Paola Zambelli

Astrology and Magic from the Medieval Latin and Islamic World to Renaissance Europe

Theories and Approaches

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VARIORUM COLLECTED STUDIES SERIES

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Theories and Approaches

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PREFACE

Many years ago, as an undergraduate student, I began researching the history of astrology and magic. I did not do it by my own choice and I had no special interest in occult sciences nor personal belief in them (I didn't then, nor do I now). In the fifties a student had to ask their supervisor for a subject for a dissertation, but after negotiating it the student had either to accept the subject and the line of research suggested by his/her teacher or to change professor. I had asked two of my teachers to agree to a dissertation of mine on Karl Marx's ideas and writings on the French Revolution, but they decided otherwise. One of these men was Delio Cantimori. The other was Eugenio Garin, Chair of History of Philosophy at the University of Florence, where I would later become his assistant, then associate professor and, finally, (1975–2007) full professor in the same discipline. Their proposal was that I should write my *tesi di laurea* (Doctoral courses did not then exist in Italy) on Cornelius Agrippa and magic. Both professors were great scholars specializing in Renaissance studies and able to anticipate forthcoming research in this and other fields. I accepted their proposal and Garin became my supervisor. My interest in the history of the occult sciences grew very quickly; I saw its relevance, and this history became my specialized field of research (although not the only one).

This field was not crowded as astrology, magic and their history were not popular topics in 1955, when I was an eighteen-year-old undergraduate publishing my first paper (see *infra* Bibliography 18). During this period such research had to be done directly on incunabula, rare books or – worse – their microfilms, editions of texts being rather lacking and secondary literature consisting almost solely of L. Thorndike's works. From a methodological point of view his *History of Magic and Experimental Science* in 8 volumes (some of which were published later, 1959–64) was certainly old fashioned, but it was and still is precious for the richness of data on authors, manuscripts and rare materials. Bestsellers by Frances A. Yates were not published until ten years later (1964–72), and serious studies by E. Garin and D.P. Walker never had the same international reception and influence: only after Yates, did we begin to see published in a number of different subjects (history of philosophy, history of art, history of literatures, history of political propaganda, and alas! history of sciences, i.e. cosmology and the exact sciences...) a long, rich and popular, although often naive series of studies. Large numbers of books aimed at a more

general readership appeared, and in the same period many movies, novels, magazine articles and other 'entertainments' were also inspired by 'the occult'…

Let me tell the story of my studies as if it were a joke: if you could consider my continual devotion to the history of magic as if it were a marriage, it should be seen as an arranged marriage; but, to use the language of the old novelists, it worked well, because my partner (by this I mean the history of magic as an academic subject) also became the focus of great attention (perhaps even too much!). I have, however, sometimes been unfaithful to this partner and spent time with other beloved themes. I have, for example, also written on a Italian follower of Hegel, Bertrando Spaventa, who saw the history of philosophy as the 'circulation' of Bruno's and more Italian philosophers' ideas via Descartes and Spinoza through to Hegel and back to the Italian Hegelians. Spaventa was supposed to anticipate Gentile and Croce, who had been criticized by Gramsci, whose thought was of great interest to me (see *infra* Bibliography 24). I have also produced a large book and several articles on Enlightenment in Italy and Antonio Genovesi (one of them in English: B/68; see also *infra* B/23, B/50, B/51, B/52, B/54, B/56, B/60, B/64, B/67, B/97), as well as many studies (see *infra* B/3, B/89, B/111, B/112, B/115, B/117, B/118, B/119, B/120, B/124, B/125, B/136, B/138, B/142) on the intellectual biography of the great historian of science, Alexandre Koyré, whose political life deserves to be more widely-known.

Closer to the subject imposed on me, I undertook a very challenging investigation on the roots of astrological theories in ancient, as well as Islamic and Latin Medieval culture focusing on the *Speculum astronomiae* attributed – rightly in my view – to Albertus Magnus. Enough of that! The English reader can look through the Bibliography of my writings printed at the end of this book. It includes this English monograph and edition of the *Speculum astronomiae* (see *infra* B/11; cf. also B/26, B/57, B/73, B/76, B/98) and two English books: one on the debate amongst astrologers before 1524 (see Part III of the present book and *infra* B/8, B/76, B/9, B/84, B/88, B/94, B/101, B/102, B/105, B/106, B/127) and the other on the (ambiguous) distinction between *White Magic, Black Magic in the European Renaissance* (see *infra* B/16).

I feel I should make it clear to the reader that I am not eurocentric in my chronology, nor am I in any way an Islamist scholar. In order to follow the medieval debate on astrology, magic, spontaneous generation of animals and of man himself, amongst other topics, it is necessary to look at what was written by philosophers and scientists of the Islamic Golden Age: when these were translated into Latin, their ideas were discussed amongst writers in the West. In these essays my aim was to focus on these ideas which remained current from the Ancient world (Plato, Aristotle, Epicurus), through the Fathers of the Church, the Scholastics and some thinkers writing in the Islamic area (for

instance al-Kindi, al-Farabi, Avicenna, ibn Tofail, Averroes, ibn Khaldun) up till the Renaissance.

I am extremely honoured and grateful to Dr John Smedley, Lindsay Farthing and Claire Jarvis of Ashgate Publishing Ltd, who have selected and produced the following ten papers for Variorum, a series well known in libraries, very useful for teachers and scholars. My thanks also go to the translators, all of them very competent and patient, who have collaborated with me over the years, and to Dr Nicola Borchi who prepared the analytical index.

The papers in Part I of this volume deal with theories: the ideas about astrology and magic amongst Renaissance thinkers; astrologers' ideas on universal history and its cycles; i.e. catastrophes and rebirths; theories, and myths on the spontaneous generation of man himself. Part II focuses on the role of astrologers in Renaissance society. As political counsellors, courtiers, and academics, their ideas were diffused and appreciated in both popular and high culture. Part III looks at the Great Conjunction of 1524 (observed and announced twenty-five years before) and on the long and extended debate surrounding it, which had not been possible before Gutenberg, since astrologers printed numberless booklets (full of religious and political innuendo) predicting the catastrophe – flood, as well as hurricanes, earthquake or fire – foreseen for February 1524 (which, in the event, proved to be a month of extraordinary mild weather). Part IV reprints some review-articles on twentieth century scholars whose writing has contributed to our understanding of the historical problems concerning magic and other connected debates.

In Part I ('Astrology and Magic as Theories') of the present book: Chapter I, 'Theories on astrology and magic (1348–1586) in recent interpretations' had been written for the *Cambridge History of Renaissance Philosophy,* but not printed there, and it was published in Italian with the same title in *Rinascimento* 27, 1987, pp. 95–119; Chapter II, 'Imagination and its power: desire and transitive or psychosomatic imagination' was read in an English translation and discussed at a conference on *Orientalische Kultur und Europäisches Mittelalter*, and published in Italian in *Miscellanea mediaevalia. Veröffentlichungen des Thomas-Instituts der Universität Köln* 17, Berlin, W. de Gruyter, 1985, pp. 188–206; Chapter III, 'Pietro Pomponazzi's *De immortalitate* and his clandestine *De incantationibus*: Aristotelianism, eclecticism or libertinism?' was published in the *Bochumer Philosophisches Jahrbuch für Antike und Mittelalter*, 2001, pp. 88–115.

In Part II ('Birth, Catastrophe, Cycles and Other Astrological Themes'): Chapter IV, '"Creating worlds and then laying them waste." The cyclical nature of history: notes on historians and on Giovanni Pico della Mirandola' was published in Italian in *Filosofia e cultura. Per Eugenio Garin,* eds M. Ciliberto and C. Vasoli, Roma, Editori Riuniti, 1991, pp. 372–94 (the translation

published in this volume is the brilliant work of Lydia Cochrane); Chapter V, '"The Earth was like a sponge and men lived within it": ideas on spontaneous generation of man among Islamic and Latin thinkers', was read and discussed at a conference on 'Islamic Freethinking and Western Radicalism' organized by Jonathan Israel, Patricia Crone and Martin Mulsow at the School of Historical Studies, Institute for Advanced Study, Princeton, NJ (April 2008), whose acts will not be printed (the excellent translation here is by Lydia Cochrane). My paper has been published in its Italian shorter version entitled 'Sono gli autoctoni generati "per accidens" o "a casu"? Note sulla generazione spontanea dell'uomo', *Giornale critico della filosofia italiana* 87, 2008, pp. 30–58.

Part III ('Astrologers and Magicians in their Historical Role') consists of: Chapter VI, 'Astrologers' theory of history', and Chapter VII 'Many ends for the World: Luca Gaurico, instigator of the debate in Italy and in Germany', which have both been translated by the late Ann Vivarelli and published in the acts of a conference I organized at the Wissenschaftskolleg zu Berlin (1984) and edited under a title taken from a quip in Luther's *Tischreden*, *'Astrologi hallucinati': Stars and the End of the World in Luther's time*, Berlin, W. de Gruyter, 1986; the first paper, at pp. 1–28, was written as its *Introduction*, whereas the second one, at pp. 239–63, had been previously published in Italian in *La città dei segreti*, ed. F. Troncarelli, Milano, F. Angeli, 1985, pp. 299–323.

Part IV ('Methodological Notes') is dedicated to scholars (either historians, historians of philosophy, historians of science, anthropologists or social scientists in a general sense) and consists of: Chapter VIII, 'Alexandre Koyré and Lucien Lévy-Bruhl', *Science in Context* 8/3, 1995, pp. 531–55 (translation by Ilse Girona); Chapter IX, 'From Menocchio to Piero della Francesca: the work of Carlo Ginzburg', *The Historical Journal* 28, 1985, pp. 983–99 (translation by Heidi Boardman Flores); and Chapter X, 'From the *quaestiones* to the *essais*: on the autonomy and methods of the history of philosophy', published in *Science, Politics and Social practice, in Honour of Robert Cohen*, eds K. Gavroglu and M.W. Wartofsky, Dordrecht, Kluwer-*Boston Studies*, 1994, pp. 373–90 (translation by Ann Vivarelli).

At the end of these selected papers is a bibliography of my writings (here referred as B/1, B/2, and so on).

PAOLA ZAMBELLI

Florence
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PUBLISHER'S NOTE

The articles in this volume, as in all others in the Variorum Collected Studies Series, have not been given a new, continuous pagination. In order to avoid confusion, and to facilitate their use where these same studies have been referred to elsewhere, the original pagination has been maintained wherever possible.

Each article has been given a Roman number in order of appearance, as listed in the Contents. This number is repeated on each page and is quoted in the index entries.

I

Theories on Astrology and Magic (1348–1586) in Recent Interpretations

Historians of philosophy, at least until the pioneering work done by Ernst Cassirer in Hamburg, where Aby Warburg's Bibliothek had just been opened,[1] have tended to discuss philosophers of occult science and their critics considering only their activities in other philosophical fields. And yet, one should not overlook the fact that, within the works which deal with occult ideas, these same philosophers also address metaphysical, natural, logical or moral issues. This is evident, for instance, in Oresme's geometry, physics and economics; in Salutati's ethical and political theories; in the theology of Pierre d'Ailly and that of his critic Gerson; in Pico's kabbalistic cosmology and his ontology;[2] in Ficino's defence of the immortality of the individual soul and in Pomponazzi's thesis of the soul's mortality; in Bodin's political and economic theories. Such an intermingling of themes suggests that these thinkers regarded discussions of magic as no less worthwhile than discussions of the soul or of Being and the One.

Clearly, theoretical formulations of astrology, magic and alchemy were not at all rigorous. We know that they had long been falsified... Indeed, even in their time they were subject to a number of serious objections. Nevertheless, throughout the Middle Ages and Renaissance, such formulations were essential and often highly articulated elements of contemporary mentalities; magic was never a purely spontaneous belief; on the contrary, it relied on complex

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[1] A. Warburg, *Heidnisch-antike Weissagung in Wort und Bild zu Luthers Zeit*, in *Gesammelte Schriften*, ed. by F. Rougemont and G. Bing, Leipzig, 1932, p. 32 ff.; E. Cassirer, *Individuum und Cosmos in der Philosophie der Renaissance*, Leipzig, 1927.

[2] I cannot deal here with the kabbalistic stream that from Pico's *Heptaplus* in a complex way mixed with cosmology, mystic and language magic. It is fundamental to read G.C. Scholem, *Major Trends in Jewish Mysticism*, New York, 1954, p. 130 ff., 194 ff. and *passim*; F. Secret, *Les Kabbalistes chrétiens de la Renaissance*, Paris, 1965, pp. 24 on Pico, 44 ff. on Reuchiin, 73 ff. on Italian kabbalists, Francesco Zorzi included; 157 ff. on Agrippa; 171 ff. on Postel; on the latter author see also M.L. Kuntz, *G. Postel, Prophet of the Restitution of all Things. His Life and Thought*, The Hague-Boston-London, 1981 and *Actes du Colloque International d'Avranches. Guillaume Postel*, Paris, 1985. M. Idel, *The Magical and Neoplatonic Interpretations of the Kabbalah in the Renaissance*, Cambridge, Ma., 1983; Id., *Kabbalah: new Perspectives*, New Haven, 1990.

argumentation and sometimes articulated systems to organize its intellectual patrimony. Intense interest in the occult sciences began with diffusion of the Greco-Arabic texts to the West (*Almagestum*,[3] *Quadripartitum* and the astrology of Albumasar;[4] for what concerns magic *Kirannides*,[5] al-Kindi[6] and some passages from Avicenna; for alchemy Geber[7]) Debate about the validity of astrological predictions and "natural" magic had begun at least a century before 1348 with William of Auvergne, Roger Bacon, Albert the Great, Thomas Aquinas.[8] This, already present in twelfth century cosmology (in the the School of Chartres), was continuously enriched with new texts and ideas right up to Bruno and Campanella at the end of the sixteenth century. Obviously it did not disappear overnight – no conceptual system ever does – but after Francis Bacon and Gassendi the hegemony of this system over philosophy and scientific research certainly began to wane.

Without devaluing in any way the immense documentary wealth and erudition of Thorndike's work, its notion of a parallel history between "magic" and "experimental science" is now methodologically outdated. [9] Even if we provisionally grant his very broad conception of magic, and massive

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[3] P. Kunitzsch, *Der Almagest. Die Syntaxis Mathematica des Claudius Ptolemäus in arabisch.-lateinische Überlieferung*, Wiesbaden, 1974.

[4] R. Lemay, *Abu Ma'shar and Latin Aristotelianism in the XIIth Century*, Beirut, 1962.

[5] T. Gregory, *L'idea di natura nella filosofia medievale prima dell'ingresso della fisica aristotelica. Secolo XII*, in *La Filosofia della Natura nel Medioevo, Atti del III Congresso internazionale di filosofia medievale*, Milan, 1966. Cf. *Die Kyraniden*, critical edition by. D. Kaimakis, Meisenheim am Glan, 1976.

[6] al-Kindi, *De radiis*, ed. by M.-Th. d'Alverny and F. Hudry, "Archives d'histoire doctrinale et littéraire du Moyen Age", XIII, 1974 (but 1975), pp. 138–260.

[7] P. Kraus, *Jabir ibn Hayan. Contribution a l'histoire des idées scientifiques dans l'Isiam*, Le Caire, 1942–43, 2 vols.; cf. the studies cited by R. Halleux, *Les textes alchimiques*, Turnhout, 1979, pp. 25–6, essential for the whole history of alchemy preceeding our period. Halleux observes (p. 72), that "une grande partie des textes alchimiques était assimilée a la fin du XIIe siècle", he defines this discipline according to Albertuus Magnus, Roger Bacon, Johammes a Rupescissa (pp. 43–4) he uses however only one author (Pietro Bono), close to the period I am considering.

[8] T. Litt, *Les corps célestes dans l'univers de Thomas d'Aquin*, Louvain-Paris, 1963. Aquinas is chronologically the last author studied in the interesting book by D. Harmening, *Superstitio. Ueberlieferungs- und theoriegeschichtliche Untersuchungen zur kirchiich- theologischen Aberglaubensliteratur des Mittelalters*, Berlin, 1979. I will not deal now with researches on special occult disciplines: see T. Charmasson, *Recherches sur une technique divinatoire: la géomancie dans l'occident medieval*, Genève-Paris, 1980; *I sogni nel Medioevo. Seminario internazionale del Lessico Intellettuale Europeo*, ed. by T. Gregory, Rome, 1985 (in particular p. 87 ff. M. Fattori, p. 111 ff. T. Gregory).

[9] L. Thorndike, *A History of Magic and Experimental Science*, New York, 1923 ff., 8 vols.: in each of my footnotes Thorndike could be cited, but in order not to make them heavy I will refer to this *History* only in the cases where more recent studies do not exist.

documentation, I do not see the principal argument in that link, especially when the focus shifts away from Arabic culture and its first echoes in the West. Equally senseless is the pondering over Hermeticism and alchemy at the time of Newton. What residues there may have been were marginal and largely irrelevant to his scientific work. The persistence of such ideas in the seventeenth and eighteenth centuries belongs to the history of popular beliefs rather than to the history of philosophy and science.

Some Greek sources on magic were uninterruptedly available from late antiquity – the *Asclepius*, the Hermetic fragments quoted by Lactantius and other Latin Church Fathers,[10] and cosmological and cosmogonic works like Chalcidius's commentary on the *Timaeus*, Macrobius's *Somnium Scipionis*, Virgil and Claudianus. Without texts such as these the magical conception of nature would have had no foundation. However, after the scholastic recovery of an astrologically fully articulated system, it was only with the revival of Greek and the discovery of manuscripts in the fifteenth century that the most important occult ideas were recovered. The most famous text – the Hermetic *Poemander*, translated by Ficino in 1463 and published in 1471 – provided the starting point. This magic and Hermetic religiosity began to spread more widely into both learned and popular writings, such as those of Giambattista Gelli. From this nucleus of translations and orginal writings, what has been called Hermeticism quickly spread across Europe on many cultural levels, ranging from the humanist academies (where it arose, and for two centuries was to inspire treatises on love and *cicalate*) to the workshops, where, in vigils, the more educated artisans read Hermetic works, aloud, in the vernacular.

"Hermeticism" itself is an historical definition which has been recently discussed and has to be investigated here briefly: at the beginning (end of the 1960s) there was an enthousiastic agreement around E. Garin's, D.P. Walker's and F.A. Yates' suggestions on these issues.[11] On the basis of Festugière's studies and translations (now unfortunately out of fashion) of late ancient

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[10] *Corpus hermeticum*, II: *Traités XIII–XVIII. Asclepius*, ed. by A.-D. Nock and translated into French by A.-J. Festugière, Paris, 1945, p. 267 ff.; A.-J. Festugière, *La révélation d'Hermès Trismégiste*, Paris, 1944–54, 4 vols.; K.H. Dannenfeld, *Hermetica philosophica*, in P.O. Kristeller, *Catalogus translationum et commentariorum*, Washington, D.C., 1960, 1, pp. 137–56 (*ibidem*, pp. 157–64, *Oracula chaldaica*); addenda concerning *Hermetica*, *ibidem*, 1971, II, pp. 423–4 (P.O. Kristeller) and 1976, III, pp. 425–6 (M.-Th. d'Alverny).

[11] E. Garin, *Nota sull'ermetismo*, "Archivio di filosofia", 1955, pp. 7–19 (reprinted in E. Garin, *La cultura filosofica del Rinascimento italiano*, Florence, 1961, pp. 143–54); D.P. Walker, *Spiritual and demonic Magic from Ticino to Campanella*, London, 1958, pp. 40–42; F.A. Yates, *Giordano Bruno and the hermetic Tradition*, London, 1964.

Hermetical documents, these scholars insisted on their practical-creative, operative attitude (transformation and regeneration of species; dissolution of hierarchical degrees of nature, whereas in the Aristotelian system they were considered immutable; intermediate role of the *spiritus*).[12] They did not consider inconvenient the essential lack of systematic rigour of *Corpus hermeticum* and they found in its ideas the nucleus around which Renaissance magic was reborn.

According an interesting hypothesis (formulated by J.E. McGuire[13] and C.B. Schmitt[14]) the components of the syncretistic body of ideas maintained by Pico and Ficino should on the contrary be characterised by Neoplatonism, not by Hermeticism (the first in date of these analysis, McGuire's, was oriented on Newton and made the same observations about Newton's *Scholium generale* and his papers on alchemy). Hermeticism, these scholars suggested, was too vague and mystical to provide the necessary framework to their ideas. This view was formulated in conflict with the ideas of Frances Yates on the foundation of magic and its relationship with the Scientific Revolution (on the latter she wrote only occasionally, being chiefly interested in other issues). These critics

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12 *Spiritus, IV Colloquio internazionale del Lessico Intellettuale Europeo*, ed. by M. Fattori and M.L. Bianchi, Rome, 1984.

13 J.E. McGuire, *Neoplatonism and active Principles: Newton and the Corpus Hermeticum*, in R.S. Westmann – J.E. McGuire, *Hermeticism and the scientific Revolution. Papers read at a Clarck Library Seminar*, Los Angeles, 1977. It was the first in date of these analyses and referred to Newton (*Scholium generale* as well his notes on alchemy), whereas Schmitt referred to Galileo.

14 C.B. Schmitt, *Reappraisals in Renaissance Science*, "History of Science", 16, 1978, p. 201: "The relation of Bruno to the history of science plays a relatively small role in Yates' book and the attentive reader will find that she focuses rather upon other issues, e.g., symbolic, occult, political and religious ones, and touches upon Bruno's role in science only in passing". Cf. *ibidem*, p. 203: "While symbols may well play a role in scientific discovery from time to time, they have little to do with finished formulations of science. [...] The real difficulty dealing with symbols is that their use goes specifically against the ideal of precision, which has always been one of the chief criteria of any valid science", p. 208: "In my view it still remains to show that hermeticism ever functioned as an important, independent world-view in the Renaissance". At p. 206, Schmitt subscribes and deepens McGuire's thesis that Hermeticism derives from Neoplatonism. In this article Schmitt gives an useful and complete review of former discussions. Given that the scientific revolution has been studied very much, I will not cite the whole bibliography on this problem; my interest in natural magic and astrology refers however to a different context, to religious and social experience as opposed to scientific experience. Some historians exposed and articulated its stays as well as disciplines according this type of symbols (see Marie Boas, *The scientific Renaissance 1450–1630*, London, 1962); later came a hard reaction, in some cases one-sided, and specialists one time enthusiastic, later disenchanted, reacted in the name of a purely internal history of science, which excluded this and several other premises (social, religious, linguistic and so on).

are among the most interesting in the whole debate on the "Yates thesis", but – to my mind – they maintain a view which is only – or at least principally – valid in the history of scientific codification (as opposed to the theory of scientific invention, to which Yates referred when writing a few of her pages on this theme). Clearly the codification of data and theories, especially in the exact sciences, must have recourse to a methodic, systematic and comprehensive philosophy: in this respect Hermeticism should yield to Neoplatonism, to Platonism proper and to Stoicism (with whose cosmology and psychology Hermeticism has much in common).

To discuss in an adequate way such a thesis one has to go back to two interconnected questions, often debated among historians of ancient philosophy, i.e. the relationship between Platonism and Neoplatonism,[15] but also the relationship of this school (as early as the times of Plotinus) and the so called "proletarian Platonism, the sort of thing that we find in the *Hermetica*, the *Chaldean Oracles* and many Gnostic systems".[16] Even considering only the centuries here focused – end of the Middle Ages and scientific Revolution – the McGuire-Schmitt thesis is sound only or at least in the field of the history of science, better of scientific codification, not of invention.

Indeed, if systematic comprehensiveness were the only criteria and if philosophy was always rigorous and straightforward, Hermeticism, as well as Platonism and Neoplatonism, would also have to yield to Aristotelianism and scholasticism. However, such formal characteristics of order and system do not carry the same weight in theories giving foundation to magic, alchemy and religiosity: they can even be counterproductive. In fact, magicians used to prefer Hermetic ideas though they were expressed in vague and mystical

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15 C. De Vogel, *On the Neoplatonic Character of Platonism and the Platonic Character of Neoplatonism*, "Mind", 62, 1953, pp. 45–6, 55; Id., *A propos de quelques aspects dits néoplatonisants du platonismo de Platon*, in *Le Neoplatonisme, Colloque international de Royaumont*, Paris, 1971, p. 7 ff., considers that thanks to Neoplatonism Plato had the opportunity of being read in the Middle Ages, a thesis already advanced by R. Klibansky, *The Continuity of Platonic Tradition during the Middle Ages*, London 1952².

16 We owe to De Vogel (cf. note 15) the definition of "proletarian platonism", which has its origins in the East. There are so many and well known researches on oriental mysteries as the context of thought, ritual and mentality of Greece – also before the Hellenistc age – that I cannot list them here. Before Vernant, Gernet and Detienne, have to be mentioned at least some authors who gave attention to philosophical sources: E.C. Dodds, *Tradition and personal Achievement in the Philosophy of Plotinus*, "Journal of Roman Studies", 50, 1960, p. 4, refering to W. Theiler, *Gott und Seele in kaiserzeitlichen Denken*, in *Recherches sur la tradition platonicienne*, Genève, 1955, p. 78; E.C. Dodds, *The Greek and the Irrational*, Berkeley-Los Angeles, 1951.

dialogues, and normally they did not contribute to science and codification of science; there is however a strong Stoic component in astrology.

When Ficino wrote his *De amore*, a strongly magical commentary on Plato's *Symposium*, he was already regarded as an "alter Plato" and a disciple of Hermes Trismegistus. At this stage he had not even planned the translations of Plotinus, Porphyrius, Proclus, Dionysius and Psellus, which Pico, upon arrival in Florence, was to urge upon him.[17] Notwithstanding this lack of Neoplatonic sources, the *De amore* is his masterpiece and philosophically the densest of his works, and with *De vita caelitus comparanda*, the most magical.[18]

The vagueness and mysticism of the *Poemander* and the *Asclepius* favoured their literary success and their profound influence on pre-Reformation and radical Reformation religiosity. These qualities also favoured their dominant role in an important Renaissance philosophical debate with far-reaching social implications; the debate about the natural and demonic character of magic, about the distinction – if there is one – between natural magic and witchcraft.[19]

Hermes Trismegistus, "who testifies most explicitly in the *Poemander, a book on God's Power and Wiseness* to the existence of demons", inspired the ambitious young Aristotelian Agostino Nifo to discuss the newly recovered material which included Porphyry, Iamblichus, Proclus and Psellus, as well as Plotinus with Ficino's *argumenta*. Magic thus tacitly appeared – or simply came back into fashion – in the Aristotelian-based university curricula, often apparently as the consequence of attempts to bring the syllabus into line with a range of issues which seemed at the time to predominate. In 1497 Nifo measured the attention allotted to magic in university curricula. Presumably he had in mind that of the celebrated University of Padua, where he had begun his brilliant career, which

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[17] See my article *Platone, Ficino e la magia*, reprinted in my book *L'ambigua natura*, Milan, 1992, p. 29 ff., in particular texts quoted at p. 43 ff..

[18] A. Chastel, *Marsile Ficin et l'art*, Genève, 1954, p. 22, n. 35; P.O. Kristeller, *Studies in Renaissance Thought and Letters*, Rome, 1956,1, pp. 36–40, 113 n.; *La diffusione europea del platonismo fiorentino*, in *Il pensiero italiano del Rinascimento*, "Atti del V Convegno internazionale del Centro di Studi Umanistici", Florence, 1967, p. 31 ff.; R. Marcel, *M. Ficin*, Paris, 1958, pp. 466 ff. n.; E. Garin, *Ritratti di umanisti*, Florence, 1967, p. 200 ff.; G. Pico, *Commento alla canzone d'amore*, in *Oratio de hominis dignitate*, ed. by E. Garin, Florence, 1942, p. 452 ff., 466, 469.

[19] In the period of "Préréformation" besides Reuchlin and Agrippa, see *De magia naturali* written about 1493 by Jacques Lefèvre d'Etaples and studied by E. Rice, *The Prefatory Epistles of J. Lefèvre*, New York, 1972, p. 118, n. 7; Id., *The "De magia naturali" of J. Lefèvre d'Etaples*, in *Philosophy and Humanism. Renaissance Studies in honor of P.O. Kristeller*, ed. by E.P. Mahoney, New York, 1976, pp. 19–29. Among radical reformators besides Theophrastus Paracelsus, see Michael Servetus, *Christianismi restitutio* [s.d.; but 1553], Frankfurt/M., 1971; cf. C. Manzoni, *Umanesimo ed eresia: M. Serveto*, Napoli, 1974.

was soon to be interrupted perhaps because of criticism aroused by his doubts about the reality of demons. He claimed to have written a *De praestigiis* and *De praxi necromantiae*, works which are no longer extant. Nifo boasted of having read innumerable *grimoires* (books on spells) and made known his belief in the efficacy of such practices:

> There is an infinite number of books on magical images and I have seen many of them. All confirm that this art is true in itself even though it is difficult to find instances of it. There is no doubt that magical images make it possible to abduct women and to perform many other marvels. Furthermore, all religions forbid magic, something which would not have happened if it had not been true. Indeed, they testify that from magic there may proceed wonderful effects which are outside the normal course of nature. Also magic is taught in many universities and sometimes terrible phenomena appear which can hardly be explained according to Aristotelian principles.[20]

This passage from Nifo's commentary on Averroes's *Destructio destructionum* leads one to think that Rabelais may well have considered Nifo, and not Picatrix (which however was one of his sources), as the real "docteur de la Faculté diabolique".

The starting point of judicial astrology in Latin learning was represented by the recovery of the Greco-Arabic astrological system. The magic of elementary properties corresponds to heavenly influences in the mineral, vegetable and animal world; in alchemy, the notion of transmutation is again founded on the influence exerted by the heavens on elemental properties.

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[20] Averroes, *Destructio destructionum cum expositione Augustini Niphi* [1497], in *Aristotelis et Averrois opera*, X, Venetiis, 1560, f. 122v: "Vidi tot libros de imaginibus, quot sunt infiniti, et omnes testantur istam artem esse veram in se, licet difficilis inventionis: et sine dubium faciunt rape re mulieres et multa. Praeterea videmus omnes leges prohibere istam, quod non esset, nisi esset vera in se: dicunt enim quod ex hac sequuntur effectus mirabiles extranei. Praeterea in multis universitatibus legitur et ibidem ap parent res terribiles, et difficile est salvare talia per fundamenta peripatetica." A. Nifo mentions his lost magical writings both in *De daemonibus*, Venezia, 1553, f. 72va; and in Averroes, *Destructio destructionum cum expositione Augustini Niphi* [1497], in *Aristotelis et Averrois opera, X*, Venetiis, 1560, f. 122^{v}: these and similar passages have been cited in my study *I problemi metodologici del necromante A. Nifo*, "Medioevo", I, 1975, pp. 157, 142–3. See also E.P. Mahoney, *Marsilio Ficino's Influence on* N. *Vernia, A. Nifo and M. Zimara*, in *Marsilio Ficino e il ritorno di Platone. Studi e documenti*, ed. by G.C. Garfagnini, Florence, 1986, pp. 517, n. 33, 520, n. 49: Mahoney does not see magic as a philosophical theory, but writes that Ficino had "the greatest influence" on Nifo.

Besides individual prognostications (*geniturae*, *interrogationes*, *electiones)* in the late Middle Ages there was a tendency to concentrate on "conjunction theory". According to this theory, large scale and universal events such as epidemics, catastrophes, religious schisms and political and social upheavals were deemed to occur as the result of periodic conjunctions of planets (chiefly Saturn and Jupiter) in the various signs of the zodiac. The conjunctions which recurred with the longest periodicity – the so-called "great conjunctions" – were regarded as having the most severe and enduring effects. Together with purely Aristotelian ideas, the theory relating cycles of great conjunctions to historical events first reached the Latin West in the twelfth century in the writings of Abu Ma'shar, but widespread acceptance of the theory became more central only in the thirteenth and mid-fourteenth century.

A great conjunction of Saturn and Jupiter on 23rd March, 1345, generated a wave of astrological predictions: various astrologers including Jean de Murs, Firmin de Belaval, Geoffroy de Meaux, Agostino da Trento[21] and John of Ashenden (author of the strongly conjunction-centred *Summa anglicana de accidentibus mundi*)[22] – claimed to have predicted the Black Death which struck later in the decade. Such "predictions" often turn out to have been made *post eventum*, and it is not difficult to find instances of similar chicanery in all applications of astrology. However, this should not obscure the fact that the majority of astrological writers were clearly persuaded by the principles of their art, and produced interesting arguments and theories in its defence.

