Paul-Henri Michel

RENAISSANCE COSMOLOGIES

I

"NATURA ARTIFEX": MARSILIO FICINO AND GIORDANO BRUNO

In the prose commentary to Chapter VI of his poem *De monade*, Giordano Bruno designates Ficino as one of the princes of Platonism: "unus e principibus platonicis Ficinus." Statements of this kind are all the more valuable because they are rare. Bruno seldom cites his sources; he utilizes his authors more often than he names them, and it requires a certain attentiveness to perceive that he knows Platonism and particularly Neo-Platonism only through and thanks to Ficino. On occasion Bruno makes use of Plotinus' opinion, quoting texts that one would seek in vain in the *Aeneid;* they have been taken from the Ficinian commentaries. The same is true as regards Porphyry and Jamblichus.

Thus certain concordances reveal direct and more or less disguised plagiarisms. Others are fortuitous, or, rather, they reflect a common tradition. For example, a like tolerance for complicated and detailed allegories is to be found in both writers. When one reads in Book IV of the *De minimo* the description of the residences of Apollo, Minerva, and Venus, he cannot but think of the "temple of philosophy," the symbols of which are interpreted by Ficino in the general introduction to his translation of Plato:

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the garden, the entrance hall, the portico, and the sanctuary of this cosmic edifice, dominated, respectively, by the superior principles of Apollo, Minerva, Jupiter, and Saturn, are the abodes reserved for poets, orators, jurists, and philosophers, the priests being everywhere.

A comparison of two texts like Ficino's *Commentary on Plato's Symposium* and Giordano Bruno's *The Heroic Frenzies*[1] reveals a closer relationship. The very word "furor," which Ficino uses to translate the Platonic term *mania*, is evidence of this. Ficino distinguishes between two kinds of furors, the one, bestial, in which "man turns himself into the nature of the beasts," and the other divine, "which raises man above himself and converts him into God." Between the two, reason has its domain. The *furor divinus* evidences itself by a transport of the fallen soul, anxious to return to its principle. And just as the downfall entailed four degrees, so the re-ascent was to take place by four degrees. Bruno simplifies this ordering but retains what is essential and, in the five dialogues of the *Fureurs héroïques*, exalts man's effort to return to his origin, which is none other than the supreme One.

In his fine book on *Marsile Ficin et l'art*, André Chastel[2] cites a passage of the *Theologia Platonica* where, he says, "the living organism of the Earth is described in terms that anticipate with great exactitude those of Leonardo in his *Introduction* to the Traité de l'eau: 'We see the Earth begetting with its own seeds trees and countless living things and causing them to grow by nourishing them, and even growing stones that are like teeth and grass that is like hair. . . . How can one dare to say that this woman's womb is not living since it produces little ones?' " The comparison with Leonardo is inevitable. But how many passages can be extracted from Bruno in which the earth is likened to a giant animal, and the celestial bodies as well, which move *secondo l'anima propria?* All are endowed with a soul, not only sensitive but also intellective, "as intellective as our own, perhaps more so than our own." These affirmations, moreover, are so replete with details that they provoke ironic amazement in one of the interlocutors of *La Cena de le Ceneri*, who was charged with presenting the argument. "It seems to me," he says, "that if the Earth is animate it should not experience pleasure when grottoes and caves are dug out of its back."[3]

1. Marsilio Ficino, *Commentaire sur le Banquet de Platon*, text ed. and trans. by Raymond Marcel (Paris: Belles Lettres, 1956); Giordano Bruno, *Des Fureurs héroïques*, text ed. and trans. by P. H. Michel (Paris: Belles Lettres, 1954).

2. *Marsile Ficin et l'art* (Geneva: E. Droz & Lille, R. Giard, 1954), p. 94.

3. Giordano Bruno, *La Cena de le Ceneri*, ed. Giovanni Aquilecchia (Turin: Einaudi, 1955); English trans.: *The Ash Wednesday Supper*. We can merely point out in passing the importance of this edition and of Aquilecchia's researches in the domain of studies on Bruno.

