. 16 Whereas in De immenso he did not deny a symbolic value to the celestial bodies furthest away, ¹⁷ in *De rerum principiis* (*The Principles of* Things) he seems to reject even this value, at least for particular cases. In the same work he is critical of the astrological theory of aspects and of astrological books in general. He laments the confusion which has arisen due to the fallacious identification of planets with celestial bodies. He claims that the corruption which the magic arts have undergone with the passage of time has been due to the spread of error but also to a desire to keep the secrets of the arts out of the hands of the ignorant. Thus, he seems to be in favour of a reconstruction of planetary astrology which would have to take account of his new cosmology but which here appears to be only roughly mapped out. Within this tentative framework, which includes some elements of his new cosmology, he is still able to retain the astrological value of the traditional celestial images, apparently feeling that the observation of them continues to be useful and that they represent the survival of an ancient language. 18

¹⁶ Op. lat., III, 503. 17 'Multum valent signare, nihil causare remota.' Op. lat., I, II, 265.
18 Ibid., III, 543-4.

All this throws light on some passages of *De magia*. Here Bruno, on the one hand, laments the extinction of that original and non-conventional hieroglyphic language in which signs designated things and apparently guaranteed communication with the divine; on the other hand, he preserves on the magical level the operational value of those characters, seals and figures which, according to tradition, propitiated demonic influence – it seemed possible not only to use them but also in some sense to remould them according to the dictates of a higher reason. More than once in his work Bruno tries to recreate something which elsewhere he claims has been irredeemably lost.

Bruno no longer accepts a separation between the natural, mathematical and divine worlds; therefore he can maintain a distinction between natural, mathematical and divine magic (or theurgy) only if he can posit the survival of a distinct object for each of these, without denying the possibility of a passage from one sphere to another. The stars have themselves become gods, in effect, and are inhabited by demons, while the divinity seems to occupy the infinite spaces which extend between worlds.

All this facilitates a process of interaction between natural and celestial magic, the most visible consequence of which seems to be the problematic nature of the distinction between the world-soul and the existence of a universal spirit. In other respects, the access to the divine world through the celestial seems to be linked to Bruno's natural philosophy and to the particular developments which his demonology had undergone.

Universal animism was what suggested to Bruno the schema according to which the whole of nature should operate and on the basis of which every type of magical operation should be modelled. Such a schema always provided for the action of an efficient universal principle, equipped with models of its action, on a passive principle. This holds true both in the action of elementary qualities, rendered perceptible to man and as a result of which one can legitimately speak of natural magic, and in the area of occult qualities ('occult' in the sense that they elude direct observation but are confirmed by the production of recurring causal links and of special effects which seem impossible to attribute to the action of elementary qualities). One has recourse in this case to the action of a universal spirit which was not necessarily located in the heavens of traditional magic. It is rather its particular corporeity which allows it to be extremely active and to produce all things, and Bruno clarifies the nature of its action by referring to the *corpora caeca* (blind bodies) which figure in Lucretius' *De rerum natura*.

The action of the magus at every level, therefore, consists in the preparation and modification of matter so as to render it susceptible to the desired influence. The world-soul has thus to be drawn into a portion of matter suitably prepared, so as to produce a particular effect. Precisely for this reason, the world-soul, which is present in all its entirety in everything, causes matter to be successively formed in an infinite variety of ways, and it does so according to specific principles of universal action. This property, of being totally present in everything, belongs also to several accidents of matter, like voice and sound, whose magic effect appears certain and whose action is ultimately attributable to the action of the soul. This allows one to explain several phenomena that were traditionally considered to be proofs of the existence of occult qualities, such as the attraction of iron by magnets, etc. Considering these phenomena, Bruno refers to a motion peculiar to matter which he terms 'spherical' and which consists in a body's acquisition or loss (*influxus* and *effluxus*) of minute particles of matter. 19

Bruno uses the theory of a universal spirit not just to explain all recorded phenomena but also to delineate the specific features of his demonology. To him this spirit is the reason for the presence everywhere of living beings acting on us through means which elude the capacity of our senses. These can be subdivided into a number of species no less numerous than the number of living species on earth and differentiated from man by their superior or inferior faculties, as well as by their varying dispositions, favourable or not, towards us.