The great conjunctions cause cycles and events of universal import: wars, the overthrow of kings, the collapse of empires, natural catastrophes and – most controversially – the emergence and demise of the great religions. Conjunction theory may be regarded as the typical late medieval and Renaissance manifestation of astrology. This theory offers a philosophy or theology of history; indeed, when it is kept apart from Augustinian providentialism and Joachimite prophecy and relies only on Abu Ma'shar's great natural cycles, it offers a kind of anti-theology of history. Such distinctions, however, are not always easy to draw, especially after the late fifteenth century and in the writings of astrologers close to Joachimism such as Johann Lichtenberger, Antonio Arquato and Josef Grünpeck.[23] Both the medieval mentality, and

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[21] L.Thorndike, *History*, III, p. 315 ff.; S. Caroti, *L'astrologia in Italia*, Rome, 1983, p. 194.

[22] J.D. North, *Astrology and the Fortunes of Churches*, "Centaurus", 24, 1980, pp. 192–7

[23] M. Reeves, *The Influence of Prophecy in Later Middle Ages*, Oxford, 1969, p. 34 ff.; D. Kurze, *Prophecy and History: Lichtenberger's forecasts of event to come*, "Journal of the Warburg and Courtauid Institutes", 21, 1958, pp. 63–83; D. Cantimori, *Umanesimo e religione nel Rinascimento*,

later Augustinian concept of Providence in Lutherans, had to face the idea of historical cycles regulated by God and his *causae secundae*. Conjunctionist theory itself is an offshoot of the Pythagorean notion of the "Great year", a cycle of 36,000 years after which the heavens return to their original positions and begin a new and identical cycle during which all events, terrestrial and celestial, repeat themselves. This notion is present in the *Timaeus*, in Stoic philosophy and in hellenistic astrology.

The widespread though often submerged success of the conjuctionist theory owed much to its implicit naturalism (at least when it descends directly from Stoicism and Abu Ma'shar) and to its heretical tendencies (when astrology proper is combined with Joachimism). As far as the succession of religions was concerned, it was believed that the conjunction of Saturn and Mercury gave rise to the Christianity, the conjunction of Saturn and Venus produced Islam, and the forthcoming conjunction of Saturn and the Moon would usher in the apocalyptic destruction and the Antichrist. Such theses in the fated transience of the great historical religions were condemned by theologians such as Jean Gerson[24] – though not by another Chancellor of the University of Paris, Pierre d'Ailly[25] – and a Heretic prophet such as Savonarola,[26] but also many historians showed the greatest interest. Giovanni Villani discussed the idea on the occasion of the 1348 plague, as did the Catholic canon Sigismondo Tizio

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Torino, 1975, pp. 164–81. See also *"Astrologi hallucinati". Stars and the End of the World in Luther's Time*, ed. by P. Zambelli, Berlin-New York, 1986, pp. 1 ff., 29 ff., and passim.

[24] Cf. P. Glorieux ed., *Introduction bio-bibliographique* to his edition of Gerson, *Oeuvres complètes*, Paris-New York, 1960, 1, p. 35, 73, 134 ff. See the very interesting *Tricelogium astrologiae theologizatae; An liceat christiano initia rerum observare ex coelestium syderum respectu* and *Tractatus de erroribus circa artem magicam* by Gerson: the old, but useful edition by L.-E. Dupin, *Gersonis Opera omnia*, Antwerp, 1706, contains also some treatises by Pierre d'Ailly.

[25] L. Thorndike, *History*, IV, pp. 101–13; cf. R. Meller, *Studien zur Erkenntnislehre des Peter von Ailly*, Freiburg, 1954; S. Caroti, *La critica contro l'astrologia di Nicole Oresme e la sua influenza nel Medioevo e nel Rinascimento*, "Atti dell'Accademia Nazionale dei Lincei, Memorie", Classe di Scienze morali, storiche e filologiche, VIII s., 23/6, 1979, pp. 629–51. For this purpose the most interesting among Pierre d'Ailly's works are to be found in an incunabulum *Concordantia astronomiae cum theologia*, L. Ratdoldt, Augsburg, 1490, containing his *Vigintiloquium*, his *Tractatus de concordia* and his *Elucidarium*; on astrology see also his *Secunda apologetica defensio astronomicae veritatis*, against Oresme, his *De falsis prophetis* and his De *legibus et sectis;* cf. N. Valois, *Un ouvrage inédit de Pierre d'Ailly, le "De persecutionibus ecclesiae"*, "Bibliotheque de l'École des Chartres", 65, 1904.

[26] D. Weinstein, *Savonarola and Florence. Prophecy and Patriotism in the Renaissance*, Princeton, NJ., 1970, p. 159 ff., 209 ff.

da Siena[27] and the Protestant Johann Carion[28] on other similarly dire occasions. This idea is present in a more fully articulate fashion in Niccolò Machiavelli, Jean Bodin and Tommaso Campanella.[29]

A number of medieval philosophers argued against both individual and universal sections of astrology, including Nicole Oresme,[30] Heinrich von Langenstein,[31] Biagio Pelacani da Parma[32] and Coluccio Salutati.[33] Their arguments were pointed out to Marsilio Ficino[34] by Giovani Pico who had read them in his studies in Paris and Padua. Pico himself synthetized them in his fundamental *Disputationes adversus astrologiam divinatricem*, which reached a larger audience than Oresme's *Quaestio in divinatores horoscopios* and must be regarded as central to any debate about astrology in the Renaissance.

This period witnesses a revival both of "artificial" and "natural" divination. The former, usually called astrology, is based on observation of the motions of the planets in the zodiac, the latter interprets unusual meteorological, mineral, vegetable and animal phenomena. Regarding both the mathematical-descriptive and predictive sides of "astrologia" from the time of Ptolemy and

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[27] Villani, *Nova Cronica*, see bk. XII. *Historiae senenses* have been studied by P. Piccolomini, *Sigismondo Tizio*, Rome, 1903.

[28] O. Tschirch, *J. Carion*, "Jahresbericht des historischen Vereins zu Brandeburg", 36–7, 1906, pp. 36–7, 54–62; G. Münch, *Das Chronicon Carionis Philippicum*, "Sachsen und Anhalt", I, 1925, p. 202 ff.; H.F.W. Kuhiow, *J. Carion*, "Jahrbuch für Berlin-Brandeburgische Kirchengeschichte", 54, 1983, p. 53 ff.

[29] E. Garin, *Dal Rinascimento all'Illuminismo*, Pisa, 1970, pp. 61–5; see J. Bodin, *Les six livres de la République*, Paris, 1577, p. 403 and his *Apologie de Rene Hervin*, Lyon, 1583, fols. 43v–44r; cf. R. Chauviré, *J. Bodin, auteur de la République*, Paris, 1914, pp. 47–9. Cf. T. Campanella, *Articuli prophetales*, ed. by G. Ernst, Florence, 1976. On magical theory in his *Del senso delle cose e della magia*, ed. by A. Bruers, Bari, 1925; now ed. by G. Ernst, Roma-Bari 2007, cf. L. Blanchet, *T. Campanella*, Paris, 1920, pp. 193–225; L. Firpo, *Ricerche campanelliane*, Florence, 1947, p. 137 ff.; G. Bock, *T. Campanella*, Tübingen, 1974, pp. 229 ff.; G.Ernst, *T. Campanella. Il libro e il corpo della natura*, Roma-Bari 2002; Engl. trans., Dordrecht 2011.

[30] S. Caroti, *La critica*, pp. 647–85; cf. N. Oresme, *Quaestio contro divinatores horoscopios*, critical ed. by S. Caroti, "Archives d'histoire doctrinale et littéraire du Moyen Age", XLIII, 1976, p. 209 ff.

[31] H. Pruckner, *Studien zu den astrologischen Schriften des Heinrich von Langenstein*, Leipzig-Berlin, 1933: recent bibliography in Caroti, *La critica*, p. 613 ff.

[32] G. Federici Vescovini, *Astrologia e scienza. La crisi dell'aristotelismo sul cadere del Trecento e Biagio Pelacani da Parma*, Florence, 1979, in particular pp. 199–202, 363–4.

[33] C. Salutati, *De fato et fortuna*, ed. crit. by C. Bianca, Florence, 1985.

[34] M. Ficino, *Opera*, Basilea, 1576, p. 890: in a letter written in July 1488 G. Pico recalls to Ficino their common reading of Oresme; P.O. Kristeller, *Studies*, I, p. 40 n. 30, writes "most probably it was Pico who became acquainted with Oresme during his stay in Paris and who called Ficino's attention to this author".

the Stoics to the Copernican revolution and beyond, we may paraphrase what Kant said about logic in relation to Aristotle: It is remarkable that almost to the present day... it has not been able to advance a single step, and is thus to all appearance a closed and complete body of doctrine.[35] This was also true of observational astronomy where the shifts observed by the Arabs (Thabit ibn Qurra) and called *motus trepidationis*, and the still unsatisfied demand for calendrical reform by resolving the problems of equinoctial precession[36] had produced only marginal modifications. For "astrologia" Kant's remark holds true even today.

Besides Pico's more philosophical motives for attacking astrology was his pious desire to safeguard human freedom and to distinguish clearly between natural divination and prophecy.[37] His nephew and intellectual heir Gianfrancesco Pico also strongly criticised foreknowledge in his *De rerum praenotione* (1506).[38] The elder Pico had aimed at reestablishing the Christian notion of Providence as against the astrological fate of the Stoics. He also defended the Christian concept of linear time – running from the Creation to the Last Judgement – and rejected pagan ideas of cyclical destructions and restorations caused by astral conjunctions.

One of the less well-known responses to Pico's *Disputationes* provides further evidence for the centrality of conjunction theory in late medieval and

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[35] See both my articles *Il problema della magia naturale*, reprinted in my book *L'ambigua natura della magia*, Milan, 1992 (Venice, 1996 2nd enlarged ed.), p. 117 ff., and *Scholastiker und Humanisten. Agrippa und Trithemius zur Hexerei. Die naturliche Magie und die Entstehung kritischer Denkens*, "Archiv für Kulturgeschichte", 67, 1985, pp. 41–79, trans. in my book *White Magic, Black Magic in the European Renaissance. From Ficino, Pico, della Porta to Trithemius, Agrippa, Bruno*, Leiden, Brill, 2007, pp. 35–72.

[36] F. von Kalternbrunner, *Die Vorgeschichte der Gregorianischen Kalenderreform*, "Sitzungsberichte der K. Akademie der Wissenschaften zu Wien", Philos.-Histor. Klasse 82/3, 1875; D. Marzi, *La questione della riforma del calendario nel V Concilio Lateranense (1512–1517)*, Florence, 1896; J.D. North, *The Western Calendar – "Intolerabilis, horribilis et derisibilis". Four Centuries of Discontent*, in *Gregorian Reform of the Calendar*, Proceedings of the Vatican Conference to Commemorate its 400th Anniversary 1582–1982, ed. by G.W. Coyne SJ., M.A. Hoskin and O.P. Pedersen, Città del Vaticano, 1983, pp. 75–113.

[37] E. Garin, *G. Pico della Mirandola. Vita e dottrina*, Florence, 1937; Id., *Ritratti*, p. 185 ff.; Id., *Lo zodiaco della vita. La polemica sull'astrologia dal Trecento al Cinquecento*, Bari, 1976, p. 95 ff. More titles in *Bibliografia degli scritti di E. Garin*, Bari, 1989, now updated and put on line in IMSS (Museo Galileo), Florence.

[38] C.B. Schmitt, *Gianfrancesco Pico della Mirandola and his Critique of Aristotle*, The Hague, 1967; W. Cavini, *Un inedito di G.F. Pico della Mirandola. La "Quaestio de falsitate astrologiae"*, "Rinascimento", II s., XIII, 1973, pp. 133–71. About deep difference between Giovanni and Gianfrancesco Pico, see my *L'ambugua natura*, p. 177 ff.

Renaissance astrology. This was the proposal to save astrology by renouncing *nearly* all conjunctions. A group of humanists acquainted with *Phaenomena* by Aratus, with Manilius and Firmicus Maternus (i.e. with the *sphaera barbarica* and the horoscope of the World's beginning) proposed to distinguish between the ideas of Abu Ma'shar and Pierre d'Ailly, and the "pure" theories of Ptolemy. The latter only allowed serious consequences to proceed from eclipses – that is, conjunctions of the sun and the moon. This defensive tactic, which was adopted by Giovanni Pontano, his followers Giovanni Abioso and Agostino Nifo, and eventually by Philip Melanchthon, aimed at disarming Pico by granting that the remaining five planets did not acquire special influences (over and above those they already possessed) when they conjoined with each other in particular zodiacal signs. This strategic retreat, which reduced the five planets to the status of mere decorative appendages was not, as it claimed to be, the brilliant proposal of these defenders of astrology. Rather, they were tacitly adopting, and turning upside down, ideas which Pico had already thoroughly aired in his *Disputationes* Book V, which was dedicated to destroying conjunction theory.[39] Pico exempted conjunctions of the sun and moon because he granted that heavenly bodies exert natural influences through changes of intensity of their natural light and heath. But, according to Pico, eclipses did not have cyclical effects on history and universal phenomena. This inadequate response to one of Pico's gravest objections against astrology is mentioned here because the astrologically-related cyclical and catastrophist view of history was, in the hands of great thinkers like Pomponazzi, Cardano, Bruno, Vanini and Campanella, one of the principal characteristics of Renaissance philosophy.

The avidly consumed astrology encountered two generations of critics – those of Oresme and Pico – both of which can be favorably compared to contemporary criticism of logic and physics. Neither attack, however, caused astrology to falter; it continued, unscathed, to provide the theoretical basis for magic and alchemy. The correspondences between changes in elements or mineral, vegetable and animal qualities – already schematised by the *Kyranides*

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[39] G. Pico, *Disputationes adversus astrologiam divinatricem*, ed. by E. Garin, Florence, 1946–52, I, p. 242 ff. (IV, 10: "Stellas diversas a Sole et Luna aut nihil, aut certe parum, in nos agere"); p. 544 ff. (V, 5: "Planetas magnis coniunctionibus iunctos non plus posse quam divisos, magnas istas coniunctiones novum esse inventum de malo Ptolemaei intellectu natum"; eclypses, conjunctions and their very different power are examined at p. 546 ff.); see also pp. 585 ff. and the whole bk.V. On Pontano, Abioso and Nifo, see my study *Fine del mondo o inizio della propaganda?*, in *Scienze, credenze occulte, livelli di cultura*, Florence, 1982, p. 354 ff.

– continued to underlie the microcosm/macrocosm conception of the world which was to persist for at least a century after the publication of Pico's work.

The Renaissance, with the possible exception of the latter part, does not seem to have been a particularly fertile period in the history of alchemy.[40] The days of John of Rupescissa and Pietro Bono Avogaro were past and the Paracelsian *virtuosos* had not yet emerged. Paracelsus himself, though dismissive of Rupescissa, was nevertheless indebted to him for putting alchemy to the service of medicine.[41] A continuity such as this confirms that this period was an intermediate one for alchemy with no substantial developments, apart from the possible and still debated exception of some of Paracelsus's distinctive new ideas. By the end of the sixteenth century, these had become an important aspect of chemical medicine and continued to generate considerable debate in academic circles.

Alchemy was principally concerned with the combination and transmutation of elements and finds its theoretical basis in astrology and magic. It has been suggested that its basis and a legitimation of the notion of the transformation of species were provided by the Aristotelian theory of alteration. This theory is founded on prime matter and the four qualities (hot/cold, wet/dry) which characterise the four elements.[42] Others have suggested that Aristotle originated the theory of the fixity of species – a problem for alchemists long before it troubled Darwin; the Middle Ages attributed to Aristotle the adage: "Sciant artifices alchimiae species permutari non posse" ("Let the alchemical practitioners know that species cannot be changed"). Even including the spurious Book IV of the *Meteorology* – an explicit critique of alchemy – there was no Aristotelian text corresponding to a *De mineralibus* and the Middle Ages felt its absence. In his critical reinterpretation of Empedocles, Democritus and the other naturalists, Aristotle posited a unitary substratum where changes of the Empedoclean "four roots" (elementary qualities) occurred.[43] According to Aristotle, in composite substances these changes only

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[40] C. Crisciani, *La "quaestio de alchimia" fra Duecento e Trecento*, "Medioevo", 2,1976, p. 162; cf. her ed. of Pietro Bono, *Preziosa margarita novella*, Florence, 1976; Id., *The conception of alchemy as expressed in the "Preziosa margarita novella" of Petrus Bonus of Ferrara*, "Ambix", 20, 1973, pp. 165–81; cf. C. Crisciani and C. Gagnon, *Alchémie et philosophie au Moyen Age: perspectives et problèmes*, St. Denis/Québec, 1980.

[41] R. Halleux, *Les ouvrages de Jean de Rupescissa*, in *Histoire Littéraire de la France*, XLI, Paris, 1981, pp. 256–7, who refers to W. Ganzenmüller, T.P. Scherlock, R. Multhauf and W.Pagel.

[42] E.J. Holmyard, *Alchemy*, Harmondsworth, 1957, pp. 19–22.

[43] Cf. H. Cherniss, *Aristotle's Criticism of Presocratic Philosophy*, New York, 1964, pp. 50–61, 120–27, n.494; Aristotle, *On coming-to-be and passing away (De generatione et corruptione)*, critical ed. by

lead to the usual modifications, generation and corruption, and never produce *ex novo* supernatural substances such as the elixir, potable gold and *homunculi*; in particular, the changes do not allow for the prodigious transmutation of a base metal into gold. In Aristotle's view, the phenomena produced by the combination of the "four roots" never cross the bounds of the normal. Since Bolus Democritus and the first Greek alchemists, changes of colour had been regarded as indicating transformations of the common primary substance from its lowest state to the highest grade of metallic perfection.[44] The florid language and symbolism of writing on alchemy from antiquity to the Renaissance make it clear, however, that the alchemists were a long way from naturalism of an Aristotelian kind. The "on the path of perfection leading to gold"[45] idea of metals suggests a Hermetic matrix, as do such maxims as "all entities come from the same root. Diversity of things arises from superfluity" from the *Liber quartorum Platonis* and "As the elements are converted in turn and as in turn they are generated out of themselves, so nature too is converted into nature" from Artefius.[46] Though it was thanks to the "popular" Hermetic texts that ideas such as these entered the Latin Middle Ages, they were later confronted by Aristotelian interpretations and, occasionally, by scholasticism. In fact, beginning with Avicenna, commentators on Aristotle criticise alchemy at length and what became the "quaestio de alchimia" is a long series of such comments.

Alchemy was condemned in the decretal *Spondent quas non exhibent* of Pope John XXII (1316–34), while the decretal *Super illius specula* censured magic. Alchemy was also criticised by philosophers such as Oresme (in his *De divinationibus*, chapter 12) and Themon the Jew (Q. 27 of Book III of his commentary on the *Meteorologica*). The latter work, along with the earlier work of Petrus Bonus, has recently been studied as instances of the relation between alchemy and university learning, and it seems that alchemy never reached the official university curricula. Though Themon regarded alchemy as useful to the natural sciences because it was the indispensable tool for knowing the nature of metals, he did not clarify whether alchemists created metals *ex novo* or transmuted them. He thus left unresolved the central problem of the relationship between the natural and the artificial, which had been the principal

H.H. Joachim, Oxford, 1922, p. 181.

[44] E.J. Holmyard, *Alchemy*, p. 24.

[45] C. Crisciani, La *"quaestio de alchimia"*, p. 149 ("in semita perfectionis ad aurum").

[46] E. Garin, *Medioevo e Rinascimento*, Bari, 1954, p. 174 n (*Liber quartorum Platonis*: "omnia entia sunt ex eadem radice. Diversitas enim rerum est ex superfluitate"; Artefius: "sicut elementa convertuntur ad invicem et ex se ad invicem generantur, sic enim natura in naturam convertitur").

focus of theoretical interest in alchemy for Roger Bacon. Though admitting a specific connection between the seven metals and the planets, Themon did try to eliminate some of the magical and astrological elements of the art, such as the requirement that alchemical operations ("opus alchemicum") take place under specific astral influences.[47] Opposition to alchemy, such as that of Themon, became a topos even among humanists who were more open to occult arts. Galeotto Marzio, in his *De doctrina promiscua*, for instance, writes:

> Magic and alchemy will go under the name of ritual or religion, rather than that of science. For in it, since the alchemist calls lead with the name of "leprous gold" and declares himself able to cure leprosy, as pure gold is cleansed from leprosy, nevertheless the causes will be hidden and the support of syllogisms will be diminished, although it be conceded to the alchemist that all metals are of the same species, though elsewhere that philosophy, which denies that one species can be confused with another will be reluctant to make the concession. But it does not seem completely absurd to think that metals are of the same species for they differ among themselves either on account of lightness or density or colour. Since these are all separable accidents they cannot vary the species. Alchemy therefore is far from the name of the most exact science .[48]

Cornelius Agrippa also severely criticised alchemy in the chapter XC of his *De vanitate* though more than one of his letters describe – in cryptic terms – metal transmutations attempted by himself and friends. Though a severe critic of astrology, Gianfrancesco Pico wrote a treatise *De auro* and had performed alchemical experiments at Mirandola, as is reported by his associate Lilio Gregorio Giraldi.[49] The most interesting documents of the period – the

[47] C. Crisciani, *La "quaestio de alchimia"*, pp. 139–41; H. Hugonnard-Roche, *L'oeuvre astronomique de Themon Juif, maître parisien du XVIe siecle*, Paris-Genève, 1973, p. 35.

[48] G. Marzio, *De doctrina promiscua*, ed. by M. Frezza, Napoli, 1949, p. 11: "culturae vel religionis nomen, potius quam scientiae, et magia et alchimia subibunt. Nam in ea, cum plumbum nomine leprosi auri nuncupent, et lepram [...] alchimicus se posse curare profiteatur, ut purum aurum a lepra mundatum sit, attamen causae latitabunt et syllogismorum suffragatio conflaccescet, quamvis etiam concedatur alchimico metalla omnia eiusdem esse speciei, alioquin philosophia reluctaretur, quae speciem in specie posse contundi negat. [...] Sed metalla eiusdem esse speciei non omnino absurdum putatur; nam inter se aut raritate aut densitate aut colore differunt; haec cum sint accidentia separabilia non possunt speciem variare. Alchimia igitur a nomine scientiae exactissimae longe abest".

[49] L.G. Giraldi, *Dialogismi XXX*, in *Opera*, Leiden, 1969, p. 877 ff. ("Dial. VIII, in quo permulta parum nota de chaemia et chaemistis traduntur"); F. Secret, *G.F. Pico della Mirandola,*

Pseudo-Lullian alchemical corpus in the fourteenth century and later,[50] and especially the texts of Paracelsian alchemy[51] – still await further historical research before anything definitive can be said about them.

Broadly speaking, the theoreticians of magic were unperturbed by their critics, though Agrippa's *De vanitate* was one of the few exceptions.[52] We can point out as examples of magical theories the several versions of two encyclopedias *De occulta philosophia* (1510–33) by Agrippa and *De magia naturali* (1558–88) by Giambattista della Porta .

The latter was one of the first members of the Lincei Academy; he was also celebrated for his contributions to optics, agronomy and metallurgy; della Porta, despite incorporating up-to-date scientific observations alongside the magic, preserved the framework of natural magic unalterated throughout the long genesis of the work, which grew from four books to twenty. The theoretical framework was the same as that of Agrippa, who had drawn it from Pico and Ficino.[53]

L.G. Giraldi et l'alchimie, "Bibliotheque d'Humanisme et Renaissance", 38, 1976, pp. 93–108.

50 M. Pereira, *L'alchimia medievale ed alcuni studi recenti*, "Annali dell'Istituto e Museo di Storia della Scienza di Firenze", 9, 1984, pp. 89–98; Id., *Quintessenza alchemica*, "Kos", I, 1984, n. 7, p. 34 ff., and *The Alchemical Corpus attributed to Raymond Lull*, Warburg Institute, London, 1989.

51 C. Webster, *From Paracelsus to Newton*, Cambridge, 1982; Id., *Alchemical and Paracelsian Medicine*, in C. Webster, ed., *Health, Medicine and Mortality in the 16th Century*, Cambridge, 1979, pp. 301–34; besides both classical monographs on Paracelsus by W. Pagel, see his article *Paracelsus als "Naturmystiker"*, in *Epochen der Naturmystik*, ed. by A. Faivre and R.C. Zimmermann, Berlin, 1979, pp. 52–104; Id., *Hermetic alchemy at Bruno's Time*, "Ambix", 12, 1964, pp. 72–6; W. Ganzenmüller, *Paracelsus und die Alchemie des Mittelalters*, "Angewande Chemie", 54, 1941, pp. 427–31; R. Hooykaas, *Die Elementenlehre des Paracelsus*, in *Medizingeschichte unserer Zeit. Festgabe Artelt*, Stuttgart, 1971, pp. 121–44. On groups of followers who printed, compliled and faked Paracelsians texts at the end of XVIth Century see C. Gilly, *Zwischen Erfahrung und Spekulation. T. Zwinger*, "Basler Zeitschrift für Geschichte und Altertumskunde", 77, 1977, pp. 57–123; 79, 1979, pp. 125–223.

52 C.G. Nauert, *Agrippa and the Crisis of Renaissance Thought*, Urbana, 111., 1965; cf. my studies *Agrippa von Nettesheim in den neueren kritischen Studien und in den Handschriften*, "Archiv für Kulturgeschichte", 51, 1969, pp. 264–95; *Humanae litterae, verbum divinum, docta ignorantia negli ultimi scritti di Enrico Cornelio Agrippa*, "Giornale critico di storia della filosofia", 45, 1966, pp. 101–31.

53 See L. Muraro, *G.B. della Porta mago e scienziato*, Milano, 1978; G. Belloni, *Conoscenza magica e ricerca scientifica in G.B. della Porta*, in G.B. della Porta, *Cristologia*, edition, biographical note and trans.by G. Belloni, Rome, 1982. Both scholars failed to underline how heavily in both editions (*Magiae naturalis sive de miraculis rerum naturalium libri IV*, Napoli, 1568, and *Magiae naturalis libri XX*, Napoli, 1588) della Porta borrowed texts and ideas from Ficino, Pico, Agrippa; cf. my article *Il problema della magia naturale*, p. 121 ff.

Agrippa published his two major works almost simultaneously. Paradoxically, while one was an encyclopedia of magic, the other was a resounding denunciation of all of the arts and sciences with chapters against each of the occult sciences in turn. Whatever Agrippa's motive for this contradiction, it confirms the invariance of the theoretical bases of occultism. If thinkers such as Agrippa and della Porta were not willing to jettison their life's work, they had to preserve this theoretical base unchanged. Magic operates on long time scales, has few variants and much care is needed in identifying opposing schools of thought; when it encounters not merely a limited critique but a genuine disenchantement of the world it can either dissolve itself or be subject to a redefinition in terms of belief, superstitions, etc.

Any account of the evolution of magical thought must depend on the gradual recovery of texts from antiquity and the East. At the same time one wonders how historians can stress the Neoplatonic character of magical thinking relying upon a late Neoplatonist such as Proclus without taking into account ideas like those of Psellus, al-Kindi and Avicenna.[54] It has been shown,

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54 B. Copenhaver, *Hermes Trismegistus, Proclus*, in *Hermeticism and the Renaissance*, ed. by I. Merkel and A.G. Debus, London, 1988 [Id., *Scholastic Philosophy and Renaissance Magic in the "De Vita" of M. Ficino*, "Renaissance Quarterly", 37, 1984, p. 523 ff.; Id., *Renaissance Magic and Neoplatonie Philosophy (Ennead" 4.3–5) in Ficino's "De vita coelitus comparanda"*, in *Marsilio Ficino e il ritorno di Platone*, pp. 351–69, discovers a fact known to all specialists (cf. Kristeller, Garin, Walker, and also F. Yates, *Giordano Bruno*, London, 1969, ch. 4: "Ficino's Natural Magic", pp. 66–9, 82–3), i.e. a strong influence of Neoplatonism in Ficino's magic, but he laid claim to exclude a presence of "not philosophical" Hermeticism: "neither the Hermetic dialogues that Ficino translated nor the Latin *Asclepius* contributed much of theoretical interest to that work [*De vita*]", p. 352. Even in the case of animated statues obtaining divine powers, which Plotinus (*Enn.* IV, 3,11) borrows from *Corpus hermeticum* – Ficino made no mention of them not because he thought it was a dangerous theurgical theme, but because he found them unsuitable for "philosophically interesting treatment". "Instead, he initiated and sustained the argument of bk. III *De vita* from philosophically richer material in Plotinus and from other thinkers – Aquinas and Proclus, for example – whom he could make compatible with his reading of Plotinus", p. 359. In my study *Il mito attuale dell'ermetismo e il dibattito storiografico* published in my book *L'ambigua natura*, pp. 251–327, I dealt with such a thesis, which became almost a catchword for a certain group of American scholars. I would like to emphasize the fact that Copenhaver here drew on and tried to overturn the sources, texts and theses already present in a richer contest in Yates' chapter already cited. Yates for example, after having quoted one of the passages discussed by Copenhaver (*Enn.* IV, 3, 11) had already observed: "We seem to have here the two main topics of which Ficino is speaking, but put in a different order"...this order is the result of the greater wealth of ancient and Oriental sources she considers. For one of Ficino's "neoplatonic-magical" translations, it has to point out that recently the original text has been declared not authentic, see P. Gauthier, *Le "De daemonibus" du Pseudo-Psellus*, "Revue des études byzantines", XXXVIII, 1980, pp. 105–94, who put its date in the XIVth, not in the XIth century.

for example, that the theory of the dependence of magical and elementary phenomena on astral influences is present in its entirety in al-Kindi's *De radiis* – a work which was widely esteemed throughout the Middle Ages and Renaissance.[55] When in his *De vita* Ficino referrred generically to the "Arabi astrologi", he was probably thinking of al-Kindi as well as of the *Picatrix* – a Neoplatonising Arabic treatise full of rituals and recipes.[56] Avicenna's theory of the imagination explained many occult phenomena as somatization, and it was used in the theoretical defence of witchcraft. For example, Pomponazzi and Johann Wier suggested that an old woman's eye could harm an infant – which is "of a tender nature" – without any spiteful intention on the part of the old woman. Though this theory of the imagination had also been in circulation since the Middle Ages, it was still used by Ficino, by the physician Andrea Cattani of Imola and by both Nifo and Pomponazzi. [57] Some criticism

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[55] Cf. M.-Th. d'Alverny and F. Hudry, *al-Kindi, De radiis*, p. 169 ff. on the history of the (secret) diffusion of this treatise. To be added H.C. Agrippa, *De occulta philosophia* [1953], in *Opera*, reprinted Hildesheim-New York 1970, I, p. 341 who mentions al-Kindi as one of the old "natural magicians" (Zoroastre, Orpheus, Jamblichus and Sinesius), who deserves respect unlike more modern "*magi*" who have degenerated and yielded to black magic. Also Giovanni Pico (1489) grouped some of his *Conclusiones* about magic under the name of al-Kindi. D'Alverny's ideas about al-Kindi (p. 151) hold for all the hermetic *magi* of the XVth and XVIth centuries: "La magie liée a l'astrologie n'est pas la magie noire; c'est plutôt un recours ingénieux aux forces naturelles latentes dans le monde élémentaire et que l'influence des astres rend agissantes. Kindi pouvait sans susciter la réprobation de ses contemporains s'intéresser aux vertus des pierres précieuses et aux talismans marqués des signes du zodiaque et des planètes. La magie que décrit Kindi, bien que se rapportant aux usages de la magie hellénistique, est interpretée de manière rationnelle, tout comme le système astrologique. Cette attitude caractérise aussi son disciple Abu Ma'shar". It is worth noting that al-Kindi based himself on the *Theologia Aristotelis*, which he had compiled from *Eddeads*, IV, 4. A deep influence over Pomponazzi's *De incantationibus* and his late courses was exerted by this Aristotelian-Neoplatonic pseudepigraph, rediscovered and published in 1519 by P.N. Castellani of Faenza who was geographically close to his university. This type of magic did not need spirits because it operated only through the impersonal forces of the stars which unlike traditional planetary demons, have no will or emotions. After al-Kindi and Avicenna this notion was adopted by heterodox Aristotelians in the conviction that Aristotle did not allow the existence of demons. The position was attacked by G.F. Pico, who believed it had originated with al-Kindi – see G.F. Pico, *De rerum praenotione* (1506) reprinted in his *Opera omnia*, Basel 1601, II, p. 425 and especially pp. 428–33: "Alchindus mirabilia opera... non spiritibus sed corporalibus radiis accepta retulit" (M.-Th. d'Alverny-F. Hudry, *al-Kindi, De radiis*, p. 173, n. 33).

[56] V. Perrone Compagni, *Picatrix latinus*, "Medioevo", I, 1975, pp. 237–337; Id., *La magia cerimoniale del "Picatrix" nel Rinascimento*, "Atti dell'Accademia di Scienze morali e politiche di Napoli", 88, 1977 (but really 1978), pp. 279–330.