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But whenever the subject is not the earth or some celestial body but rather the universe viewed as a whole, notable divergences appear between Ficino's animism and that of Giordano Bruno. According to Ficino, life circulates from the earth to the stars, "in order to constitute the uninterrupted tissue of the whole of nature" (*Theologia Platonica* ix. 7). One of the major points of this cosmology is that "the heavens are a great living thing, endowed with a soul with which all the souls of the living communicate. . . . The universe appears as a giant 'organism' in perpetual vibration, since the stars are the source of the active forces of insensitive matter, even of plants and animals" (translated from Chastel, p. 42). This word, "organism," which we stress, expresses very well the image of a coherent universe, of a unique and finite cosmos of the Aristotelian type. Its center is the earth, around which spheres gradually rise one above the other, each of which corresponds, as in the Pseudo Dionysius, to a level of the angelic hierarchy and whose container in the last analysis is the empyrean. Bruno no longer accepts this architecture. His universe has no center, or—and this amounts to the same thing—it alone is the center. It is infinite, immeasurable, formless, homogeneous in the sense that the elements of which the sublunar world is composed meet again in the immensity of the heavens. The stars are but other suns; the planets—satellites of the sun or invisible satellites of the stars—are but other lands possessing "the same properties and hazards as our own" so that if we were to escape from this globe, no matter how far we went, we would only meet other similar worlds, perhaps better, "perhaps worse." The infinite space in which the stars move does not constitute privileged regions, symbol of a hierarchy, or zones more or less distant from the source of energy that animates celestial bodies and imparts motion to them. The cosmic soul is omnipresent; it is at work everywhere, simultaneously, and in the same manner. This inorganic state is suggested by the very title of Bruno's cosmological poem: *De innumerabilibus, immenso et infigurabili*.

Whatever the structure of the universe might be, to conceive of it as a living thing is to think of it as inhabited by an internal energy—God, soul of the world, or *natura naturata*—of which the creative effort, ever at work, accounts for the sensible objects. And, since all creativity implies a mode of creating (can we venture to say a technique?), to speak of creative nature is to raise the problem of the *natura artifex*. This thought, common to both Ficino and Bruno, led them both more than once to compare nature's (or God's) effort to that of man. But here again an identical theme has been the occasion for very divergent interpretations.

According to Marsilio Ficino, God, like any artist, remains present in his

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work (Chastel, p. 58). "He has been able, known how and wished to make his work as similar to himself as possible" (*Theologia Platonica* i. 5). On the other hand, "God is the center of everything because he is more internal to every being than the being is to itself. He is also the circumference of the world, because he exists outside of everything and he so fills to overflowing the whole of all beings that he rises, with all his dignity, above the summit of each. Center, he is in all things, circumference, outside all things. . . . Then what is God? A spiritual circle the center of which is everywhere and the circumference nowhere. But if this divine center possesses an imaginary or visible seat from which to hold sway in some part of the cosmos, it reigns mostly in the middle, like the king in the middle of the city, the heart in the middle of the body, the sun in the middle of the planets. It is in the sun and in the third essence, the median essence, that he has placed his tabernacle" (*Theologia Platonica* xviii. 3).

"This analysis," says André Chastel, "is not solely destined, as in the hermetic texts, to give an idea of God; it is not applied, as in Nicholas of Cusa, to an intuition of the universe; rather it aims at revealing their metaphysical relationship, at suggesting the two ways in which one can say that the divine *artifex* is present in his work. An image of the circumference possessing multiple centers expresses first of all the relation of a force with that which it animates. God being both the container of all things and the intimacy with each one, one perceives him at work precisely when one is able to conceive that the same principle of energy moves the spheres which envelop the world and gives the gift of life to all who inhabit it. But to express this dynamic relationship is not enough; one must also draw from the image of the circle the symbol-type imposed by the analogy of the structure of the circle with the privileged place of the sun in the visible world and that of the soul in the invisible world."