Since they act in a way which is imperceptible to our senses, it becomes essential to specify the point at which they gain purchase on our faculties, so that their influence can be avoided or repulsed. Bruno scornfully challenges the very successful *De occultis naturae miraculis* (*The Hidden Miracles of Nature*) of Levinus Lemnius, ²⁰ and rejects a purely medical explanation of phenomena traditionally considered to be of demonic origin. His own explanation of such phenomena refers to both the inferior melancholic humour of the man who, because he is devoid of spirit, is especially vulnerable to demonic possession, and to the actual intervention of demons. These, possessing a body, affections and passions no less than man, are in search of whatever can constitute a source of nourishment or pleasure and, therefore, of a matter capable of attracting their action. What makes all of this possible is, on the one hand, the presence within us of a spirit which has a varying degree of purity, and, on the other, the fact that this spirit

(whose link with our imagination can be taken for granted) is indistinguishable from the passive aspect of our consciousness. It is this faculty which may or may not allow the establishment of the demonic vinculum, depending on how much resistance the cognitive faculties are able to offer. According to the infinite diversity of physical constitutions and to the quality of the spirit which we can artificially (and sometimes wrongfully) modify, for example through certain foods or particular ointments, it is possible for a spirit to take control of us, attracted by our own melancholic humour, just as the world-soul can be attracted by a matter which is disposed to receive a certain influence. The demon thus becomes the cause of our deception, making appear as real what are simply ghosts of our imagination and even giving us the illusion of entering into contact with divinities who are also imaginary. On this basis, in On Magic and Theses on Magic, Bruno posits two types of humanity, one superior and one inferior to the general level of mankind, who are distinguished by their ability (or lack thereof) to monitor and direct the processes of our consciousness and in particular its inevitably passive aspect. This, of course, is one of the constant themes of his philosophy and in particular of his polemic against the Reformation. In addition, it illustrates his belief that real processes and cognitive processes have a common foundation which has a magical aspect. Since the publication of Sigillus sigillorum (The Figure of Figures), he had been proclaiming, in overtly religious terminology, the essential value of a regulata fides (regulated faith), that is, the importance of exercising conscious control over our receptive faculties. In this way, he argues against those 'qui aguntur potius quam agant' (who are acted on rather than act).²¹

Bruno distinguishes between two types of contraction achievable by man. Contraction is a phenomenon through which the soul, by concentrating on itself, can realize particular powers; but this can have an opposite effect if it is directed towards a higher contemplative level or if it is carried out so as to render us no longer masters but servants of our imagination, and thus exposed to demonic influence. Here Bruno echoes Ficino in his exemplification of various types of contraction; but instead of calling them *'vacationes animi'*, as Ficino had done, he gives them a name which allows him to incorporate this phenomenon into the metaphysical structure governing our consciousness.²²

²¹ Op. lat., II, III, 193.

M. Ficino, *Theologia Platonica*, XIII, 2, in *Opera*, (Basel, 1576) I, 292–5. Cf. *Op. lat.*, II, II, 180–93; the distinction between two opposite types of *contractio* is connected to the distinction between two types of melancholy. Cf. on this point R. Klibansky, E. Panofsky, F. Saxl, *Saturn and Melancholy* (London: Nelson, 1964).