[57] See my study *L'immaginazione e il suo potere* [1985], reprinted in *L'ambigua natura*, p. 53 ff., and transalted here *infra*; E. Garin, *"Phantasia" e "imaginatio" fra Marsilio Ficino e Pietro Pomponazzi*, "Giornale critico della filosofia italiana", LXIV, 1985 (but really 1986), pp. 349–61.

and modifications to the theory were suggested by Girolamo Fracastoro. [58] The topos of Plato's journey to study at the feet of the Eastern *magi* was often mentioned: though a legend originating in late antiquity, [59] the topos conveys an awareness of the oriental origins of the astrological and magical tradition.

To achieve a desired end – and al-Kindi had no doubt that such achievements were possible – the reality of spirits and, even, of God did not count:

> ... whether or not the operations and passions through which the incantation is made are... so long as the desire in the one who takes the incantation with due solemnity is intense.[60]

In fact, the Platonists had singled out and assigned centrality, even omnipotence, to a *spiritus* which united the Stoic notion of life in the universe, the Neoplatonic *anima mundi* and the active forces of theurgy and astrology. This Ficinian re-evocation was quickly unmasked and analysed by the more rigorous Aristotelians. Ficino, commenting on the *Symposium* shortly after having translated the *Corpus hermeticum* (which explains his originality – compared with predecessors such as Janos Argyropulos and Cristoforo Landino – in giving Stoic, Neoplatonic and, especially, magical interpretations of Plato's ideas) posited the *spiritus* as the mover of a universe regulated by "sympathies". [61] In this text, Ficino's interest in a theory which pretended to give a natural definition of magic itself is clear: Ficino claims that magic is natural because the stars which regulate it are linked to the sublunary sphere by this web of universal sympathies. In his later *De vita coelitus comparanda* (1489), this astrological, but not deterministic foundation

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[58] E. Peruzzi, *Antioccultismo e filosofia naturale nel "De sympatia rerum" di Gerolamo Fracastoro*, "Atti e memorie dell'Accademia Toscana di Scienze e Lettere La Colombaria", n.s., 31, 1980, pp. 41–131. Leoniceno, Mainardi and Fracastoro are the most important among physicians in the schools of Padua, Ferrara, Bologna, who dealt and disputed on natural magic taking their cue from therapeutical experience, especially from the problem of explaining the "new" syphylis. But in my present review medicine is excluded.

[59] H. Dörrie, *Platons Reisen zu fernen Völkern*, in *Romanitas et christianitas. Studia J.H. Waszink [...] oblata*, Amsterdam-London, 1973, pp. 99–118. A great number of Renaissance writers (Ficino, Pico, Reuchlin, Trithemius, Lefèvre d'Etaples, Champier, Agrippa, della Porta etc.) repeated this *topos*.

[60] M.-Th. d'Alverny-F. Hudry, *al-Kindi, de radiis*, p. 248: "Fiunt enim adiurationes per Dei opera et spirituum, aut vera, aut putativa... Parum autem refert ad habendum effectum motus, an sint vel non sint... operationes et passiones per quas fit adiuratio, dummodo intensum desiderium sit in adiurante cum debita solempnitate".

[61] R. Klein, *"Spirito peregrino"*, in his book *La forme et l'intelligible*, Paris, 1970, pp. 29 ff., and cf. p. 65 ff., 89 ff..

results in further clarity and is closest to the astrology of interrogations, amenable to prayers, enchantments, rituals, cerimonies and intervention by demons of ambiguous provenance.[62] The magical notion of the universe as a living organism regulated throughout by astral sympathies is even more explicit in the passage in which Ficino writes

> ... that through the rays of the stars opportunely received, our spirit, properly prepared and purged through natural things, may receive the most from the very spirit of the life of the world. The life of the world, innate in everything, is clearly propagated into plants and trees, like the body-hairs and tresses of its body. Moreover, the world is pregnant with stones and metals, like its bones and teeth. It sprout also in shells which live clinging to the earth and to stones. For these things live not so much by their own life as by the common life of the universal whole itself. The universal life, indeed, flourishes much more above the earth in the subtler bodies, which are nearer to the Soul. Through its inward power, water, air and fire possess living things, proper to them and partake of motion. More than it does earth and water, the life warms air and fire and drives them in perpetual motion. And finally it animates in perpetual motion. And finally it animates in the highest degree possible the celestial bodies, which are like the head, or heart, or eyes of the world. From them, through the stars as though eyes, it spreads everywhere not only its visible but also its visual rays.[63]

Ficino goes on to classify the characteristics of the various planetary influences which may be attracted by using the corresponding *elementata*. He explains how such influences may combine, and recommends that colours and smells, as well

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[62] D.P. Walker, *Spiritual and demonic Magic*, p. 36 ff., on Neoplatonic and medieval sources of this theory on seals present in Ficino.

[63] Ficino, *Opera*, p. 544 (*De vita*, III, 11); *Three books on life*, critical ed. and trans. by C.V. Kaske and J.R. Clark, Tempe, AR. 1998, pp. 288–9; (cf. *Picatrix*, III, 9, which is the source of this chapter): "Huc vero tendunt: haec omnia ut spiritus noster rite per naturalia praeparatus atque purgatus accipiat ab ipso vitae mundanae spiritu plurimum per radios stellarum opportune susceptos. Vita quidem mundi omnibus insita, propagatur evidenter in herbas et arbores, quasi pilos sui corporis atque capillos. Tum et insuper in lapides et metalla, velut dentes et ossa. Pullulat quoque in viventes conchas terrae et lapidibus adherentes. Haec enim non tam propria, quam ipsi communi totius vita vivunt. Quae sane communis vita multo etiam magis super terram in corporibus viget subtilioribus tanquam propinquioribus animae. Per cuius vigorem intimum aqua, aer, ignis viventia sua possident atque moventur. Vita haec aerem ignemque etiam magis quam terram et aquam fovet agitatque perpetuo motu. Et denique coelestia corpora, quasi mundi caput, vel cor, vel oculos quam maxime vegetat. Unde per stellas, velut oculos, radios non visibiles solum, sed etiam visuales usquequaque diffundit" (English trans. mine.)

as sounds – secondary qualities according to seventeenth century philosophers – not be overlooked.

> Nor indeed should you be surprised that we attribute much to odors, colors and sounds. For tastes especially pertain to the natural spirit; odors, however, rather to the vital and animal spirit; colors, shapes, and sounds to the animal. A motion of the minds too, whether happy, sad, and constant, violently drives the spirit to its likeness: first the animal, then through this the vital, and moreover through this the natural. Finally, every spirit – since on account of its somewhat fiery, completely airy, clear and mobile nature, it is similar to lights and thus to colors and to voices, which are made of air, and to odors and to motions of the mind – every spirit is therefore instantly moved one way or the other and formed by these things. And however it turn in some degree it makes the mind, and absolutely such, the quality of the body. [64]

Gemistus Pletho, a Byzantine was a direct heir to the Neoplatonic tradition from Plotinus to Psellus, theorised and practised theurgy, a type of operative magic analogous to Hermetism and based, like Ficino's, on astrology. In Greece Pletho practised the cult of the sun. He came into contact with Italian humanists during the council for the reunification of the Latin and Greek churches at Ferrara and Florence in 1438–39. If this was the first phase in the introduction to Italy of Neoplatonism, the second was the period of Argyropulos's teaching at Florence in the 1450s. Magical and Hermetic meanings were implicit, though not yet fully enounced, in the Neoplatonism of both phases; [65] they became stronger in Ficino and his Italian and European contemporaries, while the early sixteenth century German reception of natural magic adopted notions that were striking only in appearance. One such notion was a typical topos of

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[64] Ficino, *Opera*, p. 546 *(De vita*, III, 11); critical ed. and trans. by C.V. Kaske and J.R. Clark, Tempe, AR. 1998, pp. 296–297: "Neque vero mireris nos multum coloribus, odoribus, vocibus attribuere. Nam sapores quidem ad spiritum praecipue pertinent naturalem, odores autem potius ad vitalem animalemque, colores, figurae, voces ad animalem. Motus quoque animi, vel laetus, vel moestus, vel constans, spiritum ad similitudinem suam agitat vehementer: animalem primo, per hunc vitalem, per hunc insuper naturalem. Spiritus tandem omnis,quia ob naturam quodammodo igneam aeriamque omnino et lucidam atque mobilem, similis est luminibus, ideoque coloribus et vocibus aerijs, et odoribus motibusque animi, ideo per haec subito in utramque partem movetur atque formatur. Et qualis evadit ipse, talem vicissim effecit quodammodo affectum animi et omnino corporis qualitatem". (English trans. mine.)

[65] E. Garin, *Plotino nel Rinascimento*, in *Plotino e il Neoplatonismo in Oriente e in Occidente*, Rome, 1974, pp. 538–52; F. Masai, *Pléthon et le platonisme de Mistra*, Paris, 1956, p. 328.

the Dionysius-Cusanus tradition in Agrippa and Trithemius. In the words of the latter:

> Here is the centre of natural magic, whose circumference united to itself represents a circle: immense order in infinity. [66]

A final problem is that of distinguishing the apologetic vs. orthodox attitude: in the use and analysis of magic there are apologetic intentions (conformist in Ficino and Trithemius, somewhat heretical in Giovanni Pico and Agrippa, inquisitorial in Gianfrancesco Pico) and other intentions of misbelievers and blasphemers. One approach to this problem is to survey the views expressed on the subject by Aristotelians and their inquisitors during the life of Pomponazzi and the more repressive period of Cesalpino. [67] Though Nifo, Achillini[68] and Pomponazzi were lionised by the esprits forts of Libertinism, it would be wrong to regard them as rationalists in the modern sense. None of them had any doubt about the genuine reality of occult phenomena, miracles and prophecies. Pomponazzi's *De naturalium admirandorum effectum causis sive de incantationibus* must be read with full awareness of its internal complexity, its clandestine diffusion and the complexity of its wider context. It is evident from fragments of unpublished lecture series given during the years when the *De incantationibus* was being written that the Neoplatonic conception of nature, magic and demons dominating in this period, was discussed in his courses. The *De incantationibus* cites the *Timaeus* with Chalcidus's commentary (particularly attentive to the problem of demons and well known throughout the Middle Ages[69] and many of Plato's works more

[66] J. Trithemius, *De septem secundeis*, Frankfurt, 1567, p. 95: "Hic centrum est magicae naturalis, cuius circumferentia sibi unita circulum repraesentant immensum: ordo in infinitum". This passage comes from a letter dated May 10, 1503 to a correspondent who was interested in magic; Trithemius in his magical writings clearly mentions Cusanus; also Agrippa was deeply interested in this thinker, when in his *De vanitate* among other subjects criticizes occult sciences.

[67] A. Cesalpino, *Daemonum investigatio peripatetica*, Florence, 1580; cf. il mio *Scienza, filosofia, religione nella Toscana di Cosimo I*, in *Florence and Venice: Comparisons and relations*, Florence, 1980, II, pp. 12–17, nn. 54–70.

[68] See my article *"Aut diabolus aut Achillinus". Fisionomia, astrologia e demonologia nel metodo di un aristotelico*, "Rinascimento", II s., XVIII, 1978, pp. 58–86.

[69] F. Graiff, *I prodigi e l'astrologia nei commenti di Pietro Pomponazzi al "De caelo", alla "Meteora" e al "De generatione"*, "Medioevo", II, 1976, pp. 331–61; *Aspetti del pensiero di P. Pomponazzi nelle opere e nei corsi del periodo bolognese*, "Annali dell'Istituto di filosofia" [Università di Firenze, Facoltà di Lettere], I, 1979, pp. 69–130. G. Zanier, *Ricerche sulla diffusione e fortuna del "De incantationibus" di Pomponazzi*, Florence, 1975, pp. 31–3, wrongly takes Nifo and Achillini as sources, instead of witnesses of Pomponazzi. Both scholars refer to the studies and historiographical theses

recently translated. Not only in his lectures but also in the *De incantationibus* (which circulated widely amongst trusted readers, although it could not be printed because it would have been too dangerous) Pomponazzi refers to fundamental texts of magic and accepts the definitions of Ficino and Pico. Following the practise of the time, he does not acknowledge them but they are easily identified when he repeats the topos that "magus" means "wise man" in Persian[70] and when he develops in an original fashion the distinction between natural and demonic magic.[71] He adopts Pico's fundamental definition that "magia est factiva" [72] and links it to the definition of the magus – attributed to Plotinus, but traceable to Roger Bacon and thence, eventually, to della Porta – not as *artifex* but as the minister and skillful servant of nature.[73] This definition of the latter indicates that the Hermetic view had passed its heyday. No longer the creator of reality, of statues divinely animated by the gods themselves, the "magus" was demoted to merely being the expert interpreter of nature who achieves marvels by exploiting nature's hidden resources.[74]

(H. Busson, L. Febvre, R. Lenoble, R. Pintard) on the relationship between aristotelians and libertins; see also T. Gregory, *Theophrastus redivivus*, Napoli, 1979.

[70] *De naturalium admirandorum effectum causis sive de incantationibus*, Basel 1567, p. 106.

[71] *Ibidem*, p. 98: "nihil repugnat omnia, quae in magica dicuntur fieri per daemones, posse etiam fieri per homines, nullo concurrente auxilio ipsorum daemonum quoniam dictum est daemones talia facere quoniam applicant activa passivis [...] Unde fit ut consimiliter homines operari poterunt veluti daemones operantur: quare tota magica poterit reduci in causas naturales, veluti Zoroaster [...] reduxit".

[72] *Ibidem*, p. 75; G. Pico, *Conclusiones*, ed. B. Kieszkowski, Genève, 1973, p. 73: "Magia est pars practica scienciae naturalis".

[73] G. Pico, *Oratio de hominis dignitate*, ed. by E. Garin, p. 152: "Plotinus ubi [*Enn.*, IV, 4, 42–3] naturae ministrum esse et non artificem magum demonstrat, hanc magiam probat asseveratque vir sapientissimus, alteram ita abhorrens, ut cum ad malorum daemonum sacra vocaretur, rectius esse dixerit ad se illos, quam se ad illos accedere et merito quidem [...] Haec inter sparsas Dei beneficio et inter seminatas mundo virtutes quasi de latebris evocans in lucem, non tam facit miranda quam facienti naturae sedula famulatur"; before Pico, see M. Ficino, *De amore* (VI, x); later see G.B. della Porta, *De miraculis rerum naturalium*, Antverpiae, 1560, p. 2; P. Pomponazzi, *Quaestio de alchimia*, ms. Paris. lat. 6535, fols. 343^{r}–550^{r} cited in my *L'ambigua natura*, p. 143 n. 57.

[74] Cf. my *Platone, Ficino*, pp. 32–3, and *Le problème*, reprinted in *L'ambigua natura*, p. 138 ff.; P. Rossi, *Immagini della scienza*, Rome, 1977, pp. 87–8.

II

Imagination and its Power

Desire and Transitive or Psychosomatic Imagination

"Combien en a rendu de malades le seule force de l'imagination?" asked Montaigne in his *Apologie de Raimond Sebond*. The Renaissance sources of Montaigne's concept of psychosomatic phenomena have been traced by Pierre Villey to the repertories of Caelius Rhodiginus, Pedro Mexia, and others and certainly go back to philosophers such as Ficino, Pomponazzi, Agrippa. In *Essais* I,21, "De la force de l'imagination," it is possible to identify "les uns" who "attribuent à la force de l'imagination les cicatrices du Roy Dagobert et de Saint Francois" with Pomponazzi and Agrippa.[1] This naturalistic explanation of miracles, prodigies and other physical affections has medieval precedents or sources, which have not been investigated to the extent they deserve.

Even without reading Arabic or specifically studying medieval Islamic culture, one often comes across enigmatic references in medieval and Renaissance Latin texts to Eastern authors and their thoughts on very original questions in psychology. Thanks to the translations and studies now available in Western languages, it is at least possible to trace particular points to the ideas as expressed in the Arabic sources. I am especially interested in the complex of theories related to the faculty of the imagination (Aristotle's *phantasia*). I would like to state immediately that I am gratefully indebted to the editions of Avicenna published by Fazlur Rahman and Simone Van Riet and to Rahman's very useful study *Prophecy in Islam*.[2]

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[1] See my article *Cornelio Agrippa nelle fonti e negli studi recenti*, "Rinascimento," II s., VIII (XIX), 1968, pp. 197–9 (=*Agrippa von Nettesheim in den neueren kritischen Studien und in den Handschriften*, "Archiv für Kulturgeschichte," LI, 1969, pp. 293–5).

[2] *Avicenna latinus. Liber de anima seu sextus de naturalibus*, ed. critique de la trad. lat. medievale par S. Van Riet; introduction sur la doctrine psychologique d'Avicenne par G. Verbeke, Louvain, 1968–72; *Avicenna's Psychology*. An english translation of Kitāb al-Najāt, II, VI with historico-philosophical notes by F. Rahman, Oxford, 1952; *Avicenna's De anima* (Arabic text from Al-Shifā), Oxford, 1959 (in particular p. 277); F. Rahman, *The Prophecy in Islam. Philosophy and Orthodoxy*, Liverpool-London, 1958. From this fundamental monograph Rahman took the main lines of his article *Le rêve, l'imagination et ālam al-mithāl*, in *Le rêve et les societés humaines*, Paris, 1967, pp. 407–17 (in this book see also H. Corbin's article). Cf. Rahman, *La religione del Corano*, Ital. tran., Milano, 1968, p. 187.

The theories dealing in one way or another with the faculty of the imagination are mostly an outgrowth – a marginal one, perhaps, but not for this reason less important – of exegetic traditions of Aristotle's *De anima*, as well as of his *De somno et vigilia* and *De memoria et reminiscentia*. I became curious to find out more about the imagination when I saw how it was interpreted, first by the early Latin Aristotelians of the thirteenth century, then by the Renaissance philosophers of both Aristotelian and Platonic schools. I should, however, conclude this premise by admitting openly that I am not able to offer anything but a few odd notes on these questions.

For the sake of clarity, I would like to bring up one first aspect which is, in essence, the very subject of Rahman's rich, fundamental work, with its continual comparisons of the great Arab thinkers (al-Kindī, al-Fārābī, Avicenna, al-Ghazālī, Averroes) with the Greek, especially Stoic, tradition. Rahman observes that "the Muslim philosophical tradition of revelation does not envisage that total 'otherness' of the giver of revelation which is characteristic of the Semitic tradition."[3]

> "The Muslim philosophers do not seem to recognize the technical prophecy or prophecy by rational conjecture, esteemed by Hellenism. With Plato, Plutarch, Plotinus and others they admit a highest flight of the human soul by which it gains a simple, total insight into Reality."[4]

I will say straight away that neither the Scholastic philosophers nor, even less, the Humanists seem to have been aware of or concerned with the distinction between two types of *divinatio*, already advanced by the Stoics (Cicero, *De Div.*, I,18,34), although they did not actually exclude either of these possibilities. Instead of the classical *ars divinandi*, the Muslim philosophers proposed their own concept of prophecy: for them it was based on a strong, truly exceptional imagination as well as on special contact with supreme truth; it was the highest and most divine manifestation of the intellect. The sampling of medieval and Renaissance Latin authors I will examine seem to be concordant, especially in eclectically associating the Muslim idea of prophecy with divination (with astrology and with types of magic based on astrological principles, but also

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[3] *The Prophecy*, p. 69 n. 17.

[4] *Ibidem*, p. 35, where he goes on: "with Plotinus they agree that this insight is creative of discursive rational knowledge comprising premises and conclusions which, according to them, correspond with causes and effects, since they agree with the Stoics that every event has its fixed place in a stringent and unalterable causal scheme." *Ibidem*, pp. 66–70, nn. 5, 9 and 18, Rahman quotes many texts by Cicero, d Ps. Plutarcus, Sinesius, Plotinus, Filo, Jamblichus, etc. comparing them with Avicenna.

with the patrimony of natural divination, such as the observation of omens and of monstrous or exceptional phenomena in nature, inherited from the ancient world).[5] The Muslim thesis that prophecy could only be produced by an exceptional imagination (al-Fārābī: "an excellent power of imagination and persuasion")[6] combined, ultimately, with superior, divine intervention (a thesis we do not need to consider here, since Rahman has excellently furnished the texts and his analysis of them) is also the basis for the theory of the relation between religion and politics, commonly attributed solely to Averroes, which stresses the essential (and, it is to be well understood, not negative) role of the prophet in the life of the community. According to this theory, the prophet guarantees the consensus of the community toward the political choices of whoever governs it (or, in theocratic states, towards the prophet himself). Late Renaissance thinkers and *libertins* commonly called this the theory of the imposture of religions; but this definition, still open to discussion, is not worthy of the serious intent of those who proposed it: Agostino Nifo, who, in 1497, published and commented the fourteenth-century translation, till then hardly noted, of the *Destructio Destructionum*, i.e. Averroes' critique of al-Ghazālī; and Pietro Pomponazzi, who, inspired by this Latin edition of Averroes, wrote and put into clandestine circulation in 1520, his rich and more consistent treatise, the *De Incantationibus*. A few excerpts will be examined below, because in both these and various other authors, significantly, this doctrine regarding the political grounds of religion in general and of preaching and prophecy in particular is set alongside or, rather, theoretically interconnected with their theses on natural magic.[7]

However, we must backstep for a moment to clarify that the political role of prophecy had already been evident[8] to al-Fārābī (*Siyāsae Madīna*) and to

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[5] In general for occult observances cf. T. Fahd, *La divination arabe. Études religieuses, sociologiques et folkloriques sur le milieu natif de l'Islam*, Leiden, 1966, pp. 51–4, 550–63, dealing also with Avicenna and more thinkers, but not analyzing them from the philosophical point of view; cf. G.N. Atiyeh, *Avicenna's conception of miracles*, Chicago Univ. Dissertation, 1954, p. 85, on "these two categories of miracles, intuition and imagination."

[6] F. Rahman, *The Prophecy*, p. 57, cf. R. Walzer, *Al-Fārābī's theory of prophecy and divination*, "Journal of Hellenic Studies," 77/1, 1957; Walzer studies "imagination [...] as the seer of prophecy and divination" (p. 145) and its "creative power" (p. 145).

[7] On Renaissance reading and uses of Averroes' *Destructio* translated in 1328 by Calo Calonimos, see my *I problemi metodologici del necromante A. Nifo*, "Medioevo," I, 1975, pp. 155 ff.

[8] L. Gauthier, *La théorie Ibn Rochd sur les rapports de la religion et de la philosophie*, Paris, 1909, pp. 159 ff. ("prédécesseurs grecs et musulmans"); A.-M, Goichon, *Distinction de l'Essence et de l'existence d'après Ibn Sina*, Paris, 1957, pp. 111–14 and pp. 314–335 (cf. G.C. Anawati in "Revue thomiste," 69, 1961, p. 130; F. Rahman, *The Prophecy*, pp, 40 ff., cf. *ibidem*, pp. 54–7, 61, 63; at

Avicenna before Averroes (whose *Faslal-Maqāl* Rahman quotes, in addition to the *Destructio*).[9] For these texts, which, unlike the *Tahāfut al-Tahāfut*, were not incorporated into the Latin tradition, we can only refer to the passages which Rahman quotes and defines as "again a Greek legacy."[10] A passage from al-Fārābī, commented by Rahman, suffices to illustrate this point:

> When the imaginative faculty is very strong and perfect in a man and neither the sensations coming from the external world, nor its services to the rational soul, overpower it to the point of engaging it utterly – on the contrary, despite this engagement, it has a superfluity of strength which enables it to perform its proper function – its condition with all its engagements in waking life is like [other men's souls'] condition when they are disengaged in sleep. Under such circumstances, the imaginative soul figurizes the intelligibles bestowed upon it by the Active Intelligence in terms of perceptual [literally: visible] symbols. These figurative images, in their turn, impress themselves on the perceptual faculty.

Now, when these impressions come to exist in the *sensus communis*, the visual faculty is affected by them and receives their impress. These impressions are then transmitted through the visual ray to the surrounding air filled with light and when they thus come to exist in the air, they come back and impinge upon the visual faculty in the eye and are transmitted back to the imagination through the *sensus communis*.

> Since this entire process is inter-connected, what the Active Intelligence had originally given to this man (in terms of intelligibles) thus comes

pp. 103–4 mentions Ibn Taymlya, who in the 8th/14th Century put together Avicenna and his critic al-Ghazālī, as if they gave prophecy a naturalistic explanation thanks to the power of imagination. "According to them, what the prophet possesses of intuition and verbal revelation is of the same kind as that, which magicians and demented fools have, the only difference being that the one commands good, while the other commands evil, and the demented fools have no intelligence [...] This amount of difference exists even among ordinary people and thus the prophet has no essential distinction from the magician and the demented. This is a masterpiece of Avicenna's sagacity." These examples have high religious-metaphysical relief: this allowed us not to mention some commonplaces often repeated from *Shifā*, IV, 2, and al-Fārābī, *Madina*, pp. 49–50, cited by Rahman, *ibidem*, p. 23 and n. 23, on sexual appetite awakened by images.

[9] These texts have been translated by F. Rahman, *The Prophecy*, pp. 55–6, 42–52, where one can read from Avicenna's *Risala al-Adhawiya*: "As for religious law, one general principle is to be admitted, viz. that religions and religious laws, promulgated through a prophet, aim at addressing the masses as a whole."

[10] *Ibidem*, p. 45.

> to be perceptually apprehended by him. In cases where the imaginative faculty had symbolized these truths with sensible images of utmost beauty and perfection, the man who comes to see them exclaims "Verily! God has overwhelming majesty and greatness; what I have witnessed is something wonderful not to be found in the entire range of existence.
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> It is not impossible that when a man's imaginative power reaches extreme perfection so that he receives in his waking life from the Active Intelligence a knowledge of present and future facts or of their sensible symbols and also receives the symbols of immaterial intelligibles and of the higher immaterial existents and, indeed, sees all these – it is not impossible that he becomes a prophet giving news of the Divine Realm, thanks to the intelligibles he has received. This is the highest degree of perfection a man can reach with his imaginative powers.[11]

It is from texts of this kind (analyzed with a precision that has not received the attention and appreciation it merits) that Rahman has reconstructed "the psychological law of symbolization,"[12] which characterizes these Arab philosophers and clarifies their interpretation of the "internal senses" and, in particular, of the imagination. From a rich, detailed essay by Wolfson, we know that the number and denomination of these "internal senses" differed considerably not only from one philosopher to another but also from one text to another by the same author, as is evident in comparing the *al-Qānūn*, the *al-Najat*, the *al-Shifā* and the *Risālā fī quwā l-nafs* of Avicenna.[13] However, it is not

[11] *Ibidem*, pp. 37–8 (da *Madina):* on this work, *Ideas of inhabitants of the virtuous city*, and some hints to the role of prophecy see R. Walzer, *Platonism in Islamic Philosophy*, in *Fondation Hardt, Entretiens* III (= *Recherches sur la tradition platonique)*, Genève, 1955, p. 215.

[12] *Ibidem*, pp. 38–40: "Avicenna has taken over this doctrine [by al-Fārābī] of the visual and acoustic symbolization, by imagination, of the intellectual phenomena. But he seems to regard the appearance of the angel and the hearing of the angel's voice as purely mental phenomena unlike al-Fārābī who, as the above quotation shows, regards them as veritable perceptions [...] having their counterparts in the occurences of the external world (light, air, etc.) and the perceptual organs of the experient. The points that have emerged so far are (1) that the prophet is endowed with such a strong power of imagination that he can recapture the intellectual truth by figurization in visual and acoustic symbols in waking life, and (2) that although these symbols may be private and not public, this fact does not interfere with their objective validity." Rahman cites an important text from *Psycologia*, IV, 2, in *Shifā*.

[13] I exclude from my present research the complex and long question on "internal senses," which in Arabic and latin Aristotelian exegesis have been multiplicated and variously classified. I deem it not necessary in my assumption. On this question see the fundamental work by H.A. Wolfson, *The internal senses*, "Harvard theological Review," 28, 1953, pp. 69 ff. (on

on this point that I would like to dwell, although this inconsistency, reflected and amplified in the Latin versions, might at times create difficulties. Even Albertus Magnus (who was not a paradigm of rigor and consistency) laments this fact, noting in his *De somno et vigilia* (III,i,1 and 6) the great disagreement among philosophers.

Neither will we dwell, for now, on the divergence between, on the one hand, al-Fārābī, who in the workings of the prophetic imagination admits the possibility of the intervention of angels (like Posidonius, Plutarch, and Proclus, repeatedly referred to as the sources of the Arab philosophers considered here), and, on the other hand, Avicenna, who instead does not admit this possibility and considers the appearance of angels or their voices "as purely mental phenomena." On the basis of their acceptance or denial of the possibility of the intervention of angels in the privileged experience of the prophet, astrologer, or magician, there were two, somewhat overlapping, difficult to separate schools of Latin authors: that of "natural" magic, which made no reference to angels or demons, and that of "spiritual" magic, which claimed to consider its spirits in purely Stoic terms but which often turned into "black magic," evoking actual demons. Attempts to distinguish between these fundamental positions or, worse, to verify the consistency with which they are defended in treatises on magic written between the thirteenth and seventeenth centuries do not yield neat or definitive results. Those thinkers who, like Pomponazzi, chose to exclude the possibility of demons (as Albertus Magnus did before him and Nifo in a more wavering, inconsistent way, and as Andrea Cesalpino was no longer able to do in the days of the Counter-Reformation) looked to the Aristotelian tradition; the "spiritual" magicians instead relied on the Neo-Platonic tradition. But, clearly, even the first of these two positions – already taken up by Avicenna, who in turn derived from al-Kindī on such issues – does not exclude the role of the intelligences, "movers of heavenly bodies," in this type of occult phenomena and, generally, in the sub-lunar world; it simply furnishes a definition of the sort we might today give artificial

imagination in particular pp. 96–7). F. Rahman, *Avicenna's Psychology*, 78 n., discusses it in some special issues, for instance on Avicenna's use of the term *phantasia* to *sensus communis*. Verbeke, *Avicenna latinus*, I–III, p. 49 n. agrees with Wolfson. Taking his cue from *Shifā* (VE, 5, 6) Rahman, *The Prophecy*, pp. 32–3, underlines that these discussions are connected to Aristotelian theories of intellect, he does not underrrate the fundamental religious meaning that prophecy takes in Islam. "In fact the doctrine of the certainty and of immediate and direct quality of intuitive religious cognition demands that the creative principle of knowledge be in the mind as a part of it and Avicenna indeed calls the above quotation as a part or faculty of the rational human mind." See also Verbeke, in *Avicenna latinusm*, IV–V, pp. 48* ff.; H.A. Wolfson, *Philo. Foundations of Religious Philosophy in Judaism, Christianity and Islam*, Cambridge Mass., 1962, II, pp. 63–4.

intelligence – a definition not personified or anthropomorphous like the Christian definitions of angel and devil. Litt[14] has analyzed this distinction with regard to Thomas Aquinas,[15] whereas, according to Rahman "Avicenna admits the influence which the imagination of the heavenly bodies exercises on, not only earthly bodies, but also human souls."[16] The distinction between the Aristotelian heavenly intelligences and the anthropomorphic figures of the Judeo-Christian tradition is already present in al-Kindī's fundamental text *De radiis sive Theorica artium magicarum*, widely diffused and heavily censured in the thirteenth century. Although al-Kindī's main contribution to the history of theories of astrological magic lies in his naturalistic denial that prodigies can be performed by planetary angels[17] and in his corresponding relegation of these prodigious events to the natural influences of celestial movements, we must not, on the other hand, think that his theory of the imagination does not

[14] T. Litt, *Les corps célestes dans l'univers de S. Thomas d'Aquin*, Paris, 1963.

[15] In this paper I do not deal with Thomas Aquinas; L. Thorndike, *A History of Magic*, New York, 1934, II, pp. 608 and 614, underlines in his *Summa theologica* (I, p. 117, 3) and in his *Contra Gentiles* (III, p. 103) his ideas on evil eye and *fascination* "as due to the power of the evil eye. The eye is affected by the strong imagination of the soul and corrupts and poisons the atmosphere so that tender bodies coming within its range may be injuriously affected. It is thus that malicious old woman injure children." The same moderate explanation of this phenomenon – one of the more grievous attributed to witches – will be used by their advocates (for instance in Unorthodox Aristotelians as Pomponazzi and Cattani) when after *Malleus maleficarum* more severe persecutions went on (cf. note 46). As for Thomas, known as a critic of Avicenna's theory of knowledge, numberous entries (39619 ff.) registrated in *Index Thomisticus. Operum S. Thomae Aquinatis concordantia prima*, Stuttgart, 1974 ff., whereas put in relationship imagination and demons, only twice reflect the Avicennian idea of imagination, without admitting its transitive effects: Thomas admits only effects of the body of the subject. Both examples come from Aquinas' theological writings and deal with delicate Christological cases: *Summa theologica*, III, Q.xiii, a. 3 (*Opera omnia Leonis X iussu*, Roma, 1903, XIII, p. 176): "Utrum anima Christi habuerit omnipotentiam respectu proprii corporis [...] Praeterea, ad imaginationem animae naturaliter corpus immutatur; et tanto magis, quanto anima fuerit fortioris imaginationis [...] Sed anima Christi habuit virtutem perfectissimam et quantum ad imaginationem et quantum ad alias vires"; *Quaestiones disputatae*. I. *De veritate*, Torino 1953, p. 307; Q. 26, A. 10: "Decimo quaeritur utrum per dolorem passionis [...] Christi, impediretur gaudium fruitionis, et and converso. [...] operatio animae est causa corporalis immutationis, sicut patet quod ex imaginatione terribilium vel delectabilium corpus disponitur ad frigus vel ad calorem" (cf. *ibidem*, p. 509).