As for man, he is not only the intelligent and wonder-struck spectator of this continuous creation; he is the imitator of it: "It is by his creative undertakings that he demonstrates above all the identity of his genius with that of the divine *artifex*." He is the universal artist, the king of the nature which he subdues, of the animals that he trains and controls; he collaborates and he is aware of collaborating; he is aware of the work of the Creator. "The activity that one engages in in the name of art corresponds so well to divine activity that it alone can give a valid idea of that activity." Praise for the arts always consists for Ficino of high lyricism as well. Here is an example borrowed from the *Theologia Platonica:* "Human power is almost similar to divine nature; what God creates in the world by his thought, the [hu-

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man] mind conceives within itself through the intellectual act, expresses it through language, writes it in its books, typifies it through what it builds out of the matter of the world." Other quotations, no less eloquent, are to be found, as well as numerous references in André Chastel's book (Chaps. I and II of the first part). We can but refer the reader to them. However, we must remark again upon another curious notation concerning the *mimesis*, the imitation of a "model" in which Ficino is not satisfied to recognize one of the essential conditions of our human art (in this respect he is in agreement with Léon-Baptiste Alberti) but also perceives the principle of all reality: "Just as works of art are the images (*simulachra*) of natural things so the latter are the images of divine things. Because of their material analogy, works of art come closer to the truth of natural things than the latter do to the truth of divine things. If the difference between a copied horse and a real one is only that the former is not true, the difference is far greater between a real horse and the divine horse, that is, the idea and the true reason of the horse, and one can very well say that it represents the shadow of the horse rather than the form itself" (*Theologia Platonica* xi. 6).

In the perspectives of Ficinian thought, the "analogy" between the painted or sculptured horse and the "true" horse is most striking. Both of these reflect their creator and contain the spirit of his thought; and the distance of the thing thought from the thing realized will always be greater than that from the thing realized to the thing realized. In other words, the distance that separates man's work (the art object) from that of God (the natural object) is not so great as the distance that separates God's thought from his creation. The universe is nonetheless as similar to its Creator as is possible, and the same must be true of the work of art: mirror of an individual thought, it will be all the more valid because the personality of the artist expresses itself more completely within it. It goes without saying that this rule is applicable to all the arts and not only to the plastic arts: "The mind of the artist manifests itself . . . also in speeches, music and song; the soul's form and its pattern are revealed in these" (cited by Chastel, p. 65).

Bruno, quite as much as Ficino, holds as incontrovertible truth that God, the center of everything, operating within all things, is more internal to each being than this being is to itself. Up to this point there is complete agreement between the two doctrines. But, as we have seen, Ficino admits of a cosmic center, a privileged place where divine action is initially at work, whence it springs as if from its source. The image of the circle (which Bruno was to make use of for different ends) suggests in his thinking the image of the heart, the vital organ of the organism; it also is used

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by him to stimulate the idea of a closed world, harmonious and constructed, of an architecture of spheres. For Bruno the formal or spiritual principle, issuing immediately from God, is omnipresent as principle and its action, the same everywhere, operates everywhere at once in a limitless and formless universe, where the Sun is nothing more than our sun and the Earth our planet.

Therefore it does not surprise us that Giordano Bruno's God, less localized than Ficino's, is also more impersonal and that for the Ficinian comparison between God and the artist Bruno substitutes, with a different intent, a parallel comparison between nature and art. Once stated, this comparison promptly takes the form of a contrast and is developed in a remarkable page of the treatise entitled *De la causa, principio et uno*.[4] It bears upon two points: the "matter" of art and nature and the "mode" of the creative operation.

"Nature, to which art is comparable, requires a matter for its operations." But the matter of art is a thing "already formed by nature, like wood, iron, stone or wool," while the "matter of nature has absolutely no form." The artist finds his work half-done: he gives form to that which already has form. He uses not the raw material from which everything can spring up but secondary matter, commonly but improperly called "raw material" and even, according to Bruno, improperly called "matter."