The point of distinction between the two forms of contraction is therefore represented by the intermediate cognitive faculties which turn the data of sensibility into figments of our imagination. This distinction, and the separation into two distinct levels of humanity, find their exemplary expression in the Cabala del cavallo pegaseo (The Cabala of Pegasus) and in The Heroic Frenzies. The Cabala outlines the characteristics of the man who. faced with the difficulty of searching for the divine, freely renounces his superior faculties, those which make us really human, and contracts his cognitive powers into the single one of hearing, to passive reception alone. Thus stripped of all power of judgment and reduced to the animal condition of an ass, he can no longer tell if his rider is a god or a demon - an allusion to a famous line from Luther's De servo arbitrio, aimed at denying the very possibility of our freedom. This is the reason why, in The Heroic Frenzies, he praises the 'divine seal' of the 'good contraction'. 23 We have seen that, in this work,24 the metaphysics of Cause are translated in terms of the highest experience which man can have, of contemplation of the divine by means of an adequate image of it. Bruno claims, however, that this can be attained only by someone whose mind is constrained by two bonds (vincula): love, and the highest intelligible species which divinity could present to his eyes (i.e. beauty and the goodness of nature). In relation to the action of these two vincula, the 'divine seal' of the 'good contraction' acquires an essential importance: divinity, in fact, yields and communicates itself to us only at a level proportionate to our receptivity of it. Therefore, it is always our responsibility to intervene in the passive moment of our consciousness so as to raise ourselves above that moment. actualizing the infinite potency which is within us.

This leads Bruno back to the distinction between two types of humanity, those who fall victim to demonic deception and those who, rising above the level of the multitude, overturn the scale of values in which humanity believes and set out to attain the level of a heroic humanity. A fascination with the Epicurean ethic which was already present in *The Heroic Frenzies*²⁵ appears here, in the works on magic, although this is a sophisticated Epicureanism that emphasizes the superiority of the learned man over every event. This man attains a different kind of mind – in fact, a different kind of spirit – and goes to meet a different destiny, while for the others, those who descend below the level of the mass of humanity, the

Dialoghi, 877-9.
 Dialoghi, 797. But cf. ibid. 1091-2.
 Op. lat., III, 657. Cf. Dialoghi, 1052-54.

servitude of their own imagination can become a real hell on earth and can be indefinitely prolonged through reincarnation.²⁶ With *De vinculis in* genere (A General Account of Bonding), however, we seem to encounter a different picture of the fundamental problems discussed so far. The magus is acquainted with the dynamics not only of magic but also of demonic action, and knows how demons can take possession of us through unguarded avenues, and this opens up to him a new field of action, permitting him to link other men to himself and, in fact, to establish a whole series of magical bonds between himself and others. The moral problem raised by magic in general seems to take on a new aspect here. At the beginning of *On Magic*, Bruno examines the stereotypical moral objections which are advanced against magic in general, and against 'mathematical' magic in particular. His reply is equally traditional: magic understood as pure knowledge, as scientia, is always positive but it can be used well or badly, for good or evil, depending on who sets it to work. All this could be equally applied to *Bonding*; however, there seems to be a new element here which may raise a question, if not about the nature of Bruno's philosophy, then certainly about several of its characteristic features. This is a philosophy aimed at liberating man from the fear of death and of the gods, pointing the way to an escape from the snares which demons use to catch us. And vet here we find talk of the establishment of occult snares designed to put one man in the power of another, making the latter a kind of demon with the power to take possession of the other's spirit. It should be added that none of the effects attainable by man seems to be excluded from the scope of an action which, far from limiting itself to mere rhetoric, is meant to infiltrate every sphere of civil life. Certainly, Bruno's terminology continues to be traditionally magical; even Campanella was later to write a Bonding of his own in De sensu rerum (On Sensation in Things). It should be added that Bruno was an heir, albeit in his own original way, to one of the most important (and most fruitful) aspects of Italian speculation in the 1500s, namely the unprejudiced and often brutal observation of reality that is to be found in writings from Machiavelli to Cardano. There is still a tension here between Bruno's radically aristocratic vision and the fact that his work deals with what he believes are laws of nature, which provide no barriers in principle to universal ascent.