[16] *The Prophecy*, p. 38.

[17] M.-Th. d'Alverny-F. Hudry eds., *al-Kindi, De radiis*, "Archives d'histoire doctrinale et littérarie du Moyen Age," 40, 1974, but 1975, pp. 247–8. It would be worthwhile, but too long to list all the contributions on Avicenna in the latin tradition published by d'Alverny in "Archives d'histoire doctrinale et littéraire du Moyen Age" and elsewhere; cf. *Les traductions d'Avicenne*, in Accademia dei Lincei, *Avicenna nella storia della cultura medievale*. Roma, 1957 (Quaderno 40/Anno 354).Van Riet mentions these contributions as the basis of her edition.

allow for a force capable of transitive effects. In the context of astrological influence and of man as microcosm, al-Kindī expounds his theory of the imagination:

> Being proportionate [to the ideal model], man thus raises himself to the semblance of the world. There, he is, and is called, a microcosm. Like the world, he is given the power to induce change in fit [suitable] matter, once imagination, will, and faith have been conceived in his soul. Indeed man, when he wants to act on something, first imagines the form that he wants to impress through his action, and then, having imagined it, either desires or rejects it in his soul, depending on whether he considers the thing useful or useless. Consequently, if the thing is considered desirable, he desires the circumstances by which the thing itself comes into being, according to the opinion he has conceived. The accidents that are favorable to inducing change are the passions of the soul; regarding these, we say that the imagination and human reason acquire semblance with the world, whereas forms are impressed concretely on mundane things through the exercise of our senses, since the imaginal spirit [*pneuma phantasticon*] has rays like the rays of the world. From this it follows that the imaginal spirit has the power to move external things exposed to its rays, as the superior world and inferior world with their rays move things with different changes. Furthermore, when man in his imagination conceives a corporeal thing, that thing obtains actual existence in the imaginal spirit according to its form. From this it follows that the spirit itself emits rays that move external things, like the thing of which it is the image. Therefore, the image conceived in the mind is consonant in form with the actual thing made as an example of the image through an act of the will, or a natural act, or both. [...] It is therefore not surprising if a constellation, which produces an image in the mind of man, produces itself the same in another subject, since one does not differ from the other except in its matter. In the same way, the mental image and the real image, being of the same form, follow from one another, provided only that the matter of each is inclined to receive that form and that the other necessary accidents of time and place are conducive to the generation of that thing.[18]

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[18] *Ibidem*, pp. 230–31: "Homo igitur per suam existentiam proportionatam surgit ipsi mundo similis. Unde minor mundus est et dicitur, quare recipit potentiam inducendi motus in competenti materia per sua opera, sicut habet mundus, ymaginatione tamen et intentione et fide in anima hominis praeconceptis. Homo enim aliquid volens operari primum ymaginatur rei formam quam per opus suum in aliquam materiam vult imprimere, post ymaginem rei conceptam secundum quod eadem rem sibi utilem vel inutilem iudicaverit, eam desiderat vel spernit in animo. Consequenter vero, si res desiderio digna fuerit indicata, desiderat accidentia per quae eadem res in actum proveniat secundum suam opinionem assumptam. Accidentia autem ad motum inducendum adiuvantia sunt animae passiones, de quibus disserentes dicimus quod ymaginatio et ratto humana adquirunt similitudinem mundi, dum species rerum mundialium in ipsis actualiter imprimunt per exercitium sensuum, propter quod spiritus ymaginarius habet radios conformes radiis mundi, et inde consequitur vim movendi res extrapositas suis radiis sicut ipse mundus tam superior quam inferior suis radiis movet res diversis motibus. Preterea cum homo concipit rem aliquam corpoream ymaginatione, illa res recipit actualem existentiam secundum speciem in spiritu ymaginario. Unde idem spiritus emittit radios moventes exteriora, sicut res cuius est ymago. Ymago igitur in mente concepta concordat in specie cum re actuali ad exemplum ymaginis per opus voluntarium vel naturale vel utrumque facta. Quare non est mirandum si constellatio que ymaginem in mente hominis producit in aliquo alio subiecto eadem producat, cum hec ab illa non differat nisi tantum in materia. [...] Eodem modo ymago mentalis et realis, quia sunt eiusdem speciei sese consequuntur dummodo utriusque materia ad illius forme susceptionem sit declivis et alia concurrant accidentia que secundum locum et tempus exiguntur ad rei generationem." cf. p. 248: "quaecumque autem super hiis fuerit fides obsecrantis, sequitur effectus, dummodo cum summo desiderio pronunciet et cum debita solempnitate operis vel alterius motionis. Et hec de obsecratione dieta sunt, quae est orario deprecativa ad virtutem operativam directa ad motum eliciendum in aliqua materia assumpta in cogitatione proferentis."

Al-Kindī was criticized around 1270 by Aegidius Romanus in his *Errores philosophorum* (X,6), for his theory "that spiritual substance can induce true forms by imagination alone" ("spiritualem substatiam ex sola imaginatione posse inducere veras formas");[19] but this theory was also diffused among Latin authors through al-Kindī's treatise on dreams and visions (*Rasā'il*), translated by Gerardus Cremonensis. From Thomas Aquinas to the two Picos (G. Pico deals with al-Kindī favorably in the *Oratio de hominis dignitate*[20] as does G.F. Pico in the *De rerum praenotione*),[21] al-Kindī's writings stayed in circulation but drew attention above all for the astrological theses in the *De radiis* and not for the psychological ones. From this point of view, Avicenna was undoubtedly the Arab author of greatest influence. "Stoic-neo-Platonic tenets of Sympathy constitute the basis of Avicenna's doctrine of revelation, prayer and miracles. Indeed, just as prophetic revelation . . . is the cognitive aspect of the working of sympathy, so the efficacy of prayers and the performance of miracles is its practical aspect." Rahman observes "that although Avicenna accepts a kind of theurgic magic in connection with the ritualistic part of prayer and also in connection with certain occult and obscure happenings both in the souls of men and in nature, his general tendency is to avoid the extravagant mystery-mongering of later Hellenistic magic and theurgy," which would later fascinate and condition the Humanists from Ficino onwards, "for which he substitutes as naturalizing and sober explanations as possible."[22]

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[19] Cited *ibidem*, p. 139 (cf. Giles of Rome [Aegidius Romanus], *Errores philosophorum*, ed. J. Koch, Milwaukee, 1944, p. 50).

[20] G. Pico, *Oratio de hominis dignitate*, a cura di E. Garin, Firenze 1942, pp. 102, 1.52–1.53; cf. *ibidem*, p. 173.

[21] G.F. Pico, *Opera omnia*, Torino, 1972, pp. 425, 428–33.

[22] F. Rahman, *The Prophecy*, pp. 46–7.

In a passage from his *Ishārāt* (III, pp. 254–5), unknown to Latin authors but commented on by Rahman, Avicenna writes:

> Strange occurrences which take place in the natural world are due to three causes: (1) the [powerful] quality of the soul mentioned before; (2) natural properties of the elemental bodies like the attraction of iron by magnet due to the latter's peculiar power; (3) influences of the heavenly bodies on certain earthly bodies which have certain definite relations of situation with the former, and on certain minds, which are endowed with certain peculiar active and passive states and qualities, these influences being due to similarities existing between the heavenly bodies and earthly existents. The first group is that of magic and miracles, the second of natural wonders (*nairanj*), the third of talismans.[23]

This "more spiritual and refined" interpretation of the doctrine of sympathy "in a less occult and more scientific form," such that it substitutes the theurgic magic of late Hellenism by resorting to the powers of the soul itself, is based – as Rahman notes[24] – on the essential divinity of the human soul. Avicenna underlines this point in his work best known among medieval Latin authors, the *Liber sextus naturalium* (*Shifā, Psychology*, I,3):

> as for the dominion which the soul has upon these [changeable things outside itself], what happens is that the vegetal power is reinforced or debilitated when the soul perceives something that it rejects (or desires) with a hatred (or with a love) that is in no way bodily. This happens when what the soul perceives is an approvation, which does not modify the body on account of the approvation itself, but on account of the passion of enjoyment (or pain) which follows; and this occurs also with animal perceptions and does not regard things that happen to the body as a body; this modifies the vegetative and nutritive properties, so that from an accident that comes about first in the soul, such as the joy of the rational [soul], the soul is given strength and speed of action, whereas from opposite accidents, that is the sorrow of the rational [soul], with which bodily pain is not related, the soul is made weak and

[23] *Ibidem*, pp. 47 ff.; cf. Avicenna, *Livre des directives et remarques*, French trans. by A.-M. Goichon, Beyrouth-Paris, 1951, pp. 523–4; see X Groupe, pp. 504–26, and notes at pp. 504, 514.

[24] *Ibidem*, pp. 64, 48.

> indolent, so that its action suffers and sometimes its constitution is completely destroyed.[25]

Rahman [26] and Verbeke[27] agree as to the contribution Avicenna's medical experience lent to his philosophy: "After depicting the influence of the soul on its own body by pointing to ordinary emotional experiences and medical evidence, Avicenna announces the possibility of miracles" in chapter IV of Book IV of the same work, which, space permitting, would be well worth quoting in its entirety:

> Carefully observe the frame of mind of the sick man when he believes he is beginning to recover, or of the healthy man when he believes he is falling ill. It very often occurs that, when the form is corroborated in the soul, matter itself is affected, and health or illness results. And this action is more effective than anything a doctor can do with his instruments or remedies. For this reason, a man can walk on a beam [placed] in the middle of a road; but if the beam were placed like a bridge over deep water, he would not dare to walk on it, because the form of falling would be violently impressed on his soul, to which his nature and the strength of his limbs would obey, not obeying the opposite, – that is, climbing up on it and walking.

Therefore, when the being of forms has been impressed upon the soul and the soul becomes aware of their being, matter often suffers those things which it customarily suffers on their account and which are in being. If this were to happen in the common soul, the soul of the heavens and the world, possibly its operation would concern the nature of all things; if, instead, it happens in the individual soul, it can act on an individual nature. Indeed, very often the soul acts on the body of another as it does on its own body, as in

[25] Introduction to *Avicenna latinus*, I–III, pp. 65–6: "propter dominium quod anima habet in illis, contingit ut vis vegetabilis roboretur aut debilitetur cum percipit anima quae respuit vel appetit odio vel amore qui non est corporalis ullo modo. Et hoc contingit cum id quod percipit anima est credulitas quae non est afficiens corpus ex hoc quod est credulitas, sed consequitur eam passio gaudii aut doloris, et hoc etiam est de apprehensionibus animalibus et non est de his quae accidunt corpori ex hoc quod est corpus; et hoc afficit virtutem vegetabilem et nutribilem ita ut, ex accidente quod primum accidit animae, sicut gaudium rationabile, contingat in ea robur et velocitas in actione sua, sed ex accidente illi contrario, scilicet dolore rationabili cum quo nihil est doloris corporalis, contingat in ea debilitas et desidia, ita ut deterioretur eius actio et aliquando destruatur eius complexio omnino."

[26] F. Rahman, *The Prophecy*, p. 550.

[27] *Avicenna latinus*, I–III, p. 1.

the case of the evil eye (*oculus fascinans*) and of suggestion. Moreover, when the soul is constant, noble, true to its principles, the matter which exists in the world obeys it and suffers on account of it; and in matter one finds everything that is formed in it. This occurs because, as we will show below, the human soul does not impress its matter but rather provides for it. Since, due to this sort of connection, the soul can transform corporeal matter from that which was the purpose of its nature, it is not surprising if a noble, very strong soul transcends acting on its own body so that, not being deeply immersed in the state of that body and being, moreover, constant in its habits, it cures the sick and weakens the evil, it subdues natures and changes elements, so that what is not fire becomes fire for it, and what is not earth becomes earth for it, and according to its will, rain falls and flourishing crops are harvested, like absorption in the earth and mortality; and all this happens according to some comprehensible necessity. Indeed, it is entirely possible that its desire for being goes hand in hand with that which comes of the transmutation of matter into contraries; in fact, by nature, matter obeys the soul and that which the soul sees fit to desire is realized. Indeed, matter is wholly obedient to the soul; it obeys the soul much more than it obeys the contrary agents matter contains in itself.[28]

[28] *Ibidem*, IV–V, pp. 64–6: "Attende dispositionem infirmi cum credit se convalescere, aut sani cum credit se aegrotare: multotiens enim contingit ex hoc ut cum corroboratur forma in anima eius, patiatur ex ea ipsius materia et proveniat ex hoc sanitas aut infirmitas, et est haec actio efficacior quam id quod agit medicus instrumentis suis et mediis. Et propter hoc potest homo ambulare super trabem quae est in media via, sed si posita fuerit pons super aquam profundam, non audebit ambulare super eam, eo quod imaginatur in animo eius forma cadendi vehementer impressa, cui oboedit natura eius et virtus membrorum eius et non oboediunt eius contrario, scilicet ad erigendum et ad ambulandum. Ergo cum esse formarum impressum fuerit in anima et constiterit animae quod habeant esse, continget saepe materiam pati ex eis quae solet pati ex eis, et ut habeant esse. Si autem fuerit hoc in anima communi quae est caeli et mundi, possibile est tunc ut eius operatio sit ad naturam totius; si vero fuerit in anima particulari, poterit operari in natura particulari. Multotiens autem anima operatur in corpore alieno sicut in proprio, quemadmodum est opus oculi fascinantis et aestimationis operantis; immo cum anima fuerit constans, nobilis, similis principiis, oboediet ei materia quae est in mundo et patietur ex ea, et invenietur in materia quicquid formabitur in illa. Quod fit propter hoc quod anima humana, sicut postea ostendemus, non est impressa in materia sua, sed est providens ei. Et quandoquidem propter hunc modum colligationis potest ipsa permutare materiam corporalem ab eo quod expetebat natura eius, tunc non est mirum si anima nobilis et fortissima transcendat operationem suam in corpore proprio ut, cum non tuerit demersa in affectum illius corporis vehementer et praeter hoc fuerit naturae praevalentis constantis in habitu suo, sanet infirmos et debilitet pravos et contingat privari naturas et permutari sibi elementa, ita ut quod non est ignis fiat ei ignis, et quod non est terra fiat ei terra, et pro voluntate eius contingant pluviae et fertilitas sicut contingit absorbitio a terra et mortalitas, et hoc totum proveniat secundum necessitatem intelligibilem. Omnino enim possibile est ut comitetur eius velle esse id quod pendet ex permutatione materne in contraria: nam materia oboedit ei naturaliter et fit ex ea secundum quod videtur eius voluntati; materia etenim omnino est oboediens animae et multo amplius oboedit animae quam contrariis agentibus in se." See also a passage on psychological effects of medicine in Dominicus Gundissalinus, *Tractatus "De anima,"* ed. by J.T. Muckle, "Mediaeval Studies," 2, 1940, p. 83.

In the same text, Avicenna emphasizes that these phenomena are connected with the relation of soul to body, as he conceives of it ("*sunt dispositiones rei coniunctae cum corpore*").[29] He does not exclude the possibility that

> the soul might receive something from that which is in the body, and the passions in the body, which are proper to it, then follow. Indeed, even the imagination, in that it is apprehension, is not one of the passions principally pertaining to the body. Even though it may happen that a limb be moved by the imagination, this does not result from a natural cause, for which the constitution must be modified, its temperature increased, or moisture produced, spreading through the limb so as to make it extend; rather, because in suggestion there is a form, a modification of the constitution ensues, in temperature, moisture, and spirit. If this form did not exist, nature would not have that which moves it. In conclusion then, we say that a change usually comes into matter from the soul [and that this change is achieved without the working or the passion of the body]; so that heat comes from that which is not hot, and cold from that which is not cold. When, in fact, the soul imagines some image and it is corroborated, immediately the matter of the body receives a form, or a quality, which corresponds to it. This happens either because the soul is made of the same substance as one of the dominant principles, which give form to the matter they contain, or else because it corresponds more closely to the substance itself than to the other. This happens when their disposition is perfect.[30]

[29] *Ibidem*, IV–V, p. 61, l. 70.

[30] *Ibidem*, IV–V, pp. 62–3: "Habeat aliquid anima ex hoc quod est in corpore, quod postea sequantur passiones in corpore quae sunt propriae corporis: imaginatio enim edam, ex hoc quod est apprehensio, non est de passionibus quas habet corpus principaliter; quamvis postea ex imaginatione accidat ut tendatur aliquod membrum; hoc enim non habet ex causa naturali, propter quam debeat complexio permutari vel calor augeri vel vapor generari qui diffundatur in membrum ita ut extendatur; sed quia forma habetur in aestimatione, secuta est permutatio in complexione et calor et humiditas et spiritus. Et nisi esset illa forma, non haberet natura quid moveret eam. Nos autem dicimus ad summam quod ex anima solet contigere in materia corporali, ita quod calor accidat non ex calido et frigiditas non ex frigido: cum enim imaginat anima aliquam imaginationem et corroboratur in ea, statim materia corporalis recipit formam habentem comparationem ad illam aut qualitatem. Quod fit ob hoc quod anima, aut est ex

As stated in the passage above, the act through which exceptional people (prophets or saints, Avicenna specifies) are able to effect transformations with their imaginations can be explained by the fact that these imaginations become active, pervading all of nature, as if they were *animae mundi*. In a passage from the *Ishārāt* cited, again, by Rahman, Avicenna specifies that "When a man possesses this psychic power of influencing other bodies, but is evil and misemploys it in working mischief he is an evil magician."[31] In another text, the "evil souls" are called "demons or devils," whereas "the good ones of this imperfect (since they are irrational) class of souls [are called] the jinn." [32]

In his pioneer study, much debated but nevertheless highly respected as an original approach to the interpretation of Latin studies of Avicenna in the twelfth and thirteenth centuries, De Vaux distinguishes the few true "avicennistes" from the "avicennisants," such as William of Auvergne, Roger Bacon and Albertus Magnus, "who made the distinction, in the doctrine of Avicenna, between what could be assimilated into the Christian faith and what could not."[33] The issues dealt with by De Vaux are more traditional and metaphysical than those we are trying to outline here. Nevertheless, some of his topics are very useful for our purposes; such is the case with the question of angels, the question of the animation of the heavens, and the celebrated thesis of the "two faces of the soul" (in which the *imaginatio* finds expression in the face which looks down, the *deorsum*). However, De Vaux gives the *editio princeps* of the anonymous *Liber de causis primis et secundis*: in this text inspired by both Eriugena and Avicenna, we find not only this controversial thesis but also a classification in which the definition of the internal senses oscillates, as in Avicenna, and there is a distinction between *ymaginativa* and *ymaginaria*.[34] This may be explained (A) by the distinction, not always maintained in the *Liber sextus naturalium* (I,5),[35] between *imaginativa formalis* and *imaginatio* receptive to sense data, but also, as De Vaux suggests on the basis of Gilson's thesis of

substantia alicuius principiorum quae vestiunt materias formis quae sunt in eis dominantium ipsis; aut habet propriorem comparationem ad ipsam substantiam quam ad aliam, et hoc fit cum perficitur earum aptitudo."

31 F. Rahman, *The Prophecy*, pp. .50–52, who refers to *Shifā, Psycologia*, V, 3, and poi a *Ishārāt*, III, p. 254.

32 *Ibidem*, pp. 51–52, where *Risālā Adhawīya* is quoted.

33 R. de Vaux, *Notes et textes sur l'avicennisme latin*, Paris, 1934, p. 38. This definition and distinction has been challenged by E. Gilson, *Avicenne en Occident au Moyen Age*, "Archives d'histoire doctrinale et littéraire du Moyen Age," 35, 1969 (really 1970), p. 115 n. 22, who refers to his former contributes favourable or unfavorable to de Vaux.

34 *Liber de causis primis et secundis*, in de Vaux, *Notes*, p. 129.

35 *Avicenna latinus*, I–III, p. 89 l. 44 s.

the influence of Avicenna-inspired Augustinism, (B) by the direct connection the anonymous author establishes between the *phantasia ymaginaria* discussed by Augustine in the *De Trinitate* (X,10,16) and the term which Gundisalvi and Johannes Avendaut translate, rather, as *imaginatio*.[36]

At the height of Latin Scholasticism, the idea of a transitive or psychosomatic imagination came to be more explicitly linked with analyses of natural or demoniacal magic. It is in terms of their relation to the psychosomatic imagination that William of Auvergne, for example, discusses talismans (*imagines*) – "at the sight of which anyone would die" ("visu morietur quicunque visor") – and other "verbal" or ceremonial prodigies. These prodigies do not act solely through meanings that can be learned through cognitive faculties, because in that case all the *non intelligentes* would be excluded.

> Given that meaning has no power unless it be due to the imagination or the intellect, and the imagining and understanding of meaning are themselves very great and very strong [...], thus it is by imagining and thinking without names or words that those marvels come about which people believe must necessarily happen by means of names and words.[37]

Thus reads the *De legibus*, which is as full of interesting passages as the *De universo*, both favorite sourcebooks for magicians of the Renaissance; in the *De virtutibus*, as well, magic is discussed in terms of the notion of a psychosomatic faculty.[38]

After William of Auvergne, a text attributed to his follower Roger Bacon furnishes a very clear statement of Avicenna's thesis of the psychosomatic imagination – a thesis which would often be found and tacitly repeated until the Renaissance.

36 R. de Vaux, *Notes*, pp. 71 and 139 n. 1.

37 Guillaume d'Auvergne, *Opera omnia*, Paris, 1674,1, p. 90 col. 2: "Cum significatio nihil possit nisi ratione imaginationis aut intellectus, ipsa vero imaginatio et intellectio significationis sint maximae atque fortissimae [...] ita imaginando atque intelligendo absque nominibus et verbis fient mirifica illa, quae virtute verborum et necessario fieri opinantur."

38 *Ibidem*, I, p. 120: "Quod dicimus propter praestigia magorum et illusiones daemoniorum, idem est videre de apprehensivis ab intus, sicut in sensu communi imaginatione et memoria: nihil enim potest sensus communis non impeditus, [...] nisi prout recepit a particularibus, et imaginatio simpliciter, nisi prout recepit a sensu communi, acsi diceretur prout ei traditum est."

> the soul has great power over its body, on account of its strong affections, as Avicenna teaches in Book IV of *De anima* and in the eighth book of *De animalibus*, and as all learned men admit. Therefore, before sick people we play games and we bring pleasant things [...] because the affection and desire of the soul overcome illness.[39]

In this same *Epistola de secretis operibus artis et naturae et de nullitate magiae*, dedicated precisely to William d'Auvergne, we read a little further on in the text:

> Indeed, the nature of the body (as Avicenna teaches in the passages cited) obeys the thoughts and vehement desires of the soul; moreover, no action man performs occurs except for this reason, that the natural strength of the limbs obeys the thoughts and desires of the soul. Indeed (as Avicenna teaches in the third book of *Metaphysica*), the prime mover is thought, then desire which has been made to conform to thought, then the natural strength of the limbs, which obeys thought and desire; and this occurs in the same way with evil (as has been said) as with good.[40]

These are obviously influences limited to the limbs and senses because – on the basis of a reservation which is common to all treatises of astrology and natural magic – Bacon warns "that the rational soul cannot be compelled,

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[39] *Epistola de secretis operibus artis et naturae et de nullitate magiae*, in R. Bacon, *Opera quaedam hactenus inedita*, ed. J.S. Brewer, London, 1859,1, p. 528: "Anima multum potest super corpus suum, per suas affectiones fortes, ut docet Avicenna in quarto *De anima* et octavo *De animalibus*, et omnes sapientes concordant. Et ideo fiunt coram infirmis ludi et res delectabiles afferuntur [...] quia vincit affectus et desiderium animae super morbum." At p. 527, Bacon (or an unknown writer who compiled from Bacon's works) legitimated magical and ceremonial medicine "non quia ipsi characteres et carmina aliquid operentur, sed ut devotius et avidius medicina recipiatur et animus patientis excitetur et confidat uberius et speret et congaudeat; quoniam anima excitata potest in corpore proprio multa renovare, ut de infirmitate ad sanitatem convalescat."

[40] *Ibidem*, p. 530: "Natura enim corporis (ut Avicenna docet locis predictis) obedit cogitationibus et vehementibus desideriis animae; immo nulla operatio hominis fit, nisi per hoc quod virtus naturalis in membris obedit cogitationibus et desideriis animae. Nam (sicut Avicenna docet tertio *Metaphysicae*) primum movens est cogitatio, deinde desiderium conformatum cogitationi, postea virtus naturalis in membris, quae obedit cogitationi et desiderio; et hoc in malo (ut dictum est) et in bono similiter." cf. *Avicenna latinus, Liber de philosophia prima*, ed. S. Van Riet, introd. by G. Verbeke, Louvain-Leiden, 1980, 1, p. xxx; cf. II, pp. 523 ff. *Tractatus* X, ch. 1–2, on astrology and on the political role of prophecy.

because it enjoys free will" ("quod tamen anima rationalis cogi non poterit, eo quod libertate gaudeat arbitrii").[41]

The position of Albertus Magnus is not very different. In his *De animalibus* he uses analogous terms to discuss the parapsychological phenomenon of suggestion:

> Indeed, from this derives fascination, in which the soul, by means of sight or of another sense, tries to impede or free another person [...] Thus Avicenna says that whoever imagines the color red increases the movement and flow of his own blood, and that whoever is very sad and afraid of leprosy will sooner or later become a leper. Many other things happen in man in this way.[42]

But already in his *Commentary to the Sententiae* (2, vii, 7), an early work which is perhaps the closest to the model established by William of Auvergne for all Latin Scholastic authors, he had insisted more broadly on the same phenomenon of para-psychological suggestion:

> Certain philosophers, such as Avicenna in *Liber sextus naturalium* and al-Ghazālī in his *Physica*, discuss fascination, in which the soul of a man, by means of a look or close proximity, impedes another man from proceeding in his actions because the power which, as a spirit, comes out of one soul acts upon the other soul. I am reporting this affirmation without approving it, because I believe that neither fascination nor the art of magic can harm anyone who has unwavering faith in God.[43]

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[41] *Ibidem*, p. 538; at pp. 121 ff. are quoted more passages from Bacon's *Opus tertium* ("excitatur substantia animae rationalis fortius ad faciendum suam speciem et virtutem a se in corpus suum et res extra"), and authentic or spurious texts by Albertus Magnus.

[42] *De animalibus*, XXII, i, 5, ed. H. Stadier, in *Beiträge z. Geschichte d. Philos. d. Mittelalters*, ed. v. C. Beaumker, XV–XVI, Münster, 1916–21, p. 1353: "Hinc enim causatur fascinatio qua anima unius agit ad alterius impedimentum vel expeditionem per visum vel alium sensum. [...] Et ideo dicit Avicenna quod ymaginans colores rubeos auget sanguinis motum et fluxum: et multum tristis et timens lepram erit aliquando leprosus et cetera multa in nomine contingunt huiusmodi."

[43] Albertus Magnus, *Opera omnia*, Lyon, 1651, XV, p. 85: "Quidam philosophi, sicut Avicenna *Sexto de naturalibus* et Algazel in *Physica* sua, ponunt fascinationem, ita quod anima unius hominis per aspectum vel propinquitatem impediat processum operum alterius hominis, virtute spiritualiter egrediente de una anima et operante super aliam. Hoc autem non dico approbans dictum illud, quia bene credo quod fidem firmam in Domino habenti non nocet fascinatio, nec nocere potest ars magica."

In the *De mirabilibus mundi*, inspired by Avicenna and incorrectly attributed to Albertus Magnus, the writer bases his view of magic on the "affectio animae hominis" (which causes "legationes, incantationes," etc.).

> Because in the human soul there is an innate power to transform things; and when other things obey this power, when it tends toward a great excess of love or hatred for one of them [...], we find, experience clearly shows, that it binds and changes things as it desires.[44]

Among the more independent masters of the thirteenth century, this thesis from Avicenna met with great interest; this is attested to by its inclusion as number 112 of the 219 articles condemned by Etienne Tempier in 1277:

> That the superior intelligences influence the inferior intelligences, as one soul influences another soul, even a sensitive one; because of such an influence, with a mere look, did an enchanter once throw a camel into a ditch.

This condemnation was anonymously challenged by a question on the issue "Of whether, with the imagination alone, it is possible to make transformations in the human body, for example into an organ of particular power, without being transformed by some object."[45] This is the *incipit* of the *quaestio* (discovered and analyzed by Thorndike, who connects it to the *Quodlibeta* of Nicole Oresme, written almost a century after the article condemned). The anonymous source in the Vatican manuscript cites, as the *topos* demands, Avicenna's *Liber sextus naturalium* (IV,4) as well as al-Ghazālī's *Physics* (chap. 9), from which derives the – condemned – example of the poor camel induced to leap, at the cost of its life, into a well or a hot bath. Out of the discussion, Thorndike claims, emerges the distinction of "two aspects: (1)

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[44] [Ps] Albertus Magnus, *De mirabilibus mundi*, Amsterdam, 1662, p. 171: "Quod hominum animis inesset quaedam virtus immutandi res, et quando res aliae essent obedientes ei, quando ipsa fertur in magno amoris excessum aut odium alicuius talium [...] invenitur experimento manifesto quod ipsa ligat res et alterat ad idem quod desiderai."

[45] *Chartularium Universitatis Parisiensis*, I, Paris, 1889, p. 549: "Quod intelligentiae superiores imprimunt in inferiores, sicut anima una imprimit in aliam, et etiam in animam sensitivam; et per talem impressionem incantator aliquis prohicit camelum in foveam solo visu." From Mandonnet to Hissette and Flasch many studies have been consecrated to this famous condemnation, and they will not be listed here. See also an anonymous *quaestio* (ms. Vat. lat. 1121): "Utrum circa corpus humanum potest fieri aliqua immutatio ex sola imaginatione, ut puta circa aliquod organum particularis potentiae, absque hoc quod immutetur ab obiecto proprio."

whether my imagination can alter the body of another person; (2) or merely affect my own body." Concluding the *quaestio*, the author admits the possibility of: (1) evil action, which can be exercised on third parties by "the evil spirit in the body of one possessed by a demon"; (2) as for *fascinatio*, "it may be performed either by a person with the evil eye infecting the air breathed in by the victim or by direct linear effect on the other eye."[46]

Oresme himself was influenced by William's *De universo*, particularly in his classification of external and internal senses and in his naturalistic explanation (on the basis of functional changes) of psychopathological phenomena otherwise traced to the intervention of demons (this explanation was adopted by Pierre d'Ailly in a letter of 1421):

> Indeed, it is certain, as we know from immense experience and from writers of medical treatises and historians, that in many accidents and illnesses and manias of diverse types, the same things often happen for different reasons: the sick believe they see and hear demons and many other fantastic things, of which there is no external evidence. All these things come about, however, because of defects of the organs of the internal senses and the internal deterioration of *apprehensio*, *ymaginativa*, or *aestimativa*, due in turn to a brain abcess or some other cause.[47]

Ugo Benzi of Siena, one of the great Schoolmen of this period,[48] and, at the end of the fifteenth century, Gian Matteo Ferrari de Gradibus were cited, but not closely examined, for having taken Avicenna's psychology

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[46] The texts here quoted come from L. Thorndike, *Imagination and Magic. The force of imagination on the human body and of magic on the human mind*, in *Mélanges Eugène Tisserand*, Città del Vaticano, 1964, VII, pp. 353–8. For what concerns evil eye – borderline case of black magic – cf. *Avicenna latinus*, IV–V, p. 65 (IV, p. 4); Avicenne, *Livre des directives*, p. 523. cf. note 15.

[47] Cited in S. Caroti, *La critica contro l'astrologia di Nicole Oresme*, "Accademia dei Lincei, Memorie della Classe di scienze morali," S. Vili, voi. xxiii/6, Roma, 1979, p. 579: "Nam certum est ex innumerabilibus experientiis et ex auctoribus medicine et aliis historiis quod ex pluribus accidentibus et in multis egritudinibus et speciebus manie ex diversis causis sepe contingit simile, quod videlicet infirmi putant se demones videre et audire et multa alia fantastica, quorum nichil est ad extra. Sed omnia illa eveniunt ex vitio organorum sensuum interiorum et ex corruptione interioris apprehensive seu virtutis ymaginative vel estimative propter apostema cerebri vel ab alia causa"; cf. Id., *Scetticismo e filosofia della natura nei Quodlibeta di Nicole Oresme*, "Annali dell'Istituto e Museo di Storia della Scienza di Firenze," 9, 1984; cf. L. Thorndike, *A History of Magic*, New York, 1934, III, pp. 432 sgg.