To this difference between art and nature another, even more important, is added—one that bears upon the mode of operation by which matter (raw material in the first instance and secondary matter in the second) is to be constituted in an object. Nature "works from within," *opra dal centra;* the artist, on the contrary, works "on the surface of his work." The creation of the divine *artifex* is a thought that takes shape; the creation of man, the artist, is a thought expressed—that is to say, projected from the outside.

The principal object of the treatise *De la causa, principio et uno* is to define with precision the three terms that constitute the title. For the moment let us merely envisage the first two terms. One of the interlocutors of the dialogue asks: "I would like to know if the two words 'cause' and 'principle' are synonymous in your opinion." Théophile (a person whose role it is to expound the author's doctrine) answers in the negative and, in so doing, gives the reasons which his interlocutor summarizes thus: "It seems to me that you would like the principle of a thing to be what intrinsically contributes to the constitution of that thing and which resides in the intent. . . . You call cause that which contributes externally to the produc-

4. Translated by Émile Namer under the title *Cause, principe et unité* (Paris, 1930).

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tion of things and which has its being apart from composition." Théophile approves; but, if we now come back to explanations that he has given previously, it appears that this clarification was rendered necessary by the indifferent use that he made of the two terms, the meanings of which have finally become distinctive. Moreover, this indifference was justified to a certain extent by the fact that the two terms, when they are applied to divine action, are equivalent: "When we speak of God, first principle and first cause, we mean one and the same thing under diverse relationships," for God remains present in objects of which he is cause, he remains present as principle in the universe. On the contrary, "when we speak of principles and causes in nature (that is to say in the visible world) we mean, under diverse relationships, diverse things."

Is it not therefore obvious that the artist is the cause and not the principle of his work, while God is both cause and principle of the universe? The work of art is created from the outside: its cause is foreign to it. As soon as it is finished, it is abandoned by its author who no longer lives in it. The work of nature, on the contrary, being the product of *the universal intellect* which is here designated by the compelling term "internal artist" (*da noi si chiama artefice interno*), never becomes detached from the creative principle always present in it and in each of its parts and which gives it life. If Bruno compares it to the productions of our arts, he does so not in order to exalt the genius of man but to make apparent the limits of its power—its genius is not in question: "If we do not believe that this virtually dead work (*quell'opra come morta*), which we can represent with a certain orderliness and in accordance with a model on the surface of matter, is produced without either reasoning or intelligence—as when we cause the likeness of a horse to appear, by stripping and carving a piece of wood—how greatly superior should we esteem the artist intellect (*quel intelletto artefice*) which, from the inmost depths of seminal matter, solders the bones, stretches the cartilages, hollows out the arteries, airs the pores, weaves the fibers, causes the nerves to branch out, and disposes of the whole with such a great mastery? How much greater an artist, I repeat, is he who is attached not only to one part of matter but who works on the whole continuously and completely."

This last sentence that resumes the previously developed theme of divine omnipresence reminds us that, if the work of one man (its limitations enabling it to remain at the level of our gaze and commensurate with our investigative effort) enables us to know the man, the contemplation of the infinite universe cannot to the same extent elevate us to a knowledge of

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God. "The fact that we do not possess a total view of this universe . . . has as its consequence that it is far less possible to know the first principle by its effect than to know Apollo by the statues that he sculptured;[5] for we can see these statues in their totality and examine them part by part, but not the great and infinite purpose of divine power. This is why one must understand the analogy without comparing its proportions" ("Pero quella similitudine deve essere intesa senza proporzional comparazione").

II

THE REIGN OF UNITY: BRUNO AND CAMPANELLA

The editing of Tommaso Campanella's *Theology*, begun in 1613, was not completed until 1624. In the mind of its author, who had returned to orthodoxy, it was to constitute a new systematization of the truths of faith and to demonstrate, as Raymond Lulle, Nicholas of Cusa, and Marsilio Ficino had already attempted to do, that Christian religion explains and illuminates the truths concealed in the beliefs of the Gentiles.