Bruno claims that the vinculum in itself is neither good nor evil, but the

²⁶ Cf. on this topic R. Klein, L'enfer de Ficin, La forme et l'intelligible. Ecrits sur la Renaissance et l'art moderne (Paris: Gallimard, 1970), 89–124.

fact remains that it presupposes a will to act on the part of the agent and a predisposition in the consciousness of the other person to be acted on in an occult and imperceptible way. All the bonds, he tells us, can be reduced to the bond of love, and this gives rise to a series of extremely acute observations which primarily affect the idea of beauty as conceived by the Platonists. They are observations which appear also to reveal a sort of intolerance towards a philosophical tradition which divided nature into diverse faculties, in particular the tradition which divided human nature into intellect and will. The vinculum, he says, is not found in the visible species, but what renders it active and often detrimental to us is something of which we are not aware, although it is sentient and active within us. It is precisely the difficulty of defining a single essence of love, of beauty and of pleasure which indicates to us that there are many different ways in which we can link with (*vincere*) the soul of the other. In order to put this binding process into action, we require a knowledge of the infinite variety of subjective and objective factors (beginning with the diversity of physical constitutions) in relation to which the *vinculum* must be prepared in advance in order to be effective. These elements, however, given that they exist in infinitely varied individual configurations, cannot be reliably specified in any given case. In this, they recall some of the central theses of Brunian metaphysics.

When Bruno outlines in *De immenso* the contemplation worthy of the perfect human being,²⁷ he takes inspiration from the image which he has of the divinity. The divinity is a matter which creates all and becomes all; thus, the perfect human being is one who, by elevating himself to the infinite in contemplation of the divine, actualizing in the infinite his cognitive potency, is capable of assimilating everything because he knows how to transform himself into it. The excellence of this *magnum miraculum* which is man is not taken for granted at the outset but rather constitutes a point of arrival and a final achievement. It coincides with the process of human deification, made possible by man's capacity to become, in some sense, *omniformis*, like divinity. It is therefore significant that, in *Bonding*, the metaphysical conclusions of *Cause* are taken up – the identity of *facere* and *fieri*, of the potency of creating and being created.

This metaphysical view not only implies that there exists no spiritual world which is separated from its corporeal support, but also implies that reality is unique, and this has important consequences for the psychological possibility of magical action. ²⁸ This general scheme provides for two

²⁷ Op. lat., I, I, 205-6. ²⁸ Op. lat., III, 695-6. Cf. Dialoghi, 262 and 315.

constituent moments, one active and one passive, where the latter has to be modified in order to make the former operational. Now, the mid-point between these two moments is, in fact, the *vinculum*, that which links to an ever-changing degree the operator (the vinciens) to the vinciendum. The original unity of the All, therefore, establishes the conditions for the success of magical action, because it allows us to understand how a magus can restore an existing apparent multiplicity to its underlying unity. Human beings, too, are presented as matter over whose surface pass infinite forms, and clearly each one of them is a vinculum, one of the many which we all, in fact, encounter. If we can give the right form to things we encounter, we can begin to operate on them according to the same magical scheme which we have found to be in operation on every other level of nature. This process can be guided artificially but does not go beyond the framework of nature, since it does no more than encapsulate in a unique form what are the guiding laws of nature itself. Once again, this is the myth of metamorphosis, that metamorphosis of all things which made possible on the operational level the recognition of the unity which underlies all things and their development. The action which one exercises on oneself (thus making oneself somehow one's own object) is aimed at transforming oneself into a subject of an ever higher form. Magical action is another instance of the coincidence between act and potency which the supreme contemplator has translated into the ability to become *omniformis* and which here, because of the potency of the *vincula* and, in particular, the most powerful of them all (love), is the ability to transform the other by actualizing the potency which is within him. One's action will thus have various levels according to one's capacity to give form to that potency by which one is linked to the vinculum. Finally, at the highest level, the vincu*lum* reveals its deepest nature, transforming potency into act, act into potency, whence it follows that the operator is transformed in his turn into an object, and the vinciendum into vinciens.