[48] G. Quadri, *La philosophie arabe dans l'Europe medievale*, Paris, 1947, pp. 172–97, in particular p. 269; D.P. Lockwood, *Ugo Benzi, Mediaeval Philosopher and Physician 1376–1439*, Chicago, 1951, p. 39, who refers to Quadri's thesis and points out, but does not analyze *Quaestiones de virtutibus animae* (ms. Reg. lat. 1893).

into consideration.[49] With the age of Humanism begins the phase in which the history of this idea received, we might say, a bit more attention: thanks to a few critical remarks by Eugenio Garin[50] and others by D.P. Walker, the secondary literature guides us through the various authors who took up Avicenna's concept of imagination and its transitive effects. As Walker synthetically explains,

> the *vis imaginativa* is nearly always present, for it is the fundamental, central force, and the others are usually used only as aids to heightening it or ways of communicating. The most usual medium of transmission in the whole process is the spirit, cosmic and human. The effects may be either on an animate being, or on an inanimate one (or directly on the body); the planets, considered sometimes as the former and sometimes as the latter (i.e. only their bodies), can produce a ricochetting effect back on to the operator's spirit and imagination. If the effect is on an animate being, it may be either subjective, remaining within the operator(s), or transitive, directed at some other person(s); in both cases it may be either purely psychological, remaining within the imagination or soul, or psychosomatic, affecting the body through the imagination.[51]

In the first place, it is worth mentioning two authors who explicitly take Avicenna's part against Averroes: Galeotto Marzio and Andrea Cattani of Imola. In his *De doctrina promiscua* and *De incognitis vulgo*, in the specific context of medicine or rather of astrological medicine, Galeotto reminds his readers that "as Avicenna demonstrates, the power to transform things is innate in the human soul. A human sentiment that is very violent and unhesitating can put into effect what it desires."[52]

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[49] G.M. Ferrari de Gradi, professor at the University of Pavia before 1472, published *Consilia secundum viam Avicennae ordinata*, Venice, 1514.

[50] E. Garin, *Medioevo e Rinascimento*, Bari, 1954, p. 164 (according to Avicenna "l'anima è onnipotente e le parole, i segni, i simboli possono aiutare a ridar la salute") and p. 174 n. 4; Id., *Lo zodiaco della vita*, Bari, 1976, pp. 48–9, 109–10, 138–9.

[51] D.P. Walker, *Spiritual and demonic Magic from Ficino to Campanella*, London, 1958, p. 76, and *passim*.

[52] In his *De doctrina promiscua*, ed. by M. Frezza, Napoli, 1949, there is a large comparison between Averroes and Avicenna (clearly favourable to the second one): cf. pp. 97–8: "Desideria autem adiuvare narravimus, quoniam, teste Avicenna, animae humanae inest vis rerum immutandarum [...] Non iniuria ergo Avicenna sexto naturalium ait huiusmodi fiduciae actionem omnibus medicorum instrumentis et medicinis esse potiorem." See also *Quel che i più non sanno (De incognitis vulgo)*, ed. by M. Frezza, Napoli, 1949, p. 68, cited by E. Garin, *Zodiaco*, p. 139 n. 13, where to find bibliography on this minor author; add now C. Vasoli, *Note su G. Marzio*, in *La cultura delle corti*, Firenze-Bologna, 1980, pp. 38–63.

In his *Opus de intellectu et de causis mirabilium effectuum*, which was the result of university courses held at the Hospital of Santa Maria Nuova in Florence and which was published around 1505, Cattani follows the philosophy of Avicenna instead of the customary Averroist tradition. The general framework itself of the book, which opens with a discussion of intellect, would be an interesting subject of study, but we must limit ourselves to a consideration of the third and last treatise, *De causis mirabilium effectum*. Cattani refers to the pseudo-Aristotelian *Physionomia*, which affirms that "the body is affected by the passions of the soul" ("Corpus ab animae passionibus patitur") and then adds "that Avicenna too agrees to that; he maintains that the body is affected by the soul's affections and by the imagination" ("quod etiam Avicenna consentit; dicit enim corpus ex affectione animi et imaginatione pati").[53]

Cattani lists topics which are typical of Avicenna (prophecy in sleep and in wakefulness,[54] "incantatio,"[55] "fascinatio,"[56] the decline of ancient idols,[57]

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[53] *Opus*, fol. fr., where he goes on: "inditium autem esse id quod accidit ei qui fortiter imaginatur tempore casus seminis in matrice in assimilatione; deinde ait iste [Avicenna] quidem: "sunt res quas hi homines abhorrent nec credunt, qui difficilis dispositionis habitudines non novere; illi vero qui sapientiam diligunt, haec non negant, sicut ea quae non possunt." Haec ipse. Ex dictis patet harum rerum radicem esse affectum: ingenti enim affectione, qui talibus animabus praediti sunt, non solum proprium corpus sed alienum agitant, et ob eorum nobilitatem viliora illis obediunt, et praesertim quando cum tali affectione conveniens hora et caelestis ordo concurrant, legationes itaque, hominum incantamenta et incitationes ad odium, amicitiam, iram, gaudium, detrimentum et ad alia huiusmodi, imagines quoque ad bellum, pacem, sanitatem aegritudinemque inducendam actae, ex maxima affectione ad quod actae sunt id valent efficere: An tamen omnes ex forti imaginatione possunt haec agere, sed hi qui a natura aptitudinem acceperunt, et in quibus aliquid divinitatis viget."

[54] *Ibidem*, c. e3^{r} ff., *Tractatus* III, *Quomodo possibilis sit prophetia tam in somno quam in vigilia*, ch. I and II. In this long medical discussion at fol. e7^{r} is cited Apollonius Thianaeus, a source liked by humanists and used also by P. Pomponazzi, *De naturalium effectuum causis sive de incantationibus*, Basel, 1467 [Hildesheim-New York, 1970], 57; cf. *ibidem* fol. 123 indicia futurorum eventuum [...] modo in somniis, modo in vigiliis.

[55] *Opus*, fol. e8^{r} ff. (cf. note 52).

[56] *Opus*, fol. f2^{v} ff., cap. Ili, *De fascinationibus*, with various examples (c. f3r: "ex instictu naturae oves lupum cognoscit ac metuunt non solum vivum sed etiam mortuum"; fol. f3^{v} on women who during menses damage mirrors, and on witches) which will reappear slightly different in Pomponazzi, *op. cit.*, p. 194: "XVIII *de Historiis animalium* scribitur ovium quas lupus occiderit, pelles ac vellera, et facta ex his vestis [...] aptiores ad pediculos procreandos." *Ibidem*, p. 37, on witches and their evil eye on children.

[57] *Opus*, fol. f4^{v}, cap. IV, *De motu et responsionibus idolorum;* cf. Pomponazzi, *De incantationibus*, pp. 282 ff.

and those "demoniacal fanatics"[58] who seem to acquire the temporary ability to speak languages unknown to them) – topics which would be found again, elaborately articulated, in Pomponazzi's *De incantationibus*. Cattani, concluding his *Opus*, makes a point fundamental to his thesis and characteristic of his thought – a point already found in Avicenna and later central to the polemic of Pomponazzi – denying the possibility of intervention by angels or devils: "It is therefore clear that these prodigies can come about through a power other than the power of demons, as Avicenna maintains."[59]

But Cattani's debt to Avicenna is even more obvious in his definition of the prophet, a controversial figure in Florence in the years immediately following the Savonarola experience.

> We call a prophet that man whose task is to establish the rights and precepts needed for the preservation of the community and to perform miracles. Indeed, because lower nature heeds higher nature at a mere sign, a man gifted with such a soul can, amazingly, bring the sick back to health and protect the weak, or even bring injury upon their constitutions; he can also transform the elements, so that that which is not fire becomes fire, and that which is not earth takes on the nature of earth, and through his will he can bring about rain, hail, lightning, and other phenomena of the kind, as well as fertile harvests, or famines, epidemics, and many other things, and this can happen because matter obeys the soul of that [prophet] much more than it obeys interacting contraries, and nature in the whole universe respects him [...] Of his own volition, he can also prepare discord or harmony among men, and with his power he can drive back enemies in battle, and with his gaze alone he can force them to surrender, whether they want to or not.[60]

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[58] *Opus*, fol. f5^{v} (where an unknown exorcist – whom Cattani met in Piceno – who was able to heal young possessed women, but not old ones; sometimes his practice brought them to death).

[59] *Opus*, fol. e6^{r-v}: "Patet igitur quomodo mirabilia haec alia vi quam vi daemonis fieri possunt ex Avicennae consensu." cf. Pomponazzi, *De incantationibus*, pp. 278 ff., 282.

[60] *Opus*, fol. e6^{r-v} "hic est ille homo quem prophetam vocamus, cuius offitium est universi conservandi gratia iura atque praecepta instituere: nec non et miracula tacere: nam cum inferior natura superioris nutui audiat, tali anima praeditus homo, aegros in pristinam valetudinem mirabiliter potest reducere, incolumesque debiles reddere, ac eorum complexiones depravare; potestque edam elementa ipsa permutare, ita ut id quod non est ignis efficiatur ignis, et quod terra non est sortiatur terrae naturam, et pro ipsius voluntate contingunt pluviae et grandines et fulmina et siqua sunt id genus, nec non terrae fertilitates et victus penuria et epidimiae et alia multa, et haec ea de causa efficere potest, quia materia animae ipsius multo magis auscultat quam contrariis agentibus inter se, et omnis universi natura illi obsequitur [...] potest edam talis per eius voluntatem hominibus parare discordia atque concordia suaque vi in praelio potest hostes expellere, ac eos cogere solo intuitu, ut velint nolint sibi dent herba."

Whereas Ficino has often been studied from this point of view (there is even an article[61] written on his alleged Avicenna-inspired Augustinian tendencies), it is curious that Giovanni Pico never adopted the thesis of the psychosomatic imagination, not even in that early phase when he was so enthusiastic about magic.[62] In his *Conclusiones secundum Avicennam numero XII*, there is nothing that focuses on this aspect of magic. His nephew Gianfrancesco, who actually wrote a booklet entitled *De imaginatione*, does not deal with the subject except to dismiss it quite summarily:

> previously Avicenna's thesis was refuted, the thesis that distinguishes the power of fantasy from the power of the imagination, and philosophers have rightly shown that the thesis which attributed it force and effectiveness through the force of nature is ludicrous.[63]

There are too many references to Avicenna in Ficino to permit tracing them all here, and many of these are precisely on the imagination. Of special interest are the first two books of the *De vita* (I,6 and 7; II,1 and 4), rather than the third, the famous *De vita caelitus comparanda*. Walker has analyzed various chapters of the *Theologia platonica* (IV,1; XIII,1 and 4) and Ficino's "argumentum" to Plato's *Laws*, which in fact emphasizes the power of the imagination.[64] These pages were criticized by the Protestant Erastus, who attacked Ficino, pairing him with Pomponazzi, oddly enough, in reference to another passage inspired by Avicenna.[65] The title of the first chapter of Book

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[61] M. Heitzman, *L'agostinismo avicennizzante e il punto di partenza della filosofia di Marsilio Ficino*, "Giornale critico della filosofia italiana," 16, 1935, pp. 295 ff., 460 ff.; 17, 1936.

[62] G. Pico, *Conclusione! sive Theses DCCCC*, ed. by B. Kieszkowski, Geneva, 1973, p. 36.

[63] G.F. Pico, *De imaginatione*, in *Opera omnia*, p. 136: "Pridem enim Avicennae explosa sententia est, quae phantasticam vim ab imaginaria diremit, et illa quoque eiusdem a bene audiendbus philosophis exibilata, quae illi potestatem et efficaciam super naturae vires tribuebat" (see. ed., trans. and note by H. Caplan, New Haven, 1930).

[64] D.P. Walker, *op. cit.*, p. 159, who dwells in particular on bk. XIII, ch. 1 (Ficino, *Opera omnia*; Basileae, 1576, I, p. 284) about imagination power. D.P. Walker, *ibidem*, pp. 200–201, thinks that Francis Bacon, for instance in his *Advancement of Learning*, "believed in at least some effects of the power of imagination." D.P. Walker, *op. cit.*, p. 162 (Ficino, *Opera*, p. 1501).

[65] D.P. Walker, *op. cit.*, pp. 159 ff. on Thomas Erastus, *Disputatio de medicina nova Philippi Paracelsi*, Pars I, Basileae s. d. [1572], pp. 53–7, who denounced Paracelsus, because he "imaginationi potestatem attribuit coelum et astra cogendi," but criticized also Ficino, *Theologia platonica*, XIII, 1, and Pomponazzi, *De incantationibus*, pp. 25 and 34, for the relevance they attributed to *vis imaginativa*.

XIII of the *Theologia platonica*, for example, is clear enough: *Quantum anima corpori dominatur, a multis ostenditur signis, ac primum ab affectibus phantasiae.* This is a long text, which was imitated by both Pomponazzi and Cornelius Agrippa. The latter was more or less a follower of Florentine Platonism, founded by Ficino. Pomponazzi, on the other hand, was a very independent Aristotelian who bordered on heresy; he had tried in his *De incantationibus* to measure himself against this new school, which had already drawn the attention of his fellow-disciple Nifo, who was so much more of an eclectic and a conformist. In the Humanistic prose of the *Theologia platonica*, the debt to Avicenna is not openly acknowledged; but in his less polished, more problematic summary, Pomponazzi refers to Avicenna as his source to distinguish this from the magic in *De vita*, which relies on the astral properties of herbs and other products of nature:

> It must be understood that this procedure is different from that of Avicenna. As, indeed, Avicenna is said to have claimed, the soul through mere thought and command produces effects, not making changes through the senses but only on the basis of the nature of material things, which are ordained to obey signals from that soul.[66]

[66] P. Pomponazzi, *De incantationibus*, p. 52: "Scire oportet hunc modum differe ab eo qui est Avicennae. Ut enim Avicennae ascribitur, anima sola cognitione et imperio tales producit effectus non sensibiliter, neque insensibiliter alterando, sed solum ex obedientia materialium quae sunt nata parere nutui eius animae." For Avicenna's passage quoted by Ficino cf. note 64; for Agrippa see the complete and enlarged ed. of his *De occulta philosophia*, bk. I, ch. 62: "Quomodo passiones animi mutant corpus proprium, permutando accidentia et movendo spiritum"; ch. 63: "Quomodo passiones animi immutant corpus per modum imitationis"; ch. 65: "Quomodo passiones animi etiam operentur extra se in corpus alienum," in H.C. Agrippae, *Opera omnia*, [ps. Bering,, Lyon] s. d. (Hildesheim-New York, 1970), I, pp. 127 ff. In the last mentioned chapter Agrippa – who already in his 1510 text used the classical examples used by Ficino and present also in Caelius Rhodigiunus' repertory and in Pomponazzi, *De incantationibus*, pp. 31–2 – shows himself to be drawing from *De incantationibus*, pp. 67–8, when he also apply Avicenna theory of imagination to explain the stigmata of Saint Francis as a purely natural psychosomatic effect. Agrippa, *ibidem*, p. 131; in ch. I, p. 64, he follows the general thesis here cited by Pomponazzi, and he goes on: "Secundum vero nos, anima talia non operatur nisi alterando" (*ibidem*, p. 52; cf.p. 242). I summarize here a detailed analysis (which however insisted less on Avicenna) I published in *Agrippa von Nettesheim in den neueren kritischen Studien una in den Handschriften*, "AKG," 61, 1969, pp. 292–5 (*idem* in ital., in "Rinascimento," 19, 1968 (but 1969), pp. 196–9]. The very frequent mentions of Avicenna in *De incantationibus* are registered by E. Breit, *Die Dämonologie des Pomponatius und des Cesalpinus*, Fulda, 1912, p. 67, who in his appendix gives an index of authors cited there by Pomponazzi; this index is incomplete, records Avicenna 18 times. It is important that at the beginning Pomponazzi legitimizes Avicenna in the Aristotelian tradition (*De incantationibus*, p. 21: to the natural and psychosomatic explanation of many prodigies "non repugnat sententiae Aristotelis opinio Avicennae"; about that cf. also pp. 43–4).

Pomponazzi himself, even though very much closer to Galeotto Marzio and Andrea Cattani, certainly tries in this and other passages of the *De incantationibus* to set up a critical confrontation with Ficino and his eclectic combination of Avicenna, the natural divination of the ancients, and magic based on astrology.[67] It is therefore paradoxical that an intelligent Protestant critic pairs them up to criticize them jointly regarding the *vis imaginativa* of Avicenna; but Erastus was writing the *Disputatio de medicina nova Paracelsi*, and after Paracelsus, the figure of Avicenna was immersed in other polemics which cannot be examined.

[67] From this point of view, even more than for textual connections that might be due perhaps to *topoi*, the case of Cattani going back to Avicenna is very relevant, and comparing this author with Averroes and preferring him to an Alessandrist as Pomponazzi such a reading could reveal new perspective, not less relevant than those – partly Avicennian – of *noster Ficinus* (*De incantationibus*, p. 236).

III

Pietro Pomponazzi's *De immortalitate* and his clandestine *De incantationibus*: Aristotelianism, eclecticism or libertinism?[1]

Renaissance philosophy, whether seen from a European perspective[2] or from an exclusively Italian one as has usually been the case, would certainly be incomplete without a brief survey of Aristotelianism in Pomponazzi's time and of the various components of his thought. The capital of the Aristotelian movement was, symbolically, the University of Padua; but from as early as the 14th century until the time of Achillini, the University of Bologna was also an important center of Aristotelian thought.[3] Pietro Pomponazzi, also called by his

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[1] Translated by Ilse Girona. I warmly thank Brendan Dooley for having read this essay, written as an introduction to a critical edition of Pomponazzi's *De incantationibus* prepared by C. Innocenti: the passages translated from this treatise are based on her text, but I will refer to pages of Guglielmo Gratarol's edition (Basel 1567; repr. Hildesheim – New York 1970), cf. Pietro Pomponazzi, *Gli incantesimi* (Italian transl. and comm. by C. Innocenti, Florence 1996); C. Innocenti, *Il »De incantationibus« di Pomponazzi: un'opera clandestina su demonologia e astrologia* (thesis Florence 1996). See also id., »Una fonte neoplatonica del ›De incantationibus‹ di Pietro Pomponazzi: Marsilio Ficino«, in: *Interpres* 15 (1995-1996), p. 439-471; id., »Il fondamento astrologico della realtà nel ›De incantationibus‹ e nel ›De fato‹ di Pietro Pomponazzi«, in: *Nouvelles de la République des Lettres* 1 (1997), p. 49-78.

[2] C. B. Schmitt, *Aristotle and the Renaissance* (Cambridge, Mass. – London 1983), p. 12, cites P. O. Kristeller as one of the first to have considered »Renaissance Aristotelianism as a Europe-wide phenomenon rather than as a philosophical movement confined to a single country or region. His approach is in striking contrast to that of the standard textbook, which recognizes Renaissance Platonism as a distinctive historical philosophy, but not Renaissance Aristotelianism.«

[3] According to P. O. Kristeller, »John H. Randall, Jr., and Renaissance Philosophy«, in: J. P. Anton (ed.), *Naturalism and Historical Understanding. Essays on the Philosophy of John Herman Randall, Jr.* (Albany 1967), p. 40, Randall gives great importance to Padua, neglecting other centers, such as Bologna or Pavia (the Aristotelians at the University of Pavia belonged to the nominalist school).

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pupils and friends »il Peretto« (little Peter), was a student and teacher at the former and concluded his teaching career at the latter; he also taught for a time at the court of Carpi and at the humanistic University of Ferrara. He became very well known among his contemporaries and incurred heavy censure. Rationalist (Masonic?) historians from Renan[4] to Busson,[5] and philosophers from Fiorentino[6] to Ardigò[7] transformed him into a heroic figure, representative (almost to the same extent as Giordano Bruno) of the struggle against the »darkness of the Middle Ages« and against Catholic dogma – in particular, against the thesis of the immortality of the soul.[8] More recent scholars within the Catholic tradition have instead tried to stress the continuity of his thought with scholasticism and with Thomism[9] (exactly as happened with Descartes in Gilson's interpretation). Others, from Paul O. Kristeller[10] to Charles B. Schmitt,

4 E. Renan, *Averroès et l'averroïsme: essai historique* (Paris 1852).

5 Pietro Pomponazzi, *Les causes des merveilles de la nature ou les enchantements* (ed. H. Busson, Paris 1930 with a long and interesting introduction). For a different perspective see also R. Lenoble, *Mersenne ou la naissance du mécanisme* (Paris ²1971), p. 112-119 and passim.

6 F. Fiorentino, *Pietro Pomponazzi. Studi storici su la scuola bolognese e padovana del secolo XVI* (Florence 1868); id., »Pietro Pomponazzi«, in: id., *Studi e ritratti della Rinascenza* (Bari 1911).

7 The positivist philosopher Roberto Ardigò wrote a preface to Pietro Pomponazzi, *Trattato sull'immortalità dell'anima. Il Libro degli incantesimi* (transl. by I. Toscani, Rome 1914).

8 On the general history of exegeses of Aristotle's *De anima* see B. Nardi in his »Introduzione« to Thomas Aquinas, *Trattato sull'unità dell' intelletto contro gli averroisti* (Florence 1947); cf. id., *Studi sull'aristotelismo padovano dal secolo XIV al XVI* (Florence 1958), and G. Di Napoli, *L' immortalità dell'anima nel Rinascimento* (Torino 1963). On this debate, which began in 1516, a fundamental work is E. Gilson, »Autour de Pomponazzi«, in: *Archives d'Histoire Doctrinale et Littéraire du Moyen Âge* 36 (1961), p. 163-279; id., »L'affaire d'immortalité de l'âme à Venise au début du XVIe siècle«, in: V. Branca (ed.), *Umanesimo europeo e umanesimo veneziano* (Florence 1963), p. 31-61.

9 It began with *Aristotelismo padovano e filosofia aristotelica. Atti del XII Congresso Internazionale di Filosofia*, vol. XII (Rome – Florence 1960), and with the establishment of the »Centro per la storia della tradizione aristotelica nel Veneto« at the University of Padua, whose numerous publications included editions and books concerning Pomponazzi; see among others: A. Poppi, *Causalità e infinità nella scuola padovana dal 1480 al 1513* (Padua 1966); id., *Saggi sul pensiero inedito di Pietro Pomponazzi* (Padua 1970); id., *Introduzione all'aristotelismo padovano* (Padua 1970). See also below, note 29.

10 P. O. Kristeller, »Ficino and Pomponazzi on the Place of Man in the Universe«, in: *Journal of the History of Ideas* V (1944), p. 220-226; repr. in: id., *Studies in Renaissance Thought and Letters* (Rome 1956), p. 279-78 and in: id., *Renaissance Thought II: Papers on Humanism and the Arts* (New York 1965), p. 102-118, see esp. p. 102, 109; cf. id., *La tradizione aristotelica nel Rinascimento* (Padua 1962); id., *Eight Philosophers of the Italian Renaissance* (Stanford 1964); id., *Le thomisme et la pensée italienne de la Renaissance* (Paris – Ottawa 1969). Cf. Kristeller's other contributions on the question in bibliographies of his works

reduce Pomponazzi to a case of eclecticism within the framework of the new Aristotelianism that came about with the increasing availability of Greek texts and commentaries.

There are, certainly, mental habits which make us automatically associate Aristotelianism with the Middle Ages and scholasticism, just as we associate Platonism with the Renaissance and its humanists, whose »flexibility« we admire.[11] But in 1492 one of the most important of these humanists, Marsilio Ficino, wrote with great concern that ›the whole earth has been invaded by Peripatetics‹.[12] He also referred to the distinction between the two Peripatetic schools, the Alexandrists and the Averroists, declaring both harmful. Indeed, although in all universities the teaching of philosophy was officially based on the works of Aristotle and on Averroes' commentaries, rich in references to the Greek commentaries, in the late 15th century the availability of the work of Alexander of Aphrodisias had stirred up an interest nearly as intense as that traditionally given to Averroist commentaries – not to mention the more subtle and certainly important theses of Themistius, Simplicius, and Avicenna. Ficino was not a university professor, except for a brief course which he taught in his youth.[13] But he knew about and closely followed the Aristotelian debates on the soul, ineffectively proscribed in 1489 by the bishop of Padua. Some insist that both Ficino and Pico, unlike the early, »amateurish« humanist philosophers, were true professionals.[14]

From the time of Bayle's *Dictionary*[15] and the *Critical History of Philosophy* published in the mid 18th century by J. J. Brucker,[16] who in this monumental

in E. P. Mahoney (ed.), *Philosophy and Humanism. Renaissance essays in honor of Paul Oskar Kristeller* (Leiden 1976), p. 545-589; J. Hankins, J. Monfasani and F. Purnell (eds.), *Supplementum festivum. Studies in honor of P. O. Kristeller* (Binghamton/N. Y. 1987), p. XVIII-XXXVI.

11 Schmitt, *Aristotle and the Renaissance*, p. 90: »A whole hermeneutical framework has been built up over the years by historians, making capital of the flexibility found within Platonism as contrasted with the solid bulwark of unchanging and unadaptable Aristotelianism«.

12 Marsilio Ficino, *In Plotin[um] Epitome seu Argumenta, Commentaria et Annotationes*, prooemium (*Opera omnia* II, Basel 1567), p. 1537.

13 J. Davies, »M. Ficino: Lecturer at the Studio Fiorentino«, in: *Renaissance Quarterly* 45 (1992), p. 785-790.

14 P. O. Kristeller and J. H. Randall, »General Introduction«, in: E. Cassirer, P. O. Kristeller and J. H. Randall, Jr. (eds.), *The Renaissance Philosophy of Man. Petrarca, Valla, Ficino, Pico, Pomponazzi, Vives. Selections in Translation* (Chicago 1948), p. 8; Kristeller has often emphasized this definition in his later writings.

15 P. Bayle, »Pomponace«, in: *Dictionnaire historique et critique* (Amsterdam 1734), p. 729-738.

16 J. J. Brucker, *Historia critica philosophiae a mundi incunabulis ad nostram usque aetatem deducta* (vol. 4/1, Leipzig 1743), p. 158-182: »De philosophis genuinam philosophiam Aristotelis

work profited from a series of German studies on the history of philosophy and theology[17] down to the great syntheses of the 19th century (Hegel, Michelet, Renan, Burckhardt), Renaissance philosophy was traditionally presented as the rebirth of the four schools of philosophy of antiquity (Platonic, Aristotelian, Stoic, Epicurean), slightly reworked through eclectic or syncretistic operations.

The importance of Aristotelianism during the Renaissance is one of the points most emphasized in the past thirty years by American historians. In the Faculties of Arts, professors were expected to illustrate Aristotelian texts and commentaries; but, of course, it is difficult to find a single philosopher of the 15th or 16th century who subscribed to all of the original doctrines of Aristotle. To recognize an Aristotelian, I suggest adopting a minimal criterion: verifying whether or not the author under consideration regards Aristotle as the interpreter of natural reason, which is often the case and certainly is true of Pietro Pomponazzi.

In his *Tractatus de immortalitate animae* of 1516, Pomponazzi examines with great rigor all possible hypotheses on the question, and then concludes:

1. That the individual soul will not merge with the possible intellect (the unity of the intellect was upheld by the Averroists: Siger of Brabant, Boethius of Dacia, John of Jandun, Nicoletto Vernia, and, among Pomponazzi's own colleagues, by Achillini and the early Nifo).

2. That the soul will not secure individual immortality – a necessary condition for establishing a system of punishments and rewards in the afterlife.

3. That, instead, apart from metaphorical interpretations, the individual soul will disintegrate like the individual body.

The *Tractatus de immortalitate animae*, violently attacked by Dominican inquisitors as well as by Averroists, Crypto-Averroists, and Neoplatonists, took its cue from Cajetan (the Thomist Tommaso de Vio, Cardinal Cajetan, had given an interpretation of Aristotle's *De anima*[18] which would be attacked by

sectantibus«.

17 Cf. L. Braun, *Histoire de l'histoire de la philosophie* (Paris 1973).

18 Thomas de Vio Caietanus, *Commentaria in »De anima« Aristotelis* (ed. M.-H. Laurent, Rome 1938). Cf. B. Nardi, *Studi su Pietro Pomponazzi* (Florence 1965), p. 195: for a conversation between de Vio and Pomponazzi on the interpretation of passages from Aristotle; p. 79: for the indirect reference to de Vio which Pomponazzi makes to his students in 1514–1515 (»excellentissimus doctor, … vir doctissimus«, who »contradicit doctori suo Thomae«). On de Vio cf. J. Wicks, »Between Renaissance and Reformation: the Case of Cajetan«, in: *Archiv für Reformationsgeschichte* 68 (1977), p. 3–91; B. Pinchard and S. Ricci (eds.), *Rationalisme analogique et humanisme théologique. La culture de Thomas de Vio ›Il Gaetano‹. Actes du Colloque de Naples 1er-3 novembre 1990* (Naples 1993).

his contemporary Dominican inquisitors).[19] Having emerged unscathed from the dispute for which he had written several apologies, Pomponazzi circulated two handwritten treatises which were even more subversive of orthodox beliefs on fate and on the natural causes of prodigies and incantations. From a Stoic point of view, he analyzed the Neoplatonic theses on chance and determinism, astrology and magic, and the position of man in the universe as well as on the spontaneous generation of man. In Pomponazzi's treatment of these problems (free will as attributed to the individual by Christian doctrine and by numerous philosophers, or instead, the conditioning by which man's body, or his passions, or – according to a more radical thesis – man's entire personality is subjected by the influence of the stars; the major conjunctions of the stars and the cyclical nature of history; the capacity of the astrologer and the natural magician to produce incantations and prodigies, etc.) we can trace knowledge of Ficino's and Giovanni Pico's ideas and of all the phases through which their philosophies had evolved: Pomponazzi analyzes the same problems, and reexamines a few points which correspond to Ficino's *De vita* and to the writings of Pico that were censored in 1486-87;[20] but with his resolute naturalism, he carries the Florentine Platonists' ambiguous definition of *docta religio* and religious magic to more radical conclusions. The reading of some of these works will allow us to orientate ourselves among humanist or scholastic currents which, in the 16th century, were distinct in their interpretations of Aristotle, still the obligatory basis of instruction throughout the Counter-Reformation; and it will allow us to distinguish these currents from the best known ideas of early scholasticism.

First of all, regarding institutional learning, it is important to keep in mind that instruction based on the works of Aristotle continued throughout this pe-

19 M. Tavuzzi, »Silvestro da Prierio and the Pomponazzi Affair«, in: *Renaissance and Reformation* 19/2 (1995), p. 47–57. As for Prierias' attack on de Vio's and Pomponazzi's ideas about the soul, Tavuzzi is not aware of what I observed in 1972 in »Magia e sistemi. Platonici e aristotelici di fronte a divinazione, prodigi, stregoneria e eresia«, in: P. Zambelli, *L'ambigua natura della magia: filosofi, streghe, riti nel Rinascimento* (Venice ^{2}1996), p. 211–248, and consequently he does not see the connection to Prierias' *De strigimagarum daemonumque mirandis*, which nevertheless he cites.

20 Even a rare book as was Pico's *Conclusiones nongentae* (ed. A. Biondi, Florence 1995, p. 114; ed. S. A. Farmer [in: *Syncretism in the West. Pico's 900 Theses (1486). The Evolution of Traditional, Religious, and Philosophical Systems* [Tempe, Ariz. 1998], p. 486): »*Conclusiones n° XV de intelligentia dictorum Zoroastris*: 2. … interpres nihil aliud per virtutes mysteriales intelligere quam naturalem magiam«, is used by Pomponazzi in: Petrus Pomponatius, *De naturalium effectuum causis, sive de incantationibus* (ed. G. Gratarolus, Basel 1567), p. 98, under the name of Albertus Magnus for a fundamental theme: »… tota Magica poterit reduci in causas naturales, veluti Zoroaster, Alberto referente in quinto suorum Mineralium, reduxit«.

riod; indeed, not even Descartes was able to eliminate it: he was unable to put his own *Principia philosophiae* in place of the Aristotelian texts and textbooks that still prevailed in the schools. According to statistics compiled by a specialist, from the time of the invention of the printing press to the year 1600, 4000 editions of Aristotle were published, as compared to 500 editions of Plato in that same period.[21] Although I am not impressed by these quantitative historical data, I do believe it is one aspect of Renaissance philosophy we must consider. It is true that Renaissance Aristotelianism rarely addresses issues and problems that had not already been discussed in the Middle Ages. I have in mind an interesting article by John Murdoch in which he claims that there is »almost no new argument in the Renaissance material that I have examined (commentaries on the *Physics*) which was not also present in the relevant mediaeval material«.[22] One of these arguments and problems that were ›not new‹ is, of course, the subject with which Pietro Pomponazzi is most often associated – the immortality of the soul. But we need to ask whether it is indeed true that Pomponazzi treats this in a way that is ›not new‹.