Under the direction of Enrico Castelli and Giovanni Calo, the Edizione Nazionale dei Classici del Pensiero Italiano undertook in 1950 the printing of this monumental work, unpublished until then. The first book appeared in 1950, then, in 1955, Volumes XXVII and XXVIII.[6] These two last books, which constituted an entity, shed new light on the little-known Campanellian eschatology. However, only one manuscript remained in existence, preserved in the archives of the Dominican Fathers of Saint-Sabini in Rome. This impelled Romano Amerio, the editor and translator of the text, to publish the books before their turn and without delay.

Combined under a common title of *La prima e la seconda resurrezione*, they represent a prophetic tableau of the last era of the world, that is to say, of the millennium which, after the downfall of the Antichrist, must precede the Last Judgment. They were written in 1623 and 1624, shortly before the end of Campanella's long detention in Spanish prisons—a time of suffering and even of torture but also one of fruitful activity.

The name of Campanella is frequently associated with that of Bruno by historians of modern thought. The courage of the two philosophers and their tragic destiny doubtless suffice to justify this association. However,

5. Bruno alludes to Apollo as a sculptor. This is but one of many examples of his indifference, if not contempt, for all that touches upon the arts.

6. Tommaso Campanella, *La prima e la seconda resurrezione* ("Inediti Theologicorum," Libri XXVII–XXVIII, testo critico e traduzione a cura di Romano Amerio [Rome: Fratelli Bocca, 1955]).

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despite the opinions they hold in common on certain points (animism, for example), some caution should be used in drawing a parallel between their two doctrines. In the first place, their very divergent attitudes in regard to Christian religion should be taken into account; Bruno rejects it completely and definitively, while Campanella draws away from it only to return to it. Rome was not mistaken about this; in 1600 it condemned Nolain to fire; in 1626 it freed the Calabrian and rescued him from the pursuit of his enemies. Equally anxious to harmonize their concept of the divine with the new scientific data, at a time when the horizons of the heavens had broadened immeasurably, Bruno and Campanella found themselves in the same sorry position in this respect. But while Bruno, having rejected any positive credo, experienced little difficulty in harmonizing his personal religion as a metaphysician and his concept of a limitless universe with new points of view, Campanella, respectful of dogma and singularly attached to the letter of the Scriptures, separated himself with regret from traditional teachings and experienced scruples that he shared with many scholars of his epoch—Tycho Brahe, to name one.

The question of the sublunar elements and of the celestial quintessence is one which manifests simultaneously and very plainly in both Bruno and Campanella the identity of their opinions and the contrast in their points of view. Both reject Aristotle's twofold physics which had long beaten a retreat but was stubbornly taught in the schools. They also repudiate the *Stufenkosmos* of which Cassirer speaks, the universe in stages which the Dionysian mystique had made the dwelling place and field of action of the angelic hierarchies. But their common position in this respect is inspired by different principles, as the emphasis in and the methods of their argumentation prove.

Indifferent to apologetics, Bruno attacks Aristotle with a fervor that is never restrained by respect for tradition and which a secret penchant for the scandalous would tend to reinforce. In the discussion he hardly attempts to invest himself with authority, or, if such a frailty assails him, he is more inclined to involve the pagan Epicurean or pre-Socratic philosophers than the Church Fathers.

Campanella, on the contrary, is only satisfied when he has found confirmation of his theses in Christian authors. Moreover, he shows the greatest respect for adverse opinion so long as it makes use of respondents of his own caliber. There exists, he admits, an interpretation according to which the heavens, being exempt from all imperfection save that of local move-