Chronology

1548	Born at Nola, near Naples
1572	Ordained priest in the Order of Preachers (Dominicans).
<i>3 .</i>	Began studies in theology
1576	Fled to Rome following proceedings brought against him for
	serious dissent about dogmatic theology
1579	Following several stays in northern Italian cities, went to
	Geneva where he became a Calvinist. However, he was charged
	with defamation and threatened with excommunication. He
	admitted his guilt and was pardoned
1581	Having taught at Toulouse, went to Paris. Interested the
	French court in his theory of memory and maintained con-
	tact with the court for five years, due to close links with the
	politiques who supported the King of Navarre. De Umbris
	Idearum (The Shadows of Ideas) (1582), which was dedicated
	to Henry III, Cantus Circaeus (The Circean Melody) and the
	Italian play, Candelaio (The Candle Maker), were published
_	during this period
1583	In England as guest of the French Ambassador to Elizabeth
	I, Michel de Castelnau, perhaps entrusted with a political
	mission. Proposed Copernicanism in public lectures in
	Oxford, and introduced the philosophical and scientific
	themes of subsequent works in Italian. Rejected by the acad-
	emic circles at Oxford, he returned to London where Sigillus
O .	Sigillorum (The Figure of Figures) was published
1584	In London, at the house of Fulke Greville, expounded the
	Copernican theory in a debate which is echoed in the first of

Chronology

his Italian dialogues, *La Cena de le Ceneri* (*The Ash Wednesday Supper*). The debate provoked opposition, but did not dam-

age his relations with Philip Sidney and the circle of Robert Dudley, Earl of Leicester. Bruno later defends himself in the first dialogue of De la Causa, principio e uno [Cause, Principle and Unity 1584-5 Published, in London, the Italian dialogues: La Cena de le Ceneri, De la causa, principio e uno, De l'infinito, universo e mondi (The Infinite, the Universe, and Worlds); Lo Spaccio de la bestia trionfante (The Expulsion of the Triumphant Beast); Cabala del Cavallo Pegaseo (The Cabala of Pegasus); Eroici furori (The Heroic Frenzies) – all published by J. Charlewood with an incorrect place of publication. Expulsion and The Heroic Frenzies were dedicated to Sir Philip Sidney Returned to Paris, where he found a changed atmosphere 1585 which was unfavourable to him. Disputed the one hundred and twenty Articuli de natura et mundo adversus peripateticos (Articles about nature and the world against the Peripatetics) at the College of Cambrai; these articles were rewritten and published at Wittenberg under the title Camoeracensis Acrotismus (1588) At Wittenberg, where he gave lectures on the Organon 1586 Published a series of Lullian works 1587 1588 Went to Prague, then to Helmstedt, where he remained until April 1500, despite disputes with the Lutherans and a new excommunication. De Rerum Principiis (On the Principles of Things) was sketched or finished during this period, and the works on magic, De Magia; Theses de magia, De magia mathematica (On Magic, Theses on Magic, Mathematical Magic), were completed, together with De Vinculis in genere (A General Account of Bonding) Went to Frankfurt to await publication of the three great 1590 Latin poems, De Minimo; De Monade; De Immenso (On the *Minimal; On Monads; On the Boundless*) (Wechel, 1591) During a second stay at Frankfurt, received an invitation from 1591 the Venetian patrician, Giovanni Mocenigo, to go to Venice to teach him the secrets of his art of memory. In Venice dur-

ing August, perhaps hoping to get the chair of mathematics

Chronology

1592	left vacant since 1588 (to which Galileo was subsequently appointed). A climate of hope for toleration prevailed in Europe, and perhaps the teaching of Francesco Patrizi at La Sapienza, Rome, deluded him about the possibility of enjoying a reprieve in Italy Imprisoned following three denunciations by Mocenigo
	to the Holy Office. The Venetian phase of his trial, which is well documented, was thus initiated; Bruno defended himself, claiming that his teaching was purely philosophical, that he was penitent and was prepared to renounce his errors
1593	Confined in the Roman jail of the Holy Office; the Roman Inquisition had obtained, with some difficulty, a transfer of the trial from the Venetian Senate
1594	Following a new denunciation and new depositions, Bruno's position became acute. He re-affirmed the line of defence adopted in Venice and presented a lengthy submission of eighty pages (since lost) which was a turning-point in the trial
1596	towards an unfavourable outcome A commission of theologians examined his published works which had not previously been used, to censure heretical propositions which they allegedly included and to report them to the trial. Included were propositions concerning the first principles of reality, the necessary connection between an infinite cause and an infinite effect, the conception of the individual soul and its relationship with the world-soul, the motion and soul of the earth, the identification of angels with the stars and of the Holy Spirit with the world-soul, and belief in pre-adamites
1598	Summary of the trial ready
1599	After a long interruption, trial re-activated; on the suggestion of Cardinal Bellarmine, eight heretical propositions were submitted to him for his unconditional repudiation. In a series of petitions and depositions, he claimed that he was agreeable to the renunciation; however, he also became entangled in the merits of the incriminating propositions by making various distinctions. Thus, his position deteriorated until the tribunal required him to acknowledge his errors. On