From the time when the works of Aristotle reached Europe in the late twelfth century, and above all from the moment in the mid-thirteenth century when the teaching of these works was instituted in the Faculties, the question of the immortality of the soul was necessarily posed, given that the answer furnished by Aristotle is plainly in contrast with Christian beliefs. As Thomas Aquinas observed in *De aeternitate mundi*, if Aristotle, in claiming that the world is eternal, obliges us to concede that the number of rational souls is infinite, he evidently leads us to heresy.[23] This problem will remain at the core of Renaissance debates. It is a point which Pomponazzi, too, considers absolutely necessary to examine when he links major questions on the infinity of

[21] Schmitt, *Aristotle and the Renaissance*, p. 14.

[22] J. E. Murdoch, »From the Medieval to the Renaissance Aristotle«, in: F. Henry and S. Hutton (eds.), *New Perspectives on Renaissance Thought. Essays in the History of Science, Education and Philosophy. In Memory of Charles B. Schmitt* (London 1990), p. 196. Cf. contra F. E. Cranz, »The Renaissance Reading of the ›De anima‹«, in: J.-C. Margolin (ed.), *Platon et Aristote à la Renaissance. XVI^e Colloque International du Centre de la Renaissance de Tours* (Paris 1976), p. 372: »Renaissance thought about *De anima* became increasingly independent. The great controversies (such as *De speciebus intellegibilibus, De sensu agente, De intellectu agente)* all seem to derive their essential dynamic not so much from the texts of Aristotle as from the new context and the new categories of the West.«

[23] Thomas de Aquino, *De aeternitate mundi* (*Editio Leonina* XLIII, Rome 1976), p. 83-89. On this passage see Murdoch, »From the Medieval to the Renaissance Aristotle«, p. 170, who emphasizes that this medieval topic was studied more often in the Renaissance and among the Jesuits.

the world to questions regarding the immortality of the individual soul.[24] This subject alone was of interest to Pomponazzi scholars, from Fiorentino to Gilson, from Nardi to Poppi, and so forth. Only Ernst Cassirer, in *Individuum und Kosmos*,[25] gave due importance also to the issue of prodigies and demons, which Pomponazzi reduced to natural (astrological) causes in *De incantationibus*; after Cassirer Kristeller and Randall, Trinkaus,[26] and later Martin Pine[27] mentioned this aspect in Pomponazzi's thought. Fiorentino was familiar with this work, but, writing in the days of rationalism and positivism, did not consider the question important. However, by focusing especially on Pomponazzi's exegesis of the soul, scholars in many cases (see the case of Poppi) have been prone to study Pomponazzi's early period in Padua more than his humanist interlude in Ferrara or his later, mature period in Bologna. For a thinker who developed late in life, this is hardly advantageous.

I still believe that Pomponazzi is one of the most important philosophers of the Renaissance. This contrasts with the attitude of some recent American scholars and, in particular, with that of Charles Schmitt. Even while working at the Warburg Institute, Schmitt adhered to the methodology of Kristeller as his reference and wrote as little as possible about Pomponazzi, who did not fit comfortably into his general interpretation of Aristotelianism.[28] I believe

[24] Nardi, *Studi su Pietro Pomponazzi*, p. 197-198.

[25] E. Cassirer, *Individuum und Kosmos in der Philosophie der Renaissance* (Leipzig – Berlin 1927). Cassirer had dealt with Pomponazzi from a different point of view in *Das Erkenntnisproblem in der Philosophie und Wissenschaft der neueren Zeit*, vol. I (Berlin 1906), chap. II.2. Cassirer directed a thesis, soon afterward published as an article by E. Weil, »Die Philosophie des Pietro Pomponazzi«, in: *Archiv für Geschichte der Philosophie* 41 (1932), p. 127-176; French translation in: E. Weil, *La philosophie de Pietro Pomponazzi* (trad. par G. Kirscher et J. Quillien, trad. des notes latines par L. Bescond); *Pic de la Mirandole et la critique de l'astrologie* (ed. par E. Naert et M. Lejbowicz) (Paris 1985).

[26] C. Trinkaus, *In our Image and Likeness. Humanity and Divinity in Italian Humanist Thought* (London 1970), p. 530-551, analyzes *De immortalitate* and *De fato*, but does not even mention *De incantationibus*. This is surprising because he cites, as one of his models, D. P. Walker, *Spiritual and Demonic Magic from Ficino to Campanella* (London 1958), who at p. 96-106 deals with this treatise.

[27] M. L. Pine, *Pietro Pomponazzi: Radical Philosopher of the Renaissance* (Padua 1986), p. 235-274; among his papers see the recent one »P. Pomponazzi's attack on Religion and the Problem of ›De fato‹«, in: F. Niewöhner and O. Pluta (eds.), *Atheismus im Mittelalter und in der Renaissance* (Wiesbaden 1999), p. 145-172.

[28] Schmitt, *Aristotle and the Renaissance*, p. 100: »... he places man at the center of the universe much in the same way as Ficino and Pico had done a generation earlier«. Here he quotes Kristeller, *Renaissance Thought II*, cf. especially p. 109: »Whereas on this point Pomponazzi merely follows Ficino, Pico goes one step farther ... Both of these doctrines he subjugated to an overarching Aristotelian worldview, adapting the teachings of other philosophies to his own purpose, to his own idiosyncratic variety of Aristotelianism. The

Pomponazzi is of great importance, and I believe this importance derives from both the rigor of his reasoning and his position in the history of thought. Pomponazzi was not educated as a humanist, but he availed himself of the new translations and interpretations of Aristotelian texts and their Greek commentaries published in the previous decades.[29] Although he knew absolutely no Greek and wrote in a style that lacked the elegance of the humanists, Pomponazzi, in my opinion, made good use of the Greek commentaries on Aristotle which had just been retrieved, published, and translated.[30] He also made good use of the doctrines of Plato and of the Neoplatonists that Marsilio Ficino had made available shortly before. His meditation on ancient and Hellenistic texts of the Platonic schools made available by the humanists was extremely important for the development of his thought. He is an author whom one might call a late bloomer, and his readings of Plato certainly contributed to this late blooming. But it does not seem to me that one can describe him as an eclectic Aristotelian, as indeed Kristeller and Charles Schmitt have proposed, probably taking their cue from Ferdinand Van Steenbergen's analogous definition of medieval Aristotelianism.[31] Obviously, philosophizing through commentaries

case of Pomponazzi is quite revealing – and further documentation from other passages of his work is available for additional evidence – in showing that, even when an attempt was made to interpret an issue *ad mentem Aristotelis*, doctrine from elsewhere often crept in, and not merely in a trivial sense.«

[29] Poppi, *Saggi*, p. 98, presents in disparaging terms Pomponazzi's usage of Platonic texts; cf. ibid., p. 54 n.

[30] See P. Zambelli, »›La metafora è conosciuta solo da chi fa la metafora‹. Pomponazzi, Bessarione e Platone«, in: *Nouvelles de la République des Lettres* 2 (1991), p. 75-88. Cf. F. Graiff, »Aspetti del pensiero di Pietro Pomponazzi nelle opere e nei corsi del periodo bolognese«, in: *Annali dell'Istituto di Filosofia. Università di Firenze* 1 (1979), p. 80, who publishes from students' class notes (unpublished *recollecta*) on *De sensu et sensatu* an observation inspired by the contrast between two translations and perhaps suggested to Pomponazzi by his literary advisors: »... credo quod non tantum latini habent textus depravatos, sed etiam graeci. Nam sunt circiter duo milia anni ex quo fuit Aristoteles et interim fuerunt multa bella et libri Aristoteles fuerunt absconditi et marcefacti.«

[31] F. Van Steenberghen, *Aristotle in the West. The Origins of Latin Aristotelianism* (transl. by L. Johnston, Louvain 1955), p. 143-145, writes on the thirteenth century: »*Eclectic Aristotelianism*: The new disciples of the Stagirite are exegetes rather than philosophers, they are trying to penetrate the sense of the difficult texts which have come into their hands. They go for help to the paraphrases of Avicenna and more recently to the commentaries of Averroes. Without much discernment, they mix the authentic doctrine of Aristotle with neoplatonic ideas of Jewish or Arab origin ... So Latin Aristotelianism is always in some degree and some form a ›neo-Platonizing‹ Aristotelianism«. Cf. id., *La philosophie au XIII^e siècle* (Louvain – Paris 1966), p. 181-183: »L'aristotelisme latin vers 1250: ... ce syncrétisme de deux philosophies ... déjà réalisé par les Arabes et les Juifs« must be considered »un caractère commun à toutes les formes de l'aristotelisme au Moyen Âge«.

on Aristotelian texts, on many issues a professor could have the choice of adopting the approach taken by the Stagirite or of developing freely aristotelian references to doctrines of other schools. It would have been impossible not to take these other doctrines into account, because in the Greek and Arabic commentaries on Peripatetic texts later interpretations (Neoplatonic interpretations, in particular) were continually being added. This had been the case with Themistius, Simplicius, Avicenna, and Averroes. But when one uses the term eclecticism (the pejorative term syncretism is often used), negative associations concerning Pomponazzi are implicit in this case. According to Schmitt, eclecticism is actually a kind of ›status quo‹:[32] by which I think he means a reference to the past, as far as 16th-century Aristotelians were concerned. This is evident in both his surveys: in the *Cambridge History of Renaissance Philosophy*, edited by Schmitt himself[33] (who unfortunately lived to see only the proofs), and in the more recent volume *Renaissance Philosophy* (a posthumous work, based on notes left very incomplete by Schmitt and completed by Copenhaver).[34] There is a tendency in these works to present this renewal

[32] Schmitt, *Aristotle and the Renaissance*, p. 102: »Eclecticism became an Aristotelian *status quo* in the sixteenth century nearly everywhere ... The century, though it saw a certain ›purifying‹ tendency, was in large measure an age of differing blends of eclecticism, as much among university Aristotelians as among Platonists.«

[33] C. B. Schmitt, Q. Skinner, E. Keßler and J. Kraye (eds.), *Cambridge History of Renaissance Philosophy* (Cambridge 1988). Cf. a bibliography of Schmitt's writings in: F. Henry and S. Hutton (eds.), *New Perspectives on Renaissance Thought. Essays in the History of Science, Education and Philosophy. In Memory of Charles B. Schmitt* (London 1990), p. 291-308.

[34] B. P. Copenhaver and C. B. Schmitt, *Renaissance Philosophy* (Oxford 1992). In this book the Aristotelians examined are Leonardo Bruni, George of Trebizond, Jacques Lefèvre d'Etaples, John Major, Pomponazzi, Francisco de Vitoria, Jacopo Zabarella, and John Case. The selection is curious. It unhesitatingly omits some of the Aristotelians studied, for example, by the celebrated, highly competent Bruno Nardi. Nothing is said, that is, of Paolo Veneto; nothing is said of Vernia or of Achillini or of Nifo; nor is anything said of Cesalpino or Cremonini. Likewise, it seems to me very problematic to consider Leonardo Bruni as purely and simply an Aristotelian. Instead, the book includes Lefèvre, who, frankly, is difficult to consider an Aristotelian, except for the meritorious task he performed in having humanistic translations of Aristotle printed in order to supply the schools with revised, updated texts. At the same time, however, Lefèvre devoted himself to publishing the works of Hildegard of Bingen and other mystics, of Ramón Llull, Nicolaus Cusanus, Plato, and even Hermes Trismegistus, texts much dearer to his Neoplatonic, or indeed evangelical, heart. Cf. E. F. Rice, »Introduction« in: J. Lefèvre d'Etaples, *The Prefatory Epistles of Jacques Lefèvre d'Etaples and related texts* (ed. E. F. Rice, New York – London 1972), p. XVI: Although he places him within the tradition of »humanist Aristotelianism«, to which, according to his definition, Bruni and Ermolao Barbaro also belong, he admits that » Lefèvre's Aristotelianism belongs nevertheless to a

of Aristotelianism as one of the most interesting developments of the 16th century, but nevertheless, substantially, as an eclectic phenomenon. Here, unlike elsewhere, Schmitt views eclecticism in a favorable light.[35]

Recent historians still think along these lines, especially in the United States. At present, most of the work in Renaissance research and synthesis is being done there; but, despite the financial and quantitative advantages over Continental Europe, it is offset by sometimes debatable results. Since in the United States the general education of teachers, even of university professors, often does not involve any study of philosophy at all, the panorama of Renaissance studies is not dominated today by philosophy. American historians of philosophy, who are the major producers, at present, of textbooks and general surveys, feel it is very important to list as many Aristotelians as possible.[36] Of course, for some of these Aristotelians, Schmitt's attribution of syncretism may be acceptable. Certainly it is in the case of Agostino Nifo; and Schmitt may be correct in insisting that the Aristotelian school demonstrates great adaptability, an adaptability which is evident in Coimbra's commentaries on Aristotle. About this school Schmitt observes that the Stoic and Platonic threads woven into the Jesuit curriculum combined with the intense use of a mathematical method, which was becoming more and more characteristic of the physical sciences,[37] but which, of course, was not characteristic of the work of Aristotle. On the contrary, from Cassirer and Koyré on, it was considered evidence of a Platonic tendency.

Indeed, one of the things which would have been interesting but which is not sufficiently emphasized in these two recent surveys is how, during the period from the Middle Ages to the Renaissance, the relative importance of one or another part of Aristotle's work tended to change. For example, Aristotle's *Economics* and *Politics* acquire new importance, even though they never were adopted in the classroom. We can scarcely hope to characterize authors and schools of thought accurately on the basis of publishing activities aimed at supplying students with textbooks. Although I am afraid one cannot actually

tradition distinct from the scholastic Aristotelianism of the medieval Latin West and from the secular Aristotelianism current in the Italian universities of his own day«.

35 Cf. Schmitt, *Aristotle and the Renaissance*, p. 89.

36 Schmitt, *Aristotle and the Renaissance*, p. 109: »Reestablishing the role of Aristotle as a component in Renaissance culture cannot solve all the problems any more than could the resuscitation of astrology, experimentalism, mathematics or Hermeticism«. Schmitt was alluding to Garin's interpretation, which gives considerable importance to the influence of Hermeticism and astrology in Renaissance philosophy and science (a line of interpretation which previously had not even been suggested in histories of philosophy and had just been introduced in other fields of research by A. Warburg or A.-J. Festugière).

37 Schmitt, *Aristotle and the Renaissance*, p. 104, 106.

claim that the progress of philosophy can be traced simply by reference to school curricula (as the interpretive line founded by the late and esteemed Schmitt seems to suggest), nevertheless I would like to point out that Pomponazzi, in spite of the Statutes, dedicated one of his courses to Aristotle's *De generatione animalium* and was very much concerned about informing himself on the Greek commentary to this work. We will see that these studies would lead to new arguments in his most celebrated *Tractatus de immortalitate animae*.

Other, more recent terminology for distinctions within the Aristotelian school and concerning Pomponazzi was introduced by Eckhard Keßler[38] and by Martin Pine.[39] They refer to »radical Aristotelianism«.[40] I believe this is done a bit too casually, because they also apply the term to Averroistic positions which, at that point in time, were no longer new and appear, instead, quite traditional.[41] Pine has nevertheless written an excellent book, which has received insufficient attention. Following Gilson in more up-to-date terms, Pine has the merit of having underlined that the debate provoked and sustained by Pomponazzi on the immortality of the soul was one of the most important in Christianity before the Reformation.[42] I believe that Pomponazzi's importance does not consist only in his choice of the subject of the »immortality of the soul«, because it is clear that this subject was not at all new. Certainly, this treatise of Pomponazzi's is noteworthy because of the author's extreme clarity, his very effective arguments, and also – something at odds with the rest of his work – a certain elegance. Indeed, I wonder if he might not have shown the text to one of his humanist friends to have the style improved

38 E. Keßler, »The Intellective Soul«, in: C. B. Schmitt, Q. Skinner, E. Keßler and J. Kraye (ed.), *Cambridge History of Renaissance Philosophy* (Cambridge 1988), p. 486: »The period's main characteristic was the attempt to synthesise ›radical‹ naturalistic Aristotelianism, based on Averroes and imported from Paris to Padua by Pietro d'Abano«; ibid., p. 488: »... Blasius' radical approach ...«

39 Pine, *Pietro Pomponazzi*.

40 The expression »›Averroism‹ (or ›radical Aristotelianism‹)«, also used by J. B. Ross, »Contarini and his friends«, in: *Studies in the Renaissance* 17 (1970), p. 226, n. 144, seems to me totally inappropriate.

41 I applied this term to Nifo (who, according to Nardi's research, was truly an eclectic and an opportunist) and to a minor author I had discovered, Tiberio Russiliano. I saw his position as analogous to that of the ›radical reformers‹ and I noted his use of texts that were quite far removed from those usually used to teach Aristotle, such as al-Kindi's *De radiis* (or *Theorica artium magicarum*) or Witelo's *De daemonibus*. Cf. P. Zambelli, *Una reincarnazione di Pico ai tempi di Pomponazzi* (Milano 1994), containing a critical edition of Tiberio Russiliano's *Apologeticon adversus cucullatos* (1519); cf. J. Martin, »Knowledge, Politics and Memory in Early Modern Italy: Recent Italian Scholarship«, in: *Renaissance Quarterly* 49/3 (1996), p. 601-603.

42 Pine, *Pietro Pomponazzi*, p. 61.

before having his work printed;[43] but the greater refinement one senses here in comparison to all his other works may perhaps be due to the author's having had the chance to test it in discussions *in circulis* or rather *in camera caritatis* before sending it to the press. Some of his humanist friends were among the founders of the Catholic Reform movement: it should suffice to name two cardinals, Pietro Bembo and the friendly »Contradictor« Gasparo Contarini as examples.[44]

We must keep in mind that the debate on the immortality of the soul was preceded by two significant events. First of all, there were the frequent condemnations of the discussions which Averroists and Alexandrists were conducting in the universities. In 1489, during Pomponazzi's years in Padua as a student and as a young teacher, Bishop Barozzi had forbidden public debates on this question;[45] and more recently, in 1513, the Fifth Lateran Council had dedicated an entire session to forbidding this kind of debate.[46] Furthermore, in Bologna, at the end of his course of 1513/14, in midsummer, Pomponazzi had to interrupt his classes because one of his listeners accused him of heresy.[47] Despite all this, in 1516 he decided to publish his treatise on the immortality of the soul, and then defended it against Contarini, Fiandino, Nifo and others, publishing three texts (*Apologia I, Apologia II, Defensorium*). The problem involves more than this, however: what Pine should have observed is that this debate makes use of the new means provided by the printing press. This was the most important philosophical debate in the Renaissance and might be compared with the »Objections and answers« about Descartes' *Meditationes*.

[43] The revision, in this case, cannot be attributed to his publisher, Giustiniano da Rubiera, who was specialized in printing popular prognostications and therefore probably did not have any humanists as proofreaders.

[44] Ross, »Contarini«, p. 225-228; cf. C. Dionisotti, »Ermolao Barbaro e la fortuna di Suiseth«, in: *Medioevo e Rinascimento. Studi in onore di Bruno Nardi* (Florence 1955), p. 251-253. Cf. F. Gilbert, »Cristianesimo, umanesimo e la bolla ›Apostolici regiminis‹ del 1513«, in: *Rivista storica italiana* 79 (1967), p. 976-990. Elsewhere I hope to be able to reconstruct Pomponazzi's milieu, especially during the period when he was teaching in Bologna.

[45] See the texts of this in: P. Ragnisco, »Documenti inediti e rari intorno alla vita e agli scritti di Nicoletto Vernia«, in: *Atti e memorie della Regia Accademia di Scienze Lettere e Arti* (tom. VIII, Padua 1891), p. 8-10. Cf. F. Gaeta, *Il vescovo Pietro Barozzi e il trattato »De factionibus extinguendis«* (Venice – Rome 1958); id., »Barozzi«, in: *Dizionario biografico degli italiani* VI (Rome 1964), p. 510-512.

[46] Cf. *Sacrorum conciliorum nova et amplissima collectio* (ed. J. D. Mansi, tom. 32, Paris 1912), col. 884; *Conciliorum oecumenicorum decreta* (ed. G. Alberigo et P.-P. Jeannou, Basel 1962), p. 581-582. In his lectures Pomponazzi mentions this »decretum pontificale«, cf. Nardi, *Studi*, p. 191.

[47] Nardi, *Studi*, p. 70, 253-254, n. 4.

Pomponazzi worked on this controversy for the next two and a half years, until January 1519. In 1520, he completed two other treatises: *De incantationibus* and *De fato*, which are indisputably works which he promoted and diffused himself, but which he did not wish to put into print. This he declared in the preface to *De fato*, saying that it was not for the booksellers' profit that he undertook the demanding task of writing this ambitious work, consisting of five books, on such an important subject.[48] The press was a novelty, so publishing by means of a manuscript was still an accepted practice in that period (in the case of both Pomponazzi's treatises the archetype would be copied and distributed only among a trusted few). Giovanni Pico, for example, left in manuscript form his first philosophical masterpiece – his *Comento alla canzona d'amore del Benivieni* – and had a few friends read it. Even in the case of the great Erasmus, who enjoyed such fruitful collaboration with Froben and other typographers, some of his polemical writings, such as the dialogue *Julius exclusus e coelis*, were printed and circulated anonymously. However, it is clear that these two manuscripts by Pomponazzi were clandestine but not anonymous, because of the references he makes in *De fato* to *De incantationibus* and in this ›booklet‹ to *De immortalitate*.[49] The author thus identifies himself to the readers he, or trusted friends, had selected. He acknowledges his responsibility for his own writings, but he does not have them printed. The two treatises were not included in the edition of his collected works which he had published the year he died. This surprising fact has been explained by historical circumstances: as long as Leo X was alive, Pomponazzi could allow himself to undertake an initiative as audacious as his discussion on immortality; but once he had lost this protector, it was better to be cautious.[50] I do not believe that this is the full explanation. I am convinced that the two treatises on fate and on incantations are among the first documents of a clandestine literature which, in my opinion, must date from the period before the Council of Trent. Their continuity with

[48] Petrus Pomponatius, *Libri quinque de fato, de libero arbitrio et de praedestinatione* (ed. R. Lemay, Lugano 1957), p. 2, 454.

[49] Cf. Pomponatius, *De fato*, p. 17: »... in tractatu quem edidimus *De incantationibus* ...«; ibid., p. 430: »... veluti alias diximus in nostris tractatibus *De Immortalitate Animae* et *De Incantationibus*« (similar passages are marked *passim* by critical editor Lemay). See especially, ibid., p. 357: »... in vanum poni daemones tanquam tentatores. Quoniam quanquam fortassis ratione naturali daemones esse probari non possit, ut diximus in nostro opusculo *De Incantationibus*, tamen quoniam Ecclesia tenet, admittendi sunt, eorumque tentatio a Deo admittitur ad nostram maiorem victoriam ...« On this passage and another on demons »cruciantes post mortem illos qui eos esse non crediderunt ...« (ibid., p. 90), cf. Innocenti, »Il ›De incantationibus‹«, p. 28.

[50] Fiorentino, *Pietro Pomponazzi*, p. 66 (see also p. 46-51), discussed by Lemay, »Prolegomena« to his edition of *De fato*, p. IX.

respect to *De immortalitate* seems evident to me, partly because it is not difficult to find arguments in this treatise similar to those in *De incantationibus*. Now I would like to analyze what Pomponazzi writes about prodigies in Chapter XIV of *De immortalitate*.

»To deny such things, moreover, seems great obstinacy and impudence. Wherefore we must speak otherwise. Granted that they are not fictions or illusions or our imaginings, we must say that Christians, and almost universally all religions, and Plato and Avicenna and many others hold that these things are done either by God or by his servants, whom we call angels if they are good, and demons if they are bad. It is true that there is some difference between the two, with which we are not now concerned. | And these men grant that the human soul is unqualifiedly immortal and multiple, as is well known. But this clearly contradicts the words of Aristotle, since there is no immaterial substance which does not move a sphere; for in *Metaphysica* xii he holds that the number of intelligences corresponds to the number of spheres. Nor is there any effect here below which is not reducible, in his opinion, to first motion, as appears in *Physica* viii and *Meteora* i. Further, because it seems to me this cannot be demonstrated by conclusive natural reason. Whence we shall not remain within natural limits, which we nevertheless promised in the beginning. Hence Alexander of Aphrodisias, as St. Thomas relates in the disputed question *About Miracles*, Articles III and X, in the body of the question, says these things are produced by separated substances, by means of heavenly bodies, according to the powers of the stars, according to their conjunctions and oppositions. And truly if these effects are granted, according to the Peripatetics, it cannot be said otherwise; since the whole world here below borders on that above, so that every power is governed from there, as is said in the beginning of the *Meteora*. And this also does not seem to be unreasonably said. For Alexander holds that God and the Intelligences exercise providence over things below, as St. Thomas notes as his opinion in the exposition of *De caelo* ii, text 56.«[51]

[51] Pietro Pomponazzi, *On the immortality of the soul* (transl. by W. H. Hay II, in: E. Cassirer, P. O. Kristeller and J. H. Randall, Jr. [ed.], *The Renaissance Philosophy of Man. Petrarca, Valla, Ficino, Pico, Pomponazzi, Vives. Selections in Translation*, Chicago 1948), c. XIV, p. 367-368. For the Latin text see: Petrus Pomponatius, *Tractatus de immortalitate animae*, in: Pietro Pomponazzi, *Abhandlung über die Unsterblichkeit der Seele* (übers. und mit einer Einl. hrsg. von B. Mojsisch, lat.-dt., Hamburg 1990), c. XIV, p. 204/206.; cf. Pietro Pomponazzi, *Tractatus de immortalitate animae* (ed. and transl. into Italian by G. Morra, Bologna 1954), p. 212-215; see criticism on some passages of it formulated by B. Nardi, »Di una nuova edizione del ›De immortalitate animae‹ del Pomponazzi«, in: *Rassegna di filosofia* 4 (1955), p. 149-174. I will refer to the edition of B. Mojsisch: its notes provide the basis for the commentary given by V. Perrone Compagni (Firenze 1999), in her Italian translation which follows Nardi suggestions for the text and Pomponazzi's errata corrige of 1525: I am however unhappy with its introduction and commentary, which does not deal with Pomponazzi's first questions on the soul, nor with contemporary Italian Aristotelians

Pomponazzi concludes that, according to Alexander of Aphrodisia's *De fato*, the heavens, in accordance with their movement (that is, in accordance with conditions of place and time), provide for these inferior natures. Among other things, the heavens see to or announce the birth of prophets and other great events. I would like to underscore the fact that in this celebrated, important treatise on the soul, one can already find the themes which will be developed in *De incantationibus*: they had already been sketched out by Pomponazzi in his *De actione reali* of 1514.[52]

There is a very strong connection between the polemic on the immortality of the soul (that is, Pomponazzi's denial of the survival of the individual soul) and the identification of the nature of the intelligences which move the celestial spheres (that is, his concomitant denial of the existence of demons, hell and paradise). This connection did not escape the notice of the inquisitors, who were always very sensitive to the dangers that threatened orthodoxy. And it was not by chance that, also at this time, the Master of the Sacred Palace, Silvestro Mazzolini (Sylvester Prierias), and his student and successor Bartolomeo Spina, both Dominicans, attacked Pomponazzi and Tommaso de Vio, Master General of their order, for interpretations on the question of immortality which they considered unorthodox. These two inquisitors, with the help of other, less illustrious Dominicans (Leandro Alberti, Gerolamo Armellini, etc.) were attacking the defenders of witches (witchcraft, around 1520, constituted a very important phenomenon of religious and social history) and also, at the same time, criticizing those who had questioned the existence of heaven and hell, angels and devils, souls in torment and in glory. It should be noted that Pomponazzi was then at the University of Bologna, and that these Dominicans had their seats nearby in the Po River plain.[53]

I see a very strong thematic continuity between *De immortalitate* and the two clandestine treatises of 1520. I see it, for example, in another passage of *De immortalitate* in which one can already find the thesis which the *libertins* would develop under the name of the so-called imposture of religions. However in these works of Pomponazzi there are also some variations. In Chapter XIV of *De immortalitate*, he responds to the fourth Objection in which his adversaries (who are following Ficino here) remark that not believing in the immortality of the soul is equivalent to saying that the whole world is mistaken, since all

(Vernia, Achillini, Nifo, etc.) studied by Nardi, *Studi*, nor with the debate on Pomponazzi's *Tractatus* (1516-1519), which are essential for the treatise itself.

[52] This was already noticed by Busson in his introduction to Pomponazzi, *Les causes*, p. 11. See also Pomponazzi's unpublished later work *Quaestio de alchimia* in P. Zambelli, »Pomponazzi sull'alchimia: da Ermete a Paracelso?«, in: D. Boccassini (ed.), *Studi filologici e letterari in memoria di Danilo Aguzzi-Barbagli* (Stony Brook/N.Y. 1997), p. 100-122.

[53] See Zambelli, *L'ambigua natura*, p. 200-210, 220-235 and *passim*.

religions maintain that the soul is immortal. Pomponazzi responds that »... if the whole is nothing but its parts, as many think, since there is no man who is not deceived, as Plato says in the *Republic*, it is not wrong, nay, it is necessary to admit that either the whole world is deceived or at least the greater part«.[54] In his discourse, Pomponazzi, actually, is thinking only of three religions; these are, of course, the three great monotheistic religions of Moses, of Christ and of Mohammed:

»For assuming that there are only three religions ...; then either they are all false, and thus the whole world is deceived; or at least two of them, and thus the greater part is deceived. | But it must be known that, as Plato and Aristotle say, the statesman is the physician of souls, and the purpose of the statesman is to make man righteous rather than learned. Now, according to the diversity of men, one must proceed by different devices to attain this end.«[55]

This interpretation of the moral, religious, or even political – rather than philosophical or conceptual – purpose of the activity of a preacher or of a statesman is here attributed not only to Aristotle, but also to Plato, an author who enjoyed a reputation more in line with orthodoxy: Bessarion and Ficino are credited with having presented him in this way.[56] Pomponazzi, who had carefully read the *Theologia platonica de immortalitate animorum* and other works by Marsilio Ficino, evidently had not been convinced by the image given of Plato in these writings. Pomponazzi's moral theory is Stoic.

»For some are men of ability and of a nature well formed by God, who are led to the virtues by the nobility of the virtues alone, and are restrained from vices by their foulness alone. And these are of the best nature, though they are very few. Some, however, have a nature less well ordered, and these, besides the nobility of virtue and the foulness of vice, perform righteous acts and shun vice from rewards, praise, and honors, from punishments like censure and infamy. And these are on the second level. Some, however, are made righteous on account of the hope of some good and the fear of bodily punishment. Wherefore, so that they may attain such virtue, statesmen establish either gold or dignity or some other such thing; and that they may shun vice, they establish that they shall be punished in money, or in honor, or

[54] Pomponazzi, *On the immortality of the soul*, c. XIV, p. 363; Pomponatius, *De immortalitate animae* (ed. Mojsisch), c. XIV, p. 194/196.

[55] Pomponazzi, *On the immortality of the soul*, c. XIV, p. 363; Pomponatius, *De immortalitate animae* (ed. Mojsisch), c. XIV, p. 196.

[56] Marsilio Ficino, *Theologia platonica de immortalitate animorum* (ed. R. Marcel, tom. I, Paris 1964), p. 36: »... pium cogniti Dei cultum et animorum divinitatem ... cum Plato de his ita sentiat, ut Aurelius Augustinus eum, tanquam christianae veritati omnium proximum, ex omni philosophorum numero elegerit imitandum, asseruitque platonicos, paucis mutatis, christianos fore.«

in body, either by mutilating a member or by killing. But some from the fierceness and perversity of their nature are moved by none of these, as daily experience teaches.«[57]

Here Pomponazzi introduces his view of the political basis of doctrines about the afterlife, the immortality of the individual soul, rewards and punishments in eternity.[58]

»Therefore they have set up for the virtuous eternal rewards in another life, and for the vicious, eternal punishments, which frighten greatly. And the greater part of men, if they do good, do it more from fear of eternal punishment than from hope of eternal good, since punishments are better known to us than that eternal good. And since this last device can benefit all men, of whatever degree, the lawgiver regarding the proneness of men to evil, intending the common good, has decreed that the soul is immortal, not caring for the truth but only for righteousness, that he may lead men to virtue. | Nor is the statesman to be blamed. For just as the physician feigns many things to restore a sick man to health, so the statesman composes fables to keep the citizens in the right path. But in these fables, as says Averroes in the prologue to *Physica* iii, there is, properly speaking, neither truth nor falsity.«[59]

Behind the citation of Averroes' commentary on the *Physics* lies an undeclared reference to Averroes' own philosophical treatise *Destructio destructionum Algazelis*, which Pomponazzi cites elsewhere.[60] There Averroes strongly emphasizes the idea that the value of religion lies not in finding truth but rather in controlling community life. A Latin translation of this treatise by Averroes had existed for over a hundred years already, but only at the end of the 15th century was it published with a commentary by Agostino Nifo.[61] Nifo was then a

[57] Pomponazzi, *On the immortality of the soul*, c. XIV, p. 364; Pomponatius, *De immortalitate animae* (ed. Mojsisch), c. XIV, p. 196.