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ment, have nothing more to anticipate but the cessation of this movement. Their *purgatio* would consist merely in immobilization: "satisfiet ergo eius perfectioni per solam quietatem." But, basing his argument against this doctrine on Psalm 101, St. Ambrose, "caeli peribunt et omnes sicut vestimentum veterascent," demonstrates that the heavens and the stars are susceptible to "passion," and he regards as heretics all those who, along with Aristotle, profess that the heavens are formed of a quintessence. The martyr St. Justin, Theophylactus, Origen, all the Greek Fathers, are of the same opinion. The same is even true of Augustine, himself, who is too often invoked by the Aristotelians as having, in his Commentary on the Genesis, portrayed the heavens as water vapor: "ex vapore aqueo caelum constituit." For several pages Campanella multiplies quotations and references only to conclude in the end that the heavens of fixed stars are vulnerable to impurity and that the four elements which we on earth know are also, as Empedocles claimed, those that constitute the firmament. These assertions no longer possessed the merit of novelty in 1623. They are perhaps less interesting to us than the discussion that introduces them and in which the author's desire to remain faithful to the teachings of the Scriptures is always apparent in his *Theologica*. He is inclined to follow the purest tradition of the Church Fathers and of all the great Doctors, not excepting the one who was reputed to be the most formidable champion of Aristotelianism—Thomas Aquinas.

If the celestial world is composed of the same elements as the sublunar world, it must be bound by the same physical laws: there is nothing to prevent us from supposing the presence in the heavens of stars that might be other suns, with their retinues of planets. This is one point where the adventurous cosmology of the *Cène des cendres* goes beyond the Copernican heliocentricism. Giordano Bruno wrote this remarkable dialogue in 1584 during his stay in London. Campanella has the advantage over him of being aware, some thirty years later, of the recent progress of science and of new inventions such as the telescope, thanks to which the phases of Venus had just been discovered ("telescopio experimur Venerem crescere decrescereque sicut luna").

The author of the *Theologica* also believes, after Copernicus and along with Bruno, that heavy bodies are attracted toward multiple centers of gravity and not in all toward the earth, the unique center of the universe. To this problem and to several others, Bruno and Campanella offer solutions which always contradict classical geocentricism. But here again, in contrast to Bruno, who is not inclined to dwell upon the difficulties that a

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literal interpretation of such and such a passage from the Bible might engender—although he does not ignore them entirely—Campanella pays careful attention to the scriptural texts, since it is upon them, particularly the Apocalypse, that he proposes to base his eschatology. He seriously doubts that the stars fall upon the earth. "If, indeed, fixed stars are so many suns around which revolve planets that are invisible to us," they would constitute a mass far superior to that of the earth. Therefore we must interpret judiciously, but we must not reject the prediction concerning the fall of stars. This fall would not be a "descent upon the earth," which could be jolted; for the stars, it would consist of forsaking their orbit in order to surrender throughout heavenly spaces to the disorder of random movements. "Non . . . casus stellarum erit in nostram tellurem descensus. . . . Sed a suo ordine et gyratione, et in temerarias iactationes in toto spatio firmamenti"—grandiose vision of a "fall" which, in abolishing all cosmic law, extends its effects to the new dimensions of the universe.

Not satisfied to predict and describe the end of the world, Campanella goes into the details of a prophetic chronology. He does so both to raise the problem of time and, in a certain sense, to resolve it. This problem is not of lesser importance in Bruno's cosmology. And, in this final example, we are forced to observe that the two philosophers, starting from opposing principles, end at a determinate point with an identical conclusion.

For Bruno, the universe—God's reflection—is eternal, since it partakes of divine eternity. But this material universe is the domain of movement, of change, that is to say, of becoming (the *ens mobile* of the Aristotelians). How then can it harmonize that temporality which is its most obvious characteristic with the eternity which we attribute to it? Anaximander, Heraclitus, Empedocles, and many other pre-Socratic philosophers resolved this difficulty by introducing into their cosmologies the hypothesis of the eternal return. Hence, the time of the world, which the circular movement of the heavens makes rhythmic and symbolizes, assumes the form of an indefinite series of cycles. Bruno completely rejects this concept. According to him, the cyclicism of the universe, like its finitude, and for the same reason, would signify an impious limitation of divine power. The real in the ineluctable delays of a periodic becoming, as in the narrow prison of a closed world, would represent but the smallest part of what one might regard as physically possible.