21 December, he said he would not agree to retract and that he did not know what should be retracted

1600

On 20 January, Clement VII ordered that he be condemned as an 'impenitent, stubborn and obstinate' heretic. The sentence was read to him on 8 February; it listed among his errors the denial of transubstantiation, the thesis of the transmigration of souls, the infinity of the world, the eternity of the universe, the allegation that Moses and Christ were magicians and impostors, and belief in pre-adamites. On 17 February, he was burned alive in Rome at the Campo de' Fiori

Further reading

The Latin works of Bruno are found in *Opera latine conscripta*, 3 vols in 8 parts, ed. by F. Fiorentino *et al.* (Naples: Morano, 1879-91), reprinted by Frommann, Stuttgart-bad Cannstatt, 1952. The Italian works are collected in *Dialoghi italiani*. *Dialoghi metafisici e dialoghi morali nuovamente ristampati con note da G. Gentile*, 3rd ed. edited by G. Aquilecchia (Rome and Florence: Sansoni, 1958). Other works by Bruno are *Candelaio*, ed. by V. Spampanato (Bari: Laterza, 1923); *Due dialoghi sconosciuti e due dialoghi noti*, ed. by G. Aquilecchia (Rome: Ediz. di Storia e Letteratura, 1957); *Praelectiones geometricae e Ars deformationum*, (Rome: Ediz. di Storia e Letteratura, 1964). G. Aquilecchia has also provided a critical edition of *La Cena de le Ceneri* (Turin: Einaudi, 1955), and of *De la Causa, principio e uno* (Turin: Einaudi, 1973). There is an Italian translation of the Latin poems by C. Monti, *Opere latine* (Turin: UTET, 1980).

There are bibliographies by V. Salvestrini, *Bibliografia di G. Bruno*, 1582–1950, edited by L. Firpo (Florence: Sansoni, 1958), and R. Sturlese, *Bibliografia censimento e storia delle antiche stampe di G. Bruno* (Florence: Leo S. Olschki, 1987).

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Note on the texts

Cause, Principle and Unity (De la causa, principio e uno) was first published in 1584 in London, during Bruno's sojourn there (1583–5). Few copies of the original printing survived and no other editions of the work are listed until the nineteenth century, when two important editions of Bruno's works were published by Adolfo Wagner, Lipsia, in 1830, and by Paolo Lagarde, Gottinga, in 1888. Thereafter, the book was frequently reprinted, either in whole or in part, both in Italian and in various translations, most notably as part of the critical edition of Bruno's works edited by G. Aquilecchia, Dialoghi italiani (Rome and Florence: Sansoni, 1958). The present translation is based on the text published in Opere di Giordano Bruno e Tommaso Campanella, edited by A. Guzzo and R. Amerio (Milan and Naples: Ricciard, 1956).

The translations of the *De magia* and of the *De vinculis in genere* are based on the texts published in *Jordani Bruni Nolani opera latine conscripta publicis sumptibus edita*, edited by F. Tocco and E. Vitelli (Naples and Florence: Morano, 1879–91), Vol. III, pp. 395–454 and 653–700 respectively (a shorter, earlier version of the *De vinculis* is found on pp. 637–52.) The Tocco-Vitelli edition was based on the text of the Noroff codex in Moscow, which was transcribed by Bruno's disciple Girolamo Besler, or Bisler, of Nuremberg between 1589 and 1591. Albano Biondi's Latin–Italian edition, *De magia, De vinculis in genere* (Pordenone: Edizioni Biblioteca dell'Immagine, 1986) was very helpful, and was consulted throughout the preparation of these first English translations.