[58] Cf. a passage on the expectation of rewards or punishments in the hereafter, an expectation which would eliminate the merit of a virtuous life (»sic faciunt ut lucrentur et faciunt uxuras. Item ipsi coacti faciunt hoc. Nam nisi expectarentur praemiari, ipsi non essent virtuosi ... mihi videtur quod actus ipse virtutis secundum philosophos est valde virtuosior quam actus ille in fide christianorum«) published by Graiff, in: »Aspetti«, p. 93-94, from unpublished class notes on the *Physics*.

[59] Pomponazzi, *On the immortality of the soul*, c. XIV, p. 364; Pomponatius, *De immortalitate animae* (ed. Mojsisch), c. XIV, p. 196/198.

[60] Nardi, *Studi*, p. 132: »Ideo Averrois, amator philosophiae ut dicit in principio *Destructionis*, fecit primum prologum, quod homo non debet terreri a philosophia, quia studium philosophiae non est propter ditari, sed felicitas est premium philosophiae et virtutis moralis«. Cf. Averroes, *Tahâfut at-Tahâfut. The Incoherence of Incoherence* (transl. by S. Van den Bergh, London 1930). On Pomponazzi and *Destructio*, cf. Zambelli, »La metafora«.

[61] Among many studies on Nifo published by E. P. Mahoney cf. concerning Nifo's early period spent in Padua: E. P. Mahoney, »Nicoletto Vernia and Agostino Nifo on Alexander

colleague of Pomponazzi's in Padua and was going through an early phase in which he had not yet become a conformist thinker (as he would be in the years of the controversy on immortality). Thus it is not surprising that Averroes' text and Nifo's commentary had not been widely diffused and were not often reprinted during the 16th century. There is no doubt that Pomponazzi knew the *Destructio* and Nifo's commentary, with all its long digressions, published in 1497; various arguments in the *De incantationibus* are very similar to them.[62] Immortality for Pomponazzi is a fairy tale, or rather a fiction; the purpose of this fiction is to maintain order in society. Thus it is a reasonable end, which there is no cause to condemn, but which absolutely must not be confused with values of truth. Discussions about the soul, therefore, are not of philosophical importance. The idea of the immortality of the soul is an artful expedient employed to avoid social disorder. Pomponazzi concludes:

»So also nurses bring their charges to what they know to benefit children. But if a man were healthy or of sound mind, neither physician nor nurse would need such fictions. Wherefore if all men were on the first level mentioned, even granting the mortality of the soul, they would be righteous. But almost none are of that nature.«[63]

Central to Pomponazzi's moral doctrine (expressed elsewhere in *De immortalitate*) is the idea that, as the Stoics held, virtue is its own reward; but this applies

of Aphrodisias: an unnoticed Dispute«, in: *Rivista critica di storia della filosofia* 23 (1968), p. 268-296; id., »Agostino Nifo's Early Views on Immortality«, in: *Journal of the History of Philosophy* 8 (1970), p. 451-460; see also id., »Neoplatonism, the Greek Commentators and Renaissance Aristotelianism«, in: D. J. O'Meara (ed.), *Neoplatonism and Christian Thought* (Albany – Norfolk 1982), p. 69-77, 264-283. See also P. Zambelli, »I problemi filosofici del necromante Agostino Nifo«, in: *Medioevo* I (1975), p. 129-171, and S. Perfetti, »Metamorfosi di una traduzione: Agostino Nifo revisore dei ›De animalibus‹ gaziani«, in: *Medioevo* XXII (1996), p. 259-301.

62 Pomponatius, *De incantationibus*, p. 320-321: »Cum itaque illum [Christum Salvatorem] fuisse vere Deum sciamus, eius praeceptis parere debemus. Nam secundum Augustinum, 32 libri 16 De civitate Dei, Divino intonante oraculo, non est disputandum, sed parendum sine mora, eius dictis sine inquisitione vel interrogatione adhaerere debemus: quoniam, ut inquit Plato in Timaeo, impossibile est deorum filijs non credere, quanquam incredibilia dicere videantur, quanto magis verbo quod est ipsa veritas? Aristotelem autem et Platonem scimus fuisse homines mortales, ignorantes, et peccatores, veluti ipsi de seipsis dicunt. Quare, fatuum est in omnibus fidem eis adhibere, et praecipue in his in quibus Christianae religioni adversantur. Et quamvis eorum rationes adversus religionem videantur nobis apparentes, et fortassis nescimus perfectam earum solutionem, unica solutio est, quoniam fidei adversatur, ergo quod dicitur ab eis falsum est.«

63 Pomponazzi, *On the immortality of the soul*, c. XIV, p. 364-365; Pomponatius, *De immortalitate animae* (ed. Mojsisch), c. XIV, p. 198.

only to those who have a virtuous nature and, as we have seen, these are a very small minority.

»Whence it has been necesssary to proceed by other devices. Nor is this unfitting, since human nature is almost entirely immersed in matter, and participates very little in intellect; whence man is farther from the Intelligences than a sick man from a healthy one, a boy from a man, and a fool from a wise man.«[64]

Therefore, we should not be surprised if the politician has employed these means. I would like, at this point, simply to underline another aspect of Pomponazzi's definition of the microcosm. Here Kristeller deserves recognition, because, as early as 1948 in an anthology dedicated to the place of man in the universe and published with Ernst Cassirer and John H. Randall, he had noted that the Aristotelian Pomponazzi was very up-to-date on discussions about the microcosm held among the Florentine Platonists.[65] In the very first chapter of *De immortalitate* there are pages which recall Pico's *Oratio de dignitate hominis*.

»Now, I hold that the beginning of our consideration should be made at this point. Man is clearly not of simple but of multiple, not of certain but of ambiguous (*ancipitis*) nature, and he is to be placed as a mean between mortal and immortal things. This is plain to see if we examine his essential operations, as it is from such operations that essences are made known. For in performing the functions of the vegeta-

64 Pomponazzi, *On the immortality of the soul*, c. XIV, p. 365; Pomponatius, *De immortalitate animae* (ed. Mojsisch), c. XIV, p. 198.

65 Kristeller and Randall, »General Introduction«, in: *The Renaissance Philosophy of Man*, p. 12: »Even the form of his writings reveals what he [Pomponazzi] has absorbed from the Humanists and the Platonists. He employs the treatise, not the commentary on Aristotle. To the Platonists he owes his quotations from Plato's dialogues and from other ancient philosophers and probably his conception of man as the mean between earth and heaven. He quotes from Pico and in his *Apologia* gives an acute critique of Ficino's argument for immortality based on the *appetitus naturalis*.« Cf. what was written previously by Busson, *Les causes*, p. 13; see also A. Corsano, »Il Pomponazzi nella storia religiosa del Rinascimento«, in: *Nuova rivista storica* XIX (1935), p. 11-12: to prove »con che serietà Pomponazzi meditasse la dottrina del Ficino basta il chap. XIII del *De immortalitate*, in cui è ricordato il fondamentale argomento ficiniano che se l'uomo fosse mortale la sua condizione sarebbe peggiore di quella di qualunque bestia«. Cf. also Nardi, »Il preteso desiderio naturale dell'immortalità«, in: id., *Studi su Pietro Pomponazzi* (Florence 1965), p. 247-268; D. P. Walker, *Spiritual and Demonic Magic*, p. 107: »Pomponazzi had read Ficino and quotes a long passage from the *Theologia Platonica* … Since, however, Pomponazzi's theories are in some respects close to Ficino's, an examination of them here will be not irrelevant«. Walker deals with »*vis imaginativa* transmitted by spirit«; on that theme see also P. Zambelli »L'immaginazione e il suo potere«, in: ead., *L'ambigua natura della magia* (Venice ^{2}1996), p. 74-75.

tive and of the sensitive soul, which, as is said in *De anima*, Book ii, and in *De generatione animalium*, Book ii, chapter 3, cannot be performed without a bodily and perishable instrument, man assumes mortality. However, in knowing and willing ... man is to be numbered among the immortal things.«[66]

Pomponazzi wants to emphasize that Aristotle's formulations are not univocal definitions:

»However, in knowing and willing, operations which throughout the whole *De anima* and in *De partibus animalium*, Book i, chapter 1, and in *De generatione animalium*, book ii, chapter 3, are held to be performed without any bodily instrument, since they prove separability and immateriality, and these in turn prove immortality, man is to be numbered among the immortal things. From these facts the whole conclusion can be drawn, that man is clearly not of a simple nature, since he includes three souls, so to speak – the vegetative, the sensitive and the intellective – and that he claims a twofold nature for himself, since he exists neither unqualifiedly (*simpliciter*) mortal nor unqualifiedly immortal but embraces both natures. | Therefore the ancients spoke well when they established man between eternal and temporal things for the reason that he is neither purely eternal nor purely temporal, since he partakes of both natures.«[67]

This observation on the nature of man is the basis of all the hypotheses which make up the *De immortalitate*. But it is interesting to find, at the end of the work, a more illustrative definition of the microcosm according to the above-mentioned moral theory which closely followed the Stoics:

»And he who shuns vice on account of the foulness of vice, not because of the fear of due punishment for vice, seems more to be praised than he who avoids vice on account of the fear of punishment, as in the verses: | The good hate sin from love of virtue, | The evil hate sin from fear of punishment. | Wherefore those who claim that the soul is mortal seem better to save the grounds of virtue than those who claim it to be immortal. For the hope of reward and the fear of punishment seem to suggest a certain servility, which is contrary to the grounds of virtue, etc. | To complete this opinion it must be known that, as Aristotle teaches in *De generatione animalium*, nature proceeds by degrees and in orderly fashion, so that it does not join an extreme immediately with an extreme, but an extreme with a mean. For we see that shrubs serve as a mean between grasses and trees; between vegetables and animals are unmoving animal things, like oysters and the rest of this sort ...«[68]

[66] Pomponazzi, *On the immortality of the soul*, c. I, p. 282; Pomponatius, *De immortalitate animae* (ed. Mojsisch), c. I, p. 6.

[67] Pomponazzi, *On the immortality of the soul*, c. I, p. 282; Pomponatius, *De immortalitate animae* (ed. Mojsisch), c. I, p. 6.

[68] Pomponazzi, *On the immortality of the soul*, c. XIV, p. 375; Pomponatius, *De immortalitate animae* (ed. Mojsisch), c. XIV, p. 222/224.

The idea of the ladder of nature was dear to the Platonic school of the Renaissance. Here Ficino[69] and Pico could be cited, as well as, outside Italian circles, philosophers such as Charles de Bovelles[70] and Juan Luis Vives.[71] The motif of the continuity of the ladder of nature is, in any case, well known and widely diffused.[72] This is suggested even in Dionysius the pseudo-Areopagite, in Chapter VII of *De divinis nominibus*, a text which, incidentally, Pomponazzi read in the Lefèvre d'Etaples edition.

»The Blessed Dionysius ... says that the divine wisdom joins the ends of higher things to the beginnings of lower things. But man, as has been said, is the most perfect of the animals. Wherefore since among material things the human soul holds first place, it will hence be joined to the immaterial, and is a mean between the material and the immaterial. But a mean compared to the extremes is called the other of the extremes; whence compared to the immaterial the soul can be called material, and with respect to the material, immaterial. Nor is it only those names that it deserves; indeed, it participates in the properties of the extremes. For green compared to white is not only called black; it truly gathers sight like black, though not so intensely. | Wherefore also the human soul has some of the properties of the Intelligences and some of the properties of all material things; whence it is that when it performs functions through which it agrees with the Intelligences, it is said to be divine and to be changed into a God; but when it performs the functions of beasts, it is said to be changed into a beast; for because of malice it is said to be a serpent or a fox, because of cruelty a tiger, and so on. For there is nothing in the world which because of some property cannot agree with man himself; wherefore man is not undeservedly called a microcosm, or little world.«[73]

This is Hermes Trismegistus' definition, and the words Pomponazzi employs, as he goes on, leave little doubt as to his use of Pico's Hermetic oratio.

»Therefore some have said that man is a great marvel, since he is the whole world and can change into every nature, since to him is given the power to follow whatever property of things he may prefer. Therefore the ancients were telling the right

[69] Ficino, *Theologia platonica* I 1, p. 39.

[70] Carolus Bovillus, *Liber de sapiente* (ed. R. Kibansky), in: E. Cassirer, *Individuum und Kosmos in der Philosophie der Renaissance* (Leipzig – Berlin 1927), p. 299-412; cf. id., *Il libro del sapiente* (transl. into Italian and with an introd. by E. Garin, Turin ²1987); id., *Le livre du sage* (texte et introd. par P. Magnard, Paris 1982).

[71] J. L. Vives, *Fabula de homine*, in: *Opera* (Basel 1555), p. 270; cf. the English translation in: Cassirer, Kristeller and Randall (eds.), *The Renaissance Philosophy of Man*, p. 387-393.

[72] In Arthur Lovejoy's well-known book *The Great Chain of Being* (Cambridge, Mass. 1936) the chapter dealing with the Renaissance does not go into much depth on the history of this idea.

[73] Pomponazzi, *On the immortality of the soul*, c. XIV, p. 375-376; Pomponatius, *De immortalitate animae* (ed. Mojsisch), c. XIV, p. 224/226.

fable when they said that some men had been made into gods, some into lions, some into wolves, some into eagles, some into fish, some into plants, some into stones, and so on; since some men have attained intellect, some sense, some the powers of the vegetative soul, and so on.«[74]

It seems to me that one cannot deny that in these passages of Pomponazzi's work there is evidence of a very attentive reading and consideration of Giovanni Pico's *Oratio* and his idea of the microcosm. I will not analyze these themes in the two treatises of 1520, although it would be possible to demonstrate that, especially in *De fato*, this vein, this interpretation of the dynamic microcosm borrowed from Pico, is somehow modified. The epilogue of *De fato* is much more Stoic and pessimistic and would not admit a tone of this kind. However, these are subtle differences within the same position: in *De fato* Pomponazzi writes:

»Given that under the sphere of the moon all things tend toward death, everything is fetid and inclined to rot. As, indeed, in living beings some parts are necessarily noble and other parts vile, so too the world is one living being, and there must also be necessarily those terrestrial fetid, rotting parts«,[75]

[74] Pomponazzi, *On the immortality of the soul*, c. XIV, p. 376; Pomponatius, *De immortalitate animae* (ed. Mojsisch), c. XIV, p. 226. Cf. Pietro Pomponazzi, *Expositio super libros de partibus animalium* (Ms. Paris. lat. 6537, fol. 39v, ed. Graiff, in: »Aspetti«, p. 94–95): »Potest enim homo transmutari et fieri bestia, lapis et huiusmodi, sed non quo ad substantiam, sed quo ad mores et operationes, ut verbi gratia, quia si homo est rapax et malignus fiet lupus, si homo vero erit iners, efficietur terra et lapis; et hoc modo debet intelligi quando dicimus quod ›homo transfiguratur in deum et bestias, et utrumque facere est in potestate hominis‹«. This passage certainly refers to Pico's *Oratio de dignitate hominis* and aims to adjust his definition of the divine nature of man; cf. Pomponazzi's other passages on the theme of the microcosm in *De incantationibus*, p. 270, 276 and especially p. 25, 27: »... homo est medius inter aeterna, et generabilia et corruptibilia: et non tantum ponitur medium per horum exclusionem, verum et participationem. Quare participare poterit de omnibus extremis: et sic aliquis homo assimilatur uni extremorum, aliquis alteri ... [p. 27] unde homo dictus est parvus mundus, quoniam tota natura tam superiorum quam inferiorum, in natura humana est comprehensa: quamvis et ob alias causas sic nuncupetur.« Cf. an unpublished passage from class notes from a course on *De generatione*, (Ms. Vat. Reg. lat. 1279, f. 271r, ed. F. Graiff, *Temi e problemi umanistici e platonici in P. Pomponazzi* [thesis Florence 1975], p. 182–183 and used by E. Garin, *Lo zodiaco della vita* (Rome – Bari 1976), p. 15, n. 13: »Homo est microcosmus, idest parvus mundus, unde videmus in homine quod est unum primum membrum a quo omnia membra, licet diversa maxime sint, dependent ... quare ad hanc similitudinem alias existimavi mundum hunc gubernari a corporibus caelestibus, quoniam corpora caelestia sunt sicut cor, ... et elementa sunt sicut membra. Ideo talia faciunt diversos motus, tamen omnes tales motus sunt a corde, scilicet caelo«.

[75] Pomponazzi, *De fato*, Epilogus sive peroratio, p. 452–453: »... infra autem globum Lunae, cum omnia tendant ad interitum, fetida sunt et putrentia. Veluti enim in animali aliquae partes sunt nobiles de necessitate et aliquae ignobiles, sic mundus est unum animal et de necessitate habet ista sublunaria tanquam stercora.«

and these parts pertain, in particular, to man. Despite these considerable changes of emphasis, I believe, nevertheless, that one can see in Pomponazzi, above all in these naturalistic aspects of his, an intelligent reaction to his reading and meditating on the two Florentine Platonists. It would be impossible here to illustrate in detail how the *De incantantionibus* is a very attentive discussion of the theory of astrology and magic which had been maintained in perfect agreement by Ficino and Giovanni Pico around 1486 or to show how this clandestine treatise by Pomponazzi is partly a reaction to Pico's *Disputationes adversus astrologiam*. But it is precisely this ability to react that permits me to conclude that Pomponazzi is not an eclectic. It is true that on the eve of his writing *De incantationibus* he enunciates its fundamental theses, attributing them not to Aristotle but rather to the very different doctrinal figure who inspired Ficino's and Pico's idea of natural magic: »Hermes Trismegistus tried to reduce everything magical and necromantic to natural causes.«[76]

Pomponazzi is a thinker who, while still considering Aristotle the interpreter of natural reason, defends his own point of view. This point of view is certainly renewed, updated, and greatly modified in relation to medieval Aristotelian scholasticism; but it is also, in my opinion, an original position, which will profoundly interest the *libertins*. After the interpretation offered by Henri Busson, the continuous references made by Robert Lenoble,[77] René Pintard,[78] and Lucien Febvre,[79] and the stimulating suggestions by Eugenio Garin and Tullio Gregory,[80] I will not press the point by analyzing every page of the

[76] Petrus Pomponatius, *Defensorium*, in: id., *Tractatus acutissimi, utillimi et mere peripatetici* (Venice – Scoto 1525), fol. 94ra.

[77] Lenoble, *Mersenne*, p. 112–119 and *passim*.

[78] R. Pintard, *Le libertinisme érudit dans la première moitié du XVII^e siècle* (Paris 1943).

[79] L. Febvre, *Le problème de l'incroyance au XVI^e siècle. La religion de Rabelais* (Paris 1947).

[80] E. Garin, *L'età nuova* (Naples 1969), p. 445; T. Gregory, *Theophrastus redivivus. Erudizione e ateismo nel Seicento* (Naples 1969), p. 124–126. Besides considering the persisting clandestine impact of Pomponazzi in the universities (where many copies of his *recollecta* circulated for a long time) and among *libertins*, one should also consider what inquisitors and censors wrote about Pomponazzi: cf. for example Martin Del Rio, *Disquisitionum magicarum libri VI* (Venice 1640), p. 8: »Pomponatii *De incantationibus* opusculum certe miratus fui tamdiu tolerari ab Ecclesia, nunc recens et merito in Romano Indice damnatur: verissimum enim quod ab Antonio Mirandulano scriptum: ›hoc opere Pomponatium, se nec philosophum bonum, nec quod foedius christianum bonum exhibuisse, cum effectus omnes mirificos coelorum influxibus adscribat: adeo ut velit et religiones et leges earum latores ab iis dependere‹. Quod prorsus impium«. These and other passages

short clandestine treatise *De incantationibus*. There has been no attempt to compare his ideas with the *Quaestio an caelum sit animatum*, written by Nicoletto Vernia in 1491, which Antonio Fracanziano and probably also Pomponazzi knew. It is true that Vernia, following Albertus Magnus' citations from Greek philosophers, quotes Apuleius and even Hermes Trismegistus on demons, but despite a fundamental premise Pomponazzi later shared with him and with al-Kindi (that for Aristotle there were no demons), Pomponazzi's method and questions are at bottom very different and show not only that thirty years have gone by but that these questions had been reformulated by Pico.[81] A close analysis of *De incantationibus* would be very complex and would put into question interpretations of all of Pomponazzi's work. I have had confirmation of this from the fruitful results a student of mine, Franco Graiff, in a thesis on Pomponazzi's two unpublished series of lectures on *De generatione et corruptione* (1519) and *Meteora* (1522).[82]

from Antonio Bernardi della Mirandola escaped G. Zanier, *Ricerche sulla diffusione e fortuna del »De incantationibus« di Pomponazzi* (Florence 1975).

[81] The *Quaestio* was published by Ragnisco, »Documenti inediti«, p. 285-291. The problem of whether the souls or celestial Intelligences have individual characteristics is frequently treated in the 13th century (cf. P. Zambelli, *The »Speculum astronomiae« and its enigma* [Dordrecht 1992], p. 75-94, 174-186). Here Vernia (p. 288) expounds the different theses of Albertus and Aquinas: »... neque quod dicit Sanctus Doctor ad mentem Aristotelis est, quod per ingenerabile intelligit daemonem, sic⟨ut⟩ a Platone dictum, quem dixit Albertus ›corpus aëreum tempore aeternum‹, ut Apuleius refert libro *De deo sive genio Socratis*. Sic hoc nihil est apud Aristotelem, cum ipse neget daemones, ut patet 12° *Metaphysicae*: non enim est substantia separata et abstracta secundum ipsum, quae orbi non apparetur, ut Albertus refert. Huius enim sententiae videtur fuisse Judaeus magnus Ysac in philosophia et Rabi Moyses Judaeus, ut dicit Albertus 12° *Metaphysicae*. Sed in alio loco iste dicit cum Averroi sentire ... Cum nihil ultra gradum suum agat, et caelum sit causa animatorum sensitivae animae, ut 7° *Metaphysicae* colligitur textu 9.31 de genitis ex putrefactione, ergo arguitur quod ipsa sint sensitiva etc. Hanc opinionem Termegistus ... defendit, et Plato et tota schola stoicorum, et peripateticorum pars maxima, ut Albertus in suo *De causis*: his dictis opinionibus videtur consentire Plato, ut Albertus dicit 12° *Metaphysicae*. Post hos venit Averroes qui una cum rabi Moyse et Alpetracio voluerunt quod caelum sit animatum, sed omnes philosophi confitentur, academici maxime et peripatetici, anima quae est intelligentia et non anima proprie dicta, quae non potest dare esse secundum ipsum, neque secundum aliquem bene intelligentem. Dico propter quosdam modernos qui hoc tenent ad mentem Commentatoris«; on p. 289, moreover, Vernia criticizes the followers of Avicenna, using the words of Averroes: »in hoc erravit Avicennas, cum putavit quod corpora caelestia habent phantasiam.«

[82] The two lectures were chosen not only for their subject matter, but also for the proximity of their dates of composition to that of the short treatise, finished and dated on August 16, 1520. From these lectures Graiff has gathered a very important series of observations, digressions, and critical considerations pronounced by Pomponazzi ex cathe-

Nor do I wish to affirm that Pomponazzi actually meditated on these Platonic texts with the same constancy he dedicated to Aristotle, whose works he taught throughout his entire life.[83] On the contrary, it is certain that his attention was drawn to a few passages he found commented on, illustrated or discussed in Bessarion, Ficino, and Pico. In his *De intensione et remissione formarum* (1514) Ficino is cited.[84] We have evidence that Pomponazzi was familiar with Bessarion's *In calumniatorem Platonis* as early as 1503, the very year in which it was first printed.[85] Pomponazzi read Bessarion – known to all Venetian professors, to Leonico Tomeo and to Nifo, for example – with great care, once again, while preparing the short treatise *De incantationibus*, which mentions him explicitly. In the years following the dispute on *De immortalitate*, precisely from the time of the *Defensorium* against Nifo, who forced him to rework the Platonic arguments he had used as objections, Pomponazzi read and medi-

dra concerning the concepts of nature, magic, and demonology, traceable to the then dominant Neoplatonic school. In the same *De incantationibus*, we find citations not only from *Timaeus* (with the commentary by Chalcidius known throughout the Middle Ages and very much concerned with the problem of demons) but also from the *Republic*, the *Apology*, *Alcibiades II*, *Phaedrus*, the *VIIth Letter* and very often from *Ion*, which interested him for its theory of poetic madness. In the two unpublished lecture series one can find, in addition, citations from *Alcibiades I*, *Phaedo*, *Menexenus*, *Meno*, *Parmenides*, and the *Laws*. This list does not pretend to be exhaustive, because it cannot be based on an examination of all the courses Pomponazzi taught in his last years; nor does it take into account certain other treatises, for example, the *De nutritione*, his last work, in which Plotinus' *Enneads* are cited.

[83] Cf. F. Graiff, »I prodigi e l'astrologia nei commenti di P. Pomponazzi al ›De caelo‹, alla ›Meteora‹ e al ›De generatione‹«, in: *Medioevo* 2 (1976), p. 331-361; id., »Echi italiani della polemica fra Erasmo e Lutero sul libero arbitrio«, in: *Quellen und Forschungen aus italienischen Archiven und Bibliotheken* 58 (1978), p. 450-465; id., »Aspetti«, p. 75-77. See now S. Perfetti, »›An anima nostra sit mortalis‹. Una *quaestio* inedita discussa da Pietro Pomponazzi nel 1521«, in: *Rinascimento*, 2. serie 38 (1998), p. 205-226; id., »*Docebo vos dubitare*. Il commento inedito di Pietro Pomponazzi al *De partibus animalium* (Bologna 1521-24)«, in: *Documenti e studi sulla tradizione filosofica medievale* X (1999), p. 439-466.

[84] Pomponazzi, *Tractatus acutissimi*, fol. 2r, cites various founders of the *pia philosophia*, according to the idea of *concordia Platonis et Aristotelis*: »Existimatur primam opinionem esse Aristotelis et ante eum Platonis (sicut Ficinus noster in XI° suae *Theologiae* contendit ostendere), immo et omnium antiquorum philosophorum, sicut Dionysii Areopagitae, Augustini et multorum aliorum«. Cf. C. Wilson, »Pomponazzi's Criticism of Calculator«, in: *Isis* 44 (1953), p. 355-363; see now S. Caroti, »Pomponazzi e la ›reactio‹. Note sulla fortuna del pensiero oxoniense e parigino nella filosofia italiana del Rinascimento«, in: G. Federici Vescovini (ed.), *Filosofia e scienza classica, arabo-latina e medievale e l'età moderna* (Louvain-la-Neuve 1999), p. 255-288.

[85] Pietro Pomponazzi, *Quaestio de universalibus* (1503-1504) in: id., *Corsi inediti* (tom. II, ed. A. Poppi, Padua 1970), p. 96; on Bessarion cf. P. Zambelli, »*La metafora*«.

tated on Plato, both directly, thanks to Ficino's translations and introductions (*Argumenta*), and indirectly, through the original writings of 15th century Neoplatonists. Bessarion, whom Pomponazzi perhaps reread in the Aldine edition of 1516, would induce him to reexamine the timeless methodological relationships between theology and philosophy. Pomponazzi decisively condemns Plato's use of myths, which Bessarion considers an appropriate solution for the most arduous metaphysical problems; he keeps in mind the passage from Bessarion, but turns it around and combines it with the Averroist philosophy of religion:

»... men who are not philosophers, who are in truth like beasts, are unable to understand that God, the heavens, and nature can perform these wondrous deeds; they believe that the intelligences are like man (they are indeed unable to understand anything unless it have a bodily nature). For that reason they invented angels and demons, even though those who did so were aware that these could not exist.«[86]

According to Plato and his Renaissance followers including Erasmus himself, myths contained, like the Sileni of Alcibiades, a secret treasure that could not be translated into syllogisms; for the impious Pomponazzi these myths become instances of the imposture of religions. Myths involving demons, the basis for the belief in an afterlife and the expectation of rewards or punishments, are the clearest case of this. Plato, like Aristotle and Averroes, believed that the common man, ignorant of philosophy, is irrational and primitive, and he turned to this brilliant invention, which was to persist down through the ages. It was not, however, an invention in bad faith. »For this reason«, writes Pomponazzi, »I believe and it seems to be true that Plato introduced angels and demons not because he believed they existed but because he wanted to instruct uncultivated people«. Here as well, Pomponazzi recognizes, paradoxically, the *concordia* between Plato and Aristotle, affirmed by Boethius and so thoroughly researched later by Gemistus Pletho and Bessarion. Pomponazzi reminds us that Themistius too »holds that both thinkers mean the same and differ only in words (*vult ambos idem sensisse, sed tantum verbum differre*)«.[87] This thesis, worthy

[86] Pomponatius, *De incantationibus*, p. 201. Cf. the passage from Pomponazzi, *Apologia*, cited by Pine, *Pietro Pomponazzi*, p. 206: »iniuncta est pena damni propter viros bestiales qui non terrentur nisi ex corporalibus cum non nisi corporalia percipere possunt. Non itaque leges sunt vanae iniungentes penas damni: immo maxime proficuae quoniam maior pars hominum bestialis est«. See also the passages commented by Graiff, »Aspetti«, p. 77, n. 30 (an unpublished passage) and 101-102, n. 107 from *Defensorium*: »Videant Peripatetici si umquam Aristoteles tales fabulas et chimeras posuerit, immo neque Plato ipse, cum serio loquutus est ... quod si quandoque fingat tartarum et campos helysios sive insulas beatorum hoc est propter homines vulgares non percipientes nisi corporalia.«

[87] Pomponazzi, *De incantationibus*, p. 202.

of mention by Averroes, Pomponazzi finds convincing, but not as stated. In fact the two thinkers are difficult to compare on questions regarding demons, about which Aristotle was careful to avoid writing »frankly« what he thought. There is the chance, Pomponazzi notes, that Aristotle simply did not have the time; more likely, it would seem »he decided not to write, fearing for his own life«, having been investigated on the charge »that on gods he had mistaken ideas« and having left, for this reason, the republic of the Athenians, »who before that had killed Socrates«. Indeed, the discussion centers on the very existence and nature of God, on whether he rewards or punishes the souls of the dead, and whether he can be moved to pity through prayer (Pomponazzi and the Stoics »laughed at the idea that God could be changed by receiving prayers«).[88] »Given that this theory completely eliminates the gods of the heathens and that other religions have surely not taught this, the state will be abolished and priests will be reduced to nothing.«[89] Plato, too, felt the weight of the tragedy of Socrates and the threat of the priests[90] who guaranteed both

[88] This comment by Pomponazzi (»deriserunt quod Deus precibus mutetur«) from unpublished class notes on *Meteora* has been published by Graiff, »I prodigi«, p. 359.

[89] Pomponazzi, *De incantationibus*, p. 203.