No more than Bruno does Campanella admit the existence of cosmic cycles. He does not even consider their possibility, since he declares as fact the end of the centuries. Furthermore, agreeing in this with Bruno, he

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believes that the world at no time can do without the action of its principle, that is to say, God. And in this permanent intervention of a free will he finds a further reason to exclude any notion of a fresh beginning. Certain authors—he cites among others Chrysippus, Albumazar, and other Platonists—claim that a time will come when all the planets, having pursued their course to the end, will find themselves back at their point of departure and that then everything will begin over again in a renewed world ("tunc mundum innovatum iri et easdem res reversuras et futuram ergo resurrectionem"). But this resumption of an initial position, giving rise to a mechanical resurrection, possibly conceivable in a limited system like the planetary one, could not be extended to fixed stars, which are considered the centers of multiple systems; nor could it affect the whole of the universe. Furthermore, even admitting this last and hardly plausible hypothesis, the earth nonetheless would still have evolved in a certain direction; in such a position in regard to the heavenly stars, it would be no less different from what it was in the beginning, because of its own attributes and the mutations it has undergone ("ob praeteritas passiones").

Less distant in its effects from apocalyptic cataclysms, the Empedoclean "conflagration" is no more acceptable than the return of the stars to their initial position, for it would not be the "end of the world" in Campanella's sense of the word and in the sense in which any Christian must understand the phrase. It would be no more than the end of a great cycle and the prelude to a physically impossible renewal. "Despite Lucretius and Empedocles, a worn out sword, a house destroyed, a city in ruins, do not spontaneously spring up again. They can be restored only by the artisans that made them. That which has been made by the supreme artisan (*a summo artifice*) will be remade only by him." After the end of the world a new world can be born only through God's will, by a new and free creation, which excludes any notion of inevitable renewal.

In summary, the cyclicism of cosmic time is equally rejected in all its forms by both Bruno and Campanella, but in the name of their two different theologies and cosmologies. According to Bruno, cyclicism is inconceivable because of the infinitude of the universe and because of the infinity of possibilities. For Campanella, it is inconceivable because of the finitude of the universe—an enlarged universe, but one that remains limited and organic, a body that must die and that cannot, by itself, be revived.

The concordances and disagreements between Bruno and Campanella which we have just pointed out, and which are apparent in themselves to

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anyone who takes the trouble to contrast the works of the two men, seem to correspond to the combination of a desire for unity which is common to both with a perception of unity which is quite different for each.

Campanella dreams of an organic unity, of a harmony that would manifest itself both in a physical universe and in the human species, and which would make itself visible on this earth, whose place in the heart of the cosmos remains central, if not materially, at least morally. Preoccupied with political problems, Campanella calls for and proclaims the establishment of a human society assembled under the law of a single government, during the last days of the world. Thus humanity, at the end of time, would discover, with all the happiness and innocence of the first age, the system that was most in conformity with its nature. For in the beginning there was unity: there is only one race of men—all sons of the unique Adam, whom God created to be the priest and the king of the world ("creavit in toto mundo unum Adam, qui pater et rex et sacerdos foret orbis"). All evil, and consequently all misunderstanding, is the result of temptation and man's fall. The Devil introduces sin and, through sin, the sects, the multiplicity of states, schisms ("peccatum introduxit et per peccatum sectes et diversitatem principum et schismata"). But this lost unity must be recovered. Such is the desire of all mankind. At heart all men nourish the hope of a new golden century which will know none of the evils that assail us: famine, disease, and, above all, discord. But this happiness will become possible, as the book of the Monarchy of the Messiah proved, only through the religious unity of the earth and the subordination of all to a single prince. Thus will reign that great tranquillity whose image and outline unfortunate humanity had envisaged once before, during the Roman peace. "This peace appeared like a flower at the birth of Christ, under the Emperor Augustus, and it lasted in this world for eighteen years, but only in our hemisphere and in that part of the hemisphere which the Romans dominated." It was merely a prefiguration of the truly universal peace that will occur at the end of time, after the first resurrection, the resurrection of the martyrs, when the Christian church will extend its sway over all the earth.