[90] One year before him, an obscure philosopher belonging to the same circles, Tiberio Russiliano, had imagined Philosophy pronouncing a declamation exhorting Leo X to defend the freedom of philosophers more vigorously. In 1513, the Fifth Lateran Council had, in fact, limited this freedom. The declamation impressed its sole but perceptive reader, Gabriel Naudé, as a sign of times so much more vital and less repressed than the times of the Counter-Reformation. Placed on stage by Tiberio Russiliano, Philosophy took up and completed Pomponazzi's list. Philosophy had had its own »translatio imperii« to Italy (Bologna and Padua), after the waning of the Egyptian, Greek, and Arabic schools – but the subsequent repression was such that philosophers were nearly forced into exile. Even Pico had been hard hit. We now know that the censure involving the prince of Mirandola was also known to Pomponazzi, who had read Pico's *Conclusiones* and *Apologia*, printed with Leo X's privilege. But Tiberio Russiliano reminds us about the less known episode of some twenty years before, involving his own teacher Agostino Nifo – an episode Russiliano considered analogous to the very recent one involving Pomponazzi. In this case Nifo had taken a stand on the wrong side of the barricades. Tiberio – one of the first *libertins* – had been a follower of Nifo's Averroistic interpretation of the soul and of its beatitude, but at this point he had taken sides with Pomponazzi, thus putting himself last in the line of victims. Cf. Zambelli, *Una reincarnazione*, p. 269-270. Along the same lines and from the same group of Bolognese students from Southern Italy new evidence has been recently found and kindly shown to me by Franco Bacchelli: Aurelius Gaudarinus Calaber, *Epistolae* (Bologna – Faelli 1525), f. 88r-v. In an undated letter to Aurelius Nicolaus Portius, after mentioning Tiberius' persecution and flight and Nifo's attempts to help him, Gaudarinus writes: »Mihi vero dubium non est quin sacerdotes de philosophis crudelissime cogitent multasque et graves offensiones suscipiant. Fuit etiam superioribus diebus haeresi accusatus Peretus meus optimus ma-

religious and civic order: »... their power was always very great; therefore, viewed at all times with suspicion on the subject of religion, as Plato writes in his *Apology*, philosophers were always laughed at, scorned, or hated«. Plato was, however, a philosopher who was not slandered, as Plutarch observes, attributing this to his holiness (*vitae sanctimonia*) and to his obedience to a divine oracle, whose secrets he claimed to reveal to his disciples. But in this holiness and inspiration Pomponazzi sees only a form of hypocrisy.[91]

»From this can be understood the reason why Aristotle did not speak frankly of that: he condemned the way of philosophizing through enigmas, metaphors, and fictions, mainly used by Plato, and he refused to adopt it. So it is not surprising that the vulgar and the priests praised Plato and at the same time rejected and belittled Aristotle.«[92]

Thus Plato, as a philosopher, could not help but agree with those who denied the supernatural; but out of fear and conformity he administered his myths, dear to priests and effective on common souls. Pomponazzi, in *Apologia I*, reports that »a highly expert Greek had told him that Plato himself did not believe in the immortality of the soul«. Aristotle, on the other hand, had to take refuge in silence, constituting an insuperable initiatory barrier for all his readers, with the exception of the attentive philosopher able to interpret this silence and reconstruct his doctrine – as Pomponazzi hoped he had done on the subject of demons and prodigies. »Aristotle refused to deal with this question in a separate lengthy work lest the secrets of philosophy should be ridiculed by the vulgar.«[93] Aristotle's esotericism is not referred to here in the terms used by so many authors, from Cicero to Petrarch, who mention lost texts in which Aristotle is supposed to have written more elegantly.[94] His attitude, Pomponazzi suggests, can be explained in terms of the caution necessary in all ages when there are *leges, sacerdotes, respublicae* (religions, priests, states). Indeed, persecution was not directed at Socrates alone, but also at Pythagoras and

gister et nisi multi viri nobiles intercessissent, dubium non est quin aqua et igni interdixissent vel potius cremassent. Nosti quis in alios philosophos aliis temporibus factum sit et homines etiam rudes semper philosophos vocant hereticos.«

91 Pomponatius, *Apologia I*, in: id., *Tractatus acutissimi*, f. 66v.

92 Pomponatius, *De incantationibus*, p. 205.

93 Pomponatius, *De incantationibus*, p. 205-206.

94 E. Garin, »Le traduzioni umanistiche di Aristotele nel secolo XV«, in: *Atti dell'Accademia Fiorentina di Scienze Morali ›La Colombaria‹* 8 (1950), p. 3-5. In this study one finds the comment, used again later by Schmitt, *Aristotle and the Renaissance*, p. 114: »the *Oeconomics* was more meaningful to the secular culture of fifteenth-century Italy than to the monastic culture of thirteenth-century France ... Works such as the *Oeconomics*, *Ethics*, *Politics*, *Poetics* and *Problemata* were much read by an intellectual milieu different from the academic one.«

Anaxagoras. Pomponazzi does not seek out this information from Plutarch only out of a plain,[95] ingenuous taste for so-called humanistic erudition which in *De incantationibus* impels him to cite many classic works and even some of Petrarch's poems and Boccaccio's *Life of Dante*. The analogy with the fears of his time and with his own situation transpires forcefully in these pages of his work.

»One has to be careful not to speak of that with ignorant priests. The reason is easy to understand, given that philosophers have so often been banished from their own cities, or imprisoned, or stoned, or put to death; and so, in exchange for their good deeds, they have endured great suffering.«[96]

When Renan and Fiorentino presented Pomponazzi as one of the first to attest to free thought, they were not inventing a new profile: it was precisely in these terms that Pomponazzi regarded himself and was regarded by some of his contemporaries.

95 Pomponatius, *De incantationibus*, p. 204.

96 Pomponatius, *De incantationibus*, p. 243.

IV

"Creating Worlds and then Laying them Waste." The Cyclical Nature of History: Notes on Historians and on Giovanni Pico della Mirandola

The philosophical and historical debate about the problem of time cycles has recently aroused strong interest. Another debate had taken place about the end of the world prognosticated on the eve of the great planetary conjunction of 1524. After many years spent researching this old debate and the problem itself, I have felt the need to clarify, in my own mind, the historiographical themes "cyclical time" and "linear time." The sixteenth-century documents at my disposition – be they astrological, theological, or historical – centered on the first of these terms and had historical precedents in the remote past that historians, philosophers of the hermeutical school and scholars in every field of humanities have long been aware of.

Clearly, the themes of the "circle" and the "arrow" of time are now popular topics among philosophers,[1] but despite that popularity, Norbert Elias felt it necessary to propose a quite different perspective on a sociology

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[1] Cf. in note 67 the titles of my researches. Debates touching on his theme include contributions by Paolo Rossi and Remo Bodei in the Acts of a conference *Die sterbende Zeit: Zwanzig Diagnosen*, ed. by Dietmar Kamper, (Darmstadt-Neuweid: Luchterhand, 1987). For a different problematic, see Enrico Bellone, *I nomi del tempo: La seconda rivoluzione scientifica et il mito della freccia temporale* (Turin: Bollati Boringhieri, 1989, Milan: Il Saggiatore-Mondadori, 1999), who begins by admitting "the absence ... of themes usually treated in philosophical investigation of the concept of time" and presents as illusory and mythical "beliefs in the [pschological] arrow [that distinguishes between a past and a future] understood as an intrinsic quality of time and as a property irreducible to the principles of modern and contemporary physics" (pp. 10–11). Bellone adds: "I suspect that physics vitiates that image of the temporal arrow that seems to play a natural role in the ordering of the world and of our awareness" (p. 17). Refiling my notes I come upon Giacomo Marramao, *Minima temporalia: Tempo spazio esperienza* (Milan: Il Saggiatore – Mondadori, 1990): this book discusses Heidegger and Ilya Prigogine: see also Ilya Prigogine and Isabelle Stengers, *Entre le temps et l'éternité* (Paris: Fayard, 1988). Concerning the interest in such questions among philosophers writing in the press, let me cite only Alfonso M. Iacono, "La storia inizia da me," *Il Manifesto* (31 December 1987); Vittorio Lanternari, "Irreversible: La storia di anni che si ripetono," *Il Manifesto* (31 December, 1987); Christoph Türcke, "Das Osterei und der Flucht der ewigen Wiederkehr," *Die Zeit* (1 April, 1989); and H.W. Hohn, "Zyklizität und

of time, hindered up to now because "time is still largely discussed in the traditional philosophical manner, even by sociologists" rather than "within the framework of a developed and comparative approach guided by a long-term perspective."[2]

Elias concludes: "'Social time,' though its significance in the practice of people's social life steadily increased, seemed to have hardly any significance as a theoretical concern or, more generally, as a subject of scientific enquiry. In an almost perverse distortion of the actual sequence of events, it appeared as a somewhat arbitrary derivative of the more firmly structured 'physical time.'"[3]

Thanks to these observations, I felt myself paradoxically encouraged to consider the perspective in which the philosophy of history has been examined by historians rather than by sociologists or philosophers; in fact, for Elias, ever since Descartes an "egocentric tradition" has played a central role, "whether in naturalistic or metaphysical attire"[4] in the debate about time.

Contemporary philosophers after Heidegger have consistently studied temporality in the individual, excluding the notion (admittedly metaphorical,

Heilsgeschichte," in *Zerstörung und Wiederaneignung von Zeit*, ed. Rolf Zoll (Frankfurt: Suhrkamp, 1988), pp. 120–42.

[2] Norbert Elias, *Time: An Essay*, trans. Edmund Jephcott (Oxford: Blackwell, 1992), p. 45. See also *Time*, pp. 54–6 some interesting notes on the centuries-long process of elaborating a time scale in the form of a calendar. Without entering into the separate topic of chronography and chronology, I might mention, as a victim of the theoretical vices that Elias deplores, Donald J. Wilcox, *The Measure of Time Past: Pre-Newtonian Chronologies and the Rhetoric of Relative Time* (Chicago: University of Chicago P., 1987). Wilcox fails to clarify the opposition of cyclical and linear, instead understanding time as chronologically and successively ordered (see pp. 254–5, where he seems unaware of Machiavelli's cyclical theses, interpreting him as having treated all history as if an analysis of "linear" relations could explain the significance of events). Moreover, Wilcox refers to Aristotle and Augustine without an adequate knowledge of the history of philosophy, while the models he invokes of Proust, Foucault, and Italo Calvino only introduce confusion.

[3] Elias, *Time*, p. 117. He states elsewhere (*Time*, pp. 93–4): "All these problems arise partly or wholly because certain accepted routines of speaking and thinking block access to the problem of 'time' and to much else besides. An enquiry into 'time,' as one may have noticed, is a useful point of departure for the great spring-cleaning that is long overdue. There is always a need for it when an intellectual tradition providing the basic means of orientation within its societies has run its course for several centuries, as ours has from the (so called) Renaissance to the present time, from, say, Descartes to Husserl, Galileo to Einstein, or, for that matter, from Thomism to neo-Thomism and from Luther to Barth, Bultmann, or Schweitzer."

[4] Elias gives his conclusions (*Time*, p. 28) and states, "The type of connection which one encounters when studying experienced time – *vide* Bergson and Heidegger – is given over to metaphysics" (*Time*, p. 85).

figurative) of a collective temporality or "time of universal history," which is, however, indispensable for understanding the presuppositions of many cultural documents. As Frank Manuel writes in his useful synthesis inspired by Karl Löwith's *Meaning in History*,[5] "the whole of the surviving corpus of literature inherited from antiquity testifies virtually without contradiction that cyclical theory possessed the Greco-Roman world. The intellectual and psychological atmosphere, pre-Socratic, Platonist, Aristotelian, Stoic, and Epicurean, was saturated with it. It affected the cosmologists, metaphysicians, political theorists, historians, poets, and even the superstitious dregs of the populace."[6] Manuel, who nevertheless has the merit of pursuing his theme over the long term, to the point of wondering how "the Renaissance was to ponder its vicissitudes," was later taken to task for the overly general nature of his thesis. Still, his stance is not very different from what Charles-Henri Puech wrote in 1951: "The Greek world conceived of time as above all cyclical or circular, returning perpetually upon itself, self-enclosed, under the influence of astronomical movements which command and regulate its course with necessity."[7] Puech continues, "For the Greeks, indeed, the passage of time is

[5] Karl Löwith, *Meaning in History: The Theological Implications of the Philosophy of History* (Chicago: University of Chicago P., 1949); In German as *Weltgeschichte und Heilsgeschehen: Die theologischen Voraussetzungen der Geschichtsphilosophie* (Stuttgart: Kohlhammer, 1953). In his *Das Verhängnis des Fortschritts* (1963; translated into Italian in his *Storia e fede*, Bari, Dedalo, 1985, pp. 149–51), Löwith refers to the natural history of the world and of the human species according to Lucretius and discusses how "the world of the Christian tradition separates this classic description of progress from all post-Christian philosophies." The desire to realize the kingdom of God "is revolutionary because it reverses the originally natural meaning of the *revolutiones* – that is, of the regular motion of the celestial bodies; every post-Christian formative process (*Bildung*) is progressive because it has progressively made worldly the theology of the history – from the Augustinian *procursus* toward the kingdom of God up to the Hegelian 'progress in consciousness of liberty.'" Cf. Löwith, *Nietzsches Philosophie der ewigen Widerkehr des Gleichen* (1935); in English trans. by J.H. Lomax as *Nietzsche's Philosophy of the Eternal Recurrence of the Same* (Berkeley: University of California P., 1997), where "redemption" is considered a Nietzschean *leit-motif*, see *infra*, Chapter VI, notes 35 ff., and in particular notes 41–4 and 49.

[6] Frank Manuel, *Shapes of Philosophical History* (Stanford: Stanford UP, 1957), p. 7. Manuel also states: "The cyclical theory of history, which Polybius had once eloquently represented as a Stoic bulwark against the vicissitudes of fate and which now seemed bitterly appropriate for Romans was rejected by Augustine with contempt" (p. 3); on the cyclical idea of time of the Roman empire, "commonly identified with Stoicism," he adds: "Since most of the leading Stoics were from the East, it is nowadays customary to trace their cyclical cosmology to Babylonian astronomical and astrological sources, when one does not drop back even further and identify the eternal return as a universal ingredient of mythic thought" (p. 10).

[7] Henri-Charles Puech, "Gnosis and Time," in *Man and Time: Papers from the Eranos Yearbooks*, ed. J. Campbell, Bollingen Series, 30, no. 3 (Princeton: Princeton UP, 1957), pp. 39–40.

cyclical and not rectilinear ... in which, at best, identity can be apprehended in the form of permanence and perpetuity, hence of recurrence" or eternal return. Furthermore:

> According to the famous Platonic definition [*Timaeus* 37c–38a], the time which is determined and measured by the revolution of the celestial spheres is the mobile image of immobile eternity which it imitates by moving in a circle. Consequently, both the entire cosmic process and the time of our world of generation and decay develop in a circle or according to an indefinite succession of cycles, in the course of which the same reality is made, unmade, and remade, in conformity with an immutable law and determinate alterations. The same sum of being is preserved; nothing is created and nothing lost (*eadem sunt omnia semper nec magis id nunc est, neque erit mox quam fuit ante*, Lucretius III, 945; V. 1135); moreover, certain thinkers of dying antiquity – Pythagoreans, Stoics, Platonists – went so far as to maintain that within each of these cycles of time, of these *aiones*, these *aeva*, the same situations recur that have already occurred in the preceding cycles and will occur in subsequent cycles – and so *ad infinitum*. No event is unique, nothing is enacted but once... . Cosmic time is repetition and *anakúklosis*, eternal return. [8]

Consequently, no point in that series can be considered, strictly speaking, a beginning or an end. Thus Puech sustains that, precisely because of such premises, "the Greeks never succeeded in developing a philosophy and still less a theology of history."[9] At the most (and late, with Polybius and Diodorus), they achieved a certain convergence of the events of universal history moving in the direction of the purely physical action of the *tyche*, or else they sought to discern a rhythm (still cyclical) in the development of political regimes. The result was "laws of decadence rather than development."[10] In

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Puech's essay originally appeared together with other relevant essays, also published in the same volume XIX (1951) of *Eranos Jahrbuch*, by Henri Corbin and Mircea Eliade. See also Mircea Eliade, *The Myth of the Eternal Return: Cosmos and History* (Princeton: Princeton UP, 2005), which is still (and wrongly) considered a "the greatest modern book" on the topic by as good a historian of geology and zoology as Stephen Jay Gould in his *Time's Arrow, Time's Cycle: Myth and Metaphor in the Discovery of Geological Time* (Cambridge, MA: Harvard UP, 1987).

[8]. Puech, "Gnosis and Time," pp. 40–41.

[9] Ibid., 42. Here Puech criticizes W. Nestle, "Griechische Geschichtsphilosophie," *Archiv für Geschichte der Philosophie* 41 (1932): 80–114.

[10] Puech, "Gnosis and Time," p. 43. Here Puech borrows this definition from Émile Bréhier, "Quelques traits de la philosophie de l'histoire dans l'antiquité classique," *Revue d'histoire et philosophie religieuses* 14 (1934), and from Jean Guitton, *Le temps et l'éternité chez Plotin et Saint Augustin* (Paris: Boivin 1933) .

its most intimate center, the Greek perception of time was experienced as a "degeneration" (thus recalling the definition of primitivism according to Boas and Lovejoy):[11] "The notion of a continuous progress in time was unheard of."[12] Puech notes "the inability of the Greek mind to develop an authentic philosophy of history," and he states that "the Greek conception of time and consequently of history ... is an essentially cosmological conception."[13]

Despite this extremist thesis regarding the Greeks' inability to form a theory of history of their own, the very fact that they produced a rich historiography has led two great historians of our own day to investigate the topic of time in classical historiography. I am referring to the contemporary and contrasting interpretations given more than twenty years ago by Arnaldo Momigliano and Santo Mazzarino. Given that I claim no competence in such matters, I have no intention to deal with the philological or specialistic (and, for that reason, perhaps more relevant) aspects of their debate, but simply to isolate a few ideas that I dare call "philosophical."[14] Momigliano, as always, was fond of paradox:

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[11] Arthur O. Lovejoy and George Boas, *Primitivism and Related Ideas in Antiquity* (Baltimore: Johns Hopkins UP, 1935).

[12] Puech, "Gnosis and Time," p. 43.

[13] Ibid, 43. Puech continues: "Time is perceived and considered in the light of a hierarchized vision of the universe, in which the inferior realities are only degraded and necessary reflections of the superior realities which give them being and life and govern their movements. Time is part of a cosmic order; on its own level it is an effect and an expression of that order. If it moves in a circle it is because, in its own way it imitates the cyclical course of the stars on which it depends. Its endlessness, its repetition of conjunctures, are, in a mobile form, images of the unchanging, perfect order of an eternal universe, eternally regulated by fixed laws, an order of which the heavens, with the uniform revolution of their luminaries, offer still more sublime images" (pp. 43–4).

[14] Santo Mazzarino openly and somewhat ingenuously flirts with philosophical terminology and problematics; as for Momigliano, who was better informed, let me refer to what Carlo Dionisotti, with his usual acumen and penetration, has to say in his *Ricordo di Arnaldo Momigliano* (Bologna: Il Mulino, 1989), p. 62: "Momigliano was philosophically better prepared than any other Italian historian of that time. ... But he was not, nor did he want to be a philosopher." Dionisotti speaks elsewhere (p. 11) of the "characteristic nucleus of Momigliano's entire work," in terms of a "preoccupation both philosophical and religious." For Arnaldo Momigliano, see especially "Platone, la storia e gli storici secondo P. Vidal-Naquet," *Rivista Storica italiana* 95 (1983): 448–50, where he states, "Around 1931–32 I had behind me a small past as a student of Greek philosophy in relation to social history ... even we poor provincial Italians of the first half of the twentieth century [had] some idea about Plato and about the historicity of philosophy. ... Benedetto Croce published his books on Vico, Hegel, and Marx, precisely, in

> If one wants to understand something about Greek historians and the real differences between them and the Biblical historians, the first precaution is to beware of the cyclical notion of time. Even Greek philosophers were not unanimous about it. Anaxagoras, according to Aristotle, did not hold such a view of time, nor did Epicurus. Aristotle, who made the heavens eternal, attributed limited importance to the succession of Great Years. Greek philosophers were not forced by race or language to have only one view of time. Nor were the historians. Herodotus, Thucydides, and of course Polybius have in turn been described as historians with a cyclical view of time. I shall attempt to show that they were not.[15]

The examples that Momigliano chooses are equally paradoxical: "Herodotus was not ... a believer in the idea of eternal returns. Historical cycles in the precise sense and meaning are unknown to Herodotus." "Here again no eternal return is implied by Thucydides." It was true that "the cycle is there for anyone to see" in Polybius, who "in book VI ... states that men emerged from some sort of primeval cataclysm into monarchy; then they pass from one type of constitution to another only to end where they started,"

Bari. Italian historiography of fifty years ago might have suffered from an insufficiency of many vitamins, but not an insufficiency of the philosophical vitamin."

[15] Arnaldo Momigliano, "Il tempo nella storiografia antica" (1966), now in his *La storiografia greca* (Turin: Einaudi, 1968), pp. 94–5; in the English original as "Time in Ancient Historiography," in *Essays in Ancient and Modern Historiogaphy* (Middletown CT: Wesleyan U.P., 1962), pp. 179–204, quotation pp. 186–7 and in *History and theory*, 1966; reprinted in Id.,*Quarto Contributo* (Rome, Ed. Storia e letteratura, 1969), pp. 13–41; in particular p. 17. See also Momigliano, review of Thorlief Boman, *Das Hebräische Denken im Vergleich mit dem Griechischen*, in *Rivista storica italiana* 74 (1962): 605–7 (in English translation as *Hebrew Thought Compared with Greek* (London: SCM Press, 1960). Momigliano states that for Boman, "The Greeks have created a historiography dominated by the idea of the cyclical return and by the notion that nothing is new under the sun (which is actually a Hebraic expression!) – an a-historical historiography, whereas the Hebrews created a historical religion." Momigliano discusses this thesis, referring also to Hermann Fränkel, "Die Zeitauffassung in der frühgriechische Literatur" (1931), reprinted in his *Wege und Formen frühgriechischen Denkens* (Munich: Beck, 1960), pp. 1–22. Momigliano adds a philosophical note that seems casual but reveals his thorough preparation about the "purely metaphoric and non-essential nature of the representation of time as a line, inasmuch as it already surreptitiously introduces into the idea of the line the non-spatial element of succession," referring not only to a fundamental passage in Heidegger's *Sein und Zeit* (*Being and Time*), but also his "Der Zeitbegriff in der Geschichtswissenschaft," *Zeitschrift für Philosophie und pilosophische Kritik* 106 (1916): 173–88, where Heidegger observes "that the historian, unlike the physicist, thinks by epochs, that is, he introduces qualitative distinctions into time" and suggests "possible research on chronological systems" – research that Momigliano considered "a good deal more useful."

but "outside the constitutional chapters, in the rest of his history, Polybius operates as if he did not hold any cyclical view of history." To the contrary, "Polybius very probably learned about the cycle of the forms of government from some philosopher and liked the idea, but was unable to apply it to his historical narrative."[16] In the final analysis, what counted for Momigliano (and here he differs from Puech) "is that the Greek historians recognized a continuous, albeit limited, progress in the sphere of philosophy, science, arts, and constitutions rather than in that of ordinary moral and political actions."[17]

Mazzarino, for his part, introduced other observations, especially regarding the measurement of time (*diastematica*, *eis emê*) and, among other things, "palingenesis,"[18] without, however, stating the fundamental differences from Momigliano that were part of his intentions.[19] For Mazzarino, "the problems posed here by the history of historiography refer back to the history of philosophy. He is in substantial agreement with Momigliano when he attempts to explain "the historical vision according to which there is a cycle of human affairs by means of the cosmological doctrine of the eternal return,"[20] but

[16] Momigliano, "Time in Ancient Historiography," pp. 188–9; "Il tempo," pp. 78–80. Momigliano made no attempt to hide his antipathy for philosophemes; he reproached the Greek philosophers themselves for not having been unanimous and systematic in the idea of historical cycles, however, applying such a criterion might have the unfortunate result of denying further development to all the principal philosophical conceptions, not only in the (less fully documented) time of the pre-Socratics, but also in the modern and contemporary ages.

[17] Momigliano, "Time in Ancient Historiography," p. 194.

[18] Mazzarino, *Il pensiero storico classico* (1965–66), 2 vols. in 3 pts. (Rome and Bari: Laterza, 1983), 3:417, where he observes, regarding palingenesis in Virgil, *Eclogue* IV, that "it does not imply full identity with the Eternal Return, seeing that the 'new Achilles' is invoked only as an analogic figure who will set off an absolutely different new *aetas*." See also ibid., n. 555, pp. 412–61.

[19] Ibid., 3:421–22. Mazzarino comes to the conclusion that in classical historical thought the "ideas more or less connected with that of the historical Return are mixed in with ideas relative to evolving process: the ancient Greeks sensed no difference between a 'cyclical' and a 'linear' *Zeitauffassung*. (Moreover, even in modern thought we have Schopenhauer on the one hand and Hegel or Marx on the other; Spengler on the one hand and Croce on the other). But for the moderns the contrast is much more obvious. In the ancient terminology connected with the idea of the Return we find terms such as *palingenesia* or *anakyklosis*, which are proper to the Pythagorean vocabulary relative to metempsychosis. (Compare the orphic idea of the wheel of births.) ... But just as metempsychosis does not imply a precise identity ... so the Return does not exclude the variety of the new manifestations. Rather, we must repeat that the ancients, although they did not sense any opposition between a cyclical *Zeitauffassung* and a linear *Zeitauffassung*, did, however, sense the contrast between the doctrine that admits generation and corruption of the cosmos and the doctrine that makes the cosmos eternal."(Trans. Cochrane).

[20] Ibid., 1:207.

he viewed the overall philosophical picture quite differently, dealing instead with the Pythagorean-Stoic *ekpyrosis*, the rejection of the same by Aristotle and especially by Theophrastus, the Plotinian polemic against the Gnostics to confute the "Christian idea that asserts the end of the world."[21] These themes are undeniably relevant and fundamental to my topic, but – both because of my limited competence in the classical field and because of my desire to circumscribe my remarks – I shall simply observe that the thesis (central in Mazzarino) of the possibility of separating a historical-historiographical conception of the eternal return from a metaphysical-cosmological conception of it is not easy to corroborate.[22] Among the documents that Mazzarino cites, some serve to summarize the second conception (which, in my opinion, cannot be separated from the first in any conceptual analysis of texts, be they ancient, medieval, or Renaissance texts, or even analyzing certain works of clandestine literature between 1689 and 1750; moreover, the entire theory of spontaneous generation is linked to it). Mazzarino writes, "To the great cataclysm of the cosmic fire that, in Stoic thought, brought on the destruction of the world, ancient thought instinctively added the other great mythic cataclysm, the universal deluge, or the two destructions as they appeared in symbolic form in the images of Phaeton and Deucalion."

Mazzarino refers here to the Stoics (with the exception of Panaetius), to the Babylonian tradition of Berosus, and to biblical texts, but above all, he

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[21] Ibid., 2:9, 3.

[22] Ibid., 3:416: "We need to distinguish between the idea of the eternal return as a cosmological doctrine and ... as an intuition of historical time" (3:421). Mazzarino adds, "In classical historical thought ideas more or less connected with that of the eternal return are found mixed with ideas relative to evolving process: the ancients did not sense the difference" 3:312. He continues, "There is some truth [here] but not in the opposition between circle and line that has now become common." (Trans. Cochrane). A clearer distinction was introduced by Christian Meier, *Die Entstehung des Politischen bei den Griechen* (Frankfurt: Suhrkamp, 1980), 412, who defines cyclicality as "discriminant" in the "*Geschichte der Historiker*", who did not consider it in antiquity, and the "*Geschichte der Philosophen*", who admitted it. On this topic, see B.A. van Groningen, *In the Grip of the Past: Essay on an Aspect of Greek Thought* (Leiden: E.J. Brill, 1953), pp. 77–8; Pierre Vidal-Naquet, "Temps des dieux et temps des hommes" (1960), now in his *Le chasseur noir: Formes de pensée et formes de société dans le monde grec* (Paris: Maspero, 1981), pp. 69–94, in English translation by Andrew Szegedy-Maszak as *The Black Hunter: Forms of Thought and Forms of Society in the Greek World* (Baltimore: Johns Hopkins UP, 1986); Ludwig Edelstein, *The Idea of Progress in Classical Antiquity* (Baltimore: Johns Hopkins UP, 1967); George Boas, "Cycles," in *Dictionary of the History of Ideas*, 5 vols. (New York: Charles Scribner's Sons, 1973–74), 1:621–7; E.R. Dodds, *The Ancient Concept of Progress and other Essays on Greek Literature and Belief* (Oxford: Clarendon Press, 1973); M.M. Sassi, "Natura e storia in Platone," *Storia della storiografia* 9 (1986): 104–28.

is distinguishing a case that differs from such conceptions of a truly total catastrophe. He mentions a "theory of cataclysms developed in Plato's *Timaeus*" (or, better, in his *Statesman*), "according to which the cosmic fire destroys the inhabitants of lands at higher altitudes and the cosmic deluge the inhabitants of the lowlands, but in either case a portion of humanity survives and the arts that humanity has created continue." In his *Physikai doxai* and in the lost *Pròs toùs physikoùs* Theophrastus confuted "the Stoic doctrine of the generation and corruption of the cosmos," given that, in Aristotelian terms, the cosmos is ungenerated and eternal. In his examination of Platonic doctrine, as he has presented it, Theophrastus states that his intention was to "make possible a mediation between the cosmological doctrine of an ungenerated and uncorrupt world, on the one hand, and the history of the arts, or cultural history," which, in its early doxographic writings, was in fact an outgrowth of the Aristotelian school.[23]

Whereas Mazzarino's text is a gold mine of references (at times cryptic and fugitive) to Greek philosophical works, what is most relevant in Momigliano is, above all, a painstaking consideration of contemporary interpretations and their theological aspects. Some of the observations that he makes, accompanying them with ferocious quips, have helped me to bring into focus a thesis (which might not have pleased him, however). Momigliano derided theologians who, "in some cases ... oppose Indo-European to Semitic, in other cases Greek to Hebrew, and in others still Greek to the Jewish-Christian or to Christian alone."[24] It is worth noting that here in this entire essay, when speaking of Semites, the scholars whom Momigliano surveys and he himself (and he is of course is speaking only of the ancient world, before the Hegira) were referring only to the Jews. Momigliano exposes his thoughts, however,

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[23] Mazzarino, *Il pensiero storico classico*, 3:419–20. Mazzarino opens his argument by stating, "The common contrast between the 'cyclical' *Zeitauffassung* of the classical world and the 'linear' *Zeitauffassung* of the Jews and the Christians thus needs to be narrowed considerably" (a thesis that his adversary, Momigliano, would have agreed with). Mazzarino further states that "the ancients did not see any contradiction between the doctrine that admitted the generation and corruption of the cosmos and the doctrine of an eternal cosmos; hence most of them denied the first and affirmed the second" (3:422). He cites "cosmologies with a more or less linear *Zeitauffassung*, as with the Peripatetics, who in fact deny the origin and destruction of the cosmos" (although this is not what normally characterizes linear time) (3:420). Finally, he cites the case of Plotinus, who "delineates the difference between paganism and Christianity as a contrast between those who love the world (we might say, who love history), holding it to be eternal despite all of its inequalities, and those who instead do not love it, preaching its end, and with that, the end of inequalities" (3:422) (Trans. Cochrane)..

[24] Momigliano, "Time in Ancient Historiography," p. 181.

with reservations about the thesis that today is still taken for granted: "The Greeks conceived of time as a cycle, whereas the Hebrews and the early Christians conceived of it as a progression *ad finitum* or *ad infinitum*. Cullmann, H.-C. Puech, and Quispel ... express this view in its simplest form. Time is a line to the Jews, a circle to the Greeks."

Moreover, he reaches the conclusion that "none of these three main differences between Jewish and Greek thought about time can stand up to close examination,"[25] Regarding the "most publicized difference" between "the cyclical thinking of the Greeks about time and the non-cyclical, even non-spatial, thinking of the Jews and early Christians," he states, "this difference has at least the merit of having been stated by St Augustine and of representing an essential part of his argument about time. He warned the Christians against the circular notion of the Greeks: the Christian *recta via* was to him both an image of time and an image of salvation."[26] Here Momigliano is referring not only to Guitton, Marrou, Luneau, Hubaux, and other specialists of Augustine,[27] but also to Puech,[28] and to Karl Löwith's *Meaning in History*, which, despite the criticisms of Hans Blumenberg,[29] is still a fundamental reference for all of us .

Löwith had been deeply influenced by Cullmann, who had claimed "that Jews and Christians conceived of time as a series of epoch-making events" in

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[25] Momigliano, "Time in Ancient Historiography," p. 182.

[26] Momigliano, "Time in Ancient Historiography," p. 184; "Il tempo," p. 72. On Augustine, see Gilles Quispel, "Time and History in Patristic Christianity," in *Man and Time*, pp. 96–101, and Marta Cristiani, *"Summe esse, atque summe vivere, id ipsum est" (Conf. 1, 6, 10): Il tempo vissuto: Seneca e Agostino* (Rome: Jamusa, 1979) and the bibliography cited therein.

[27] Niklas Luhmann,"Weltzeit und Systemgeschichte: Über Beziehungen zwischen Zeithorizonte und soziale Strukturen gesellschaftigen Systeme," in *Soziologie und Sozialgeschichte*, ed. P.C. Ludz, *Koelner Zeitschrift für Soziologie und Sozialpsychologie*, Sonderheft 16 (Opladen, 1972), pp. 59, 115, esp. p. 91 (VI).

[28] Puech, "Gnosis and Time," p. 50. Puech states, "Anyone who wishes to apprehend the opposition between Christian rectilinear time and Greek circular time in all its living depth can do no better than consult Book 12, Chapters 10 to 14, of Augustine's *City of God*. Over against the secular periods of the philosophers, the "*circuitus temporum in quibus eadem semper fuisse renovata atque repetita in rerum natura atque ita deinceps fore sine cessatione asseverarent [philosophi]*", over against the "*falsi circuli* or *falsus circulus*", Augustine sets forth the *rectum iter*, the *via recta*, which is the Christ. Over against Greek repetition he sets the Christian *novitas, nullo repetita, nullo repetenda circuitu*." In this manner, Augustine manages to "imbue Christianity with the idea of an organic, oriented time and to guide it toward a theology of