Irenicism is inseparable from intolerance in this connection: Campanella regards religious unity as the triumph of Christianity alone and as the disappearance of all other religions, toward which he evidences a relentless severity. We can deduce this from what he says of Islam: Mohammed has sullied Paradise ("ponit deiectiones excrementitias in paradiso"); he made of it a Paradise of pigs. It goes without saying that spiritual and temporal

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powers will be reunited; the Pope will govern all peoples. "After the fall of the Antichrist all the nations will walk in the full light of the Church and all the kings of the Earth will be bound to him. Not one hundred, nor one thousand, but *all*." And the seat of this monarchy will not be Rome, but Jerusalem, finally rebuilt ("Jerusalem reaedificandam fore sedem saeculi aurei potiusquam Roman et caput Monarchiae Christi").

No less obsessed than Campanella by the thought of unity, Bruno, declaring unity principle and end, endows it with quite different traits. In the infinite universe which he envisages, and in which the earth, both raised above its shame and stripped of its privileges, occupies the smallest place, the unity and omnipresence of the formal principle manifests itself as a rising up of the "being" everywhere. The infinite, everywhere and totally inherent in the finite, causes life to flower everywhere in forms that are varied but uniformly valid.

On our own earth, the effects of this universal law give rise to phenomena within our grasp and which we are able to interpret. Let us consider, for example, the diversity of the human races, the existence of men different from ourselves in size or color, like Negroes or Pygmies. Will we not be led to believe at the start in a multiplicity of families? The Hebrews claim that we are all sons of Adam; but Adam is no other than the father of the Jewish race. Bruno stresses this polygenism in his Latin poem, *De immenso*. But he had already alluded to it in his treatises, written in his own language, notably on a page of the *Spaccio*. In support of his thesis he invoked the discovery of America and the traces there of a civilization that is "more than ten thousand years old" ("è frescamente scoperta uno nuova parte de la Terra che chiamamo Nuovo Mondo dove hanno memoriali di diece mila anni e più"). But these regions were unknown to the ancients and the sons of Adam could hardly have traveled there to found a line at a time when ships were not yet in existence.

It is difficult to admit that all men are the descendants of a common ancestor, since during the course of the long centuries the various human families could not have had the slightest contact with one another. But is not the impossibility of a common origin for the inhabitants of diverse planets even more obvious? Curiously enough, this impossibility is presented, in the fifth dialogue of the Treatise on the Infinite, as an argument against the plurality of worlds; an "unreasonable hypothesis, since these multiple worlds would be deprived of the benefit of civil life, which consists in commerce between humans." The champion of Aristotelianism who raises this objection against Bruno's philosophy establishes as a prin-

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ciple that all thinking beings must have the means of communicating with each other. A few pages further on he is answered to the effect that relationships between the inhabitants of diverse worlds are in no way indispensable to the public good ("à la bontà civile") and that one might say the same of the relationships between men of different races who people the diverse continents of our planet. "Experience teaches us that the obstacles of seas and mountains which nature placed in the way of families were all for the good of the inhabitants of this world [the earth]. And when it did happen that, through human artifice, relationships between these families could be established, they were bound to lose more than they gained, since the result of such contacts was that vices rather than virtues increased."

The same idea is expressed in a page of the *La Cena de le Ceneri* with quite as much forcefulness and more asperity. Christopher Columbus is designated as one of the "new Typhon" whose discoveries had been announced by Seneca in his tragedy, *Medea*. These bold navigators had merely "disturbed the peace of others . . . added to the vices of nations . . . taught men a new art and new means of tyrannizing over and assassinating one another."

At this juncture we find ourselves far removed from Campanella and from any desire for the political and religious organization of the earth. Moreover, the earth is simply used as an example to demonstrate the impious vanity of any effort to cause unity to reign in a world whose proper nature is to be infinite and infinitely diverse. The unity that we must seek and recover is that of the principle common to every being, ever living, ever present. It is not the aim of a conquest undertaken throughout space; it is not the goal of an exodus but, as Bruno says, of an *eisode*, a voyage inward, toward the totally inherent infinite of each finite being—a voyage in which all diversity is resolved.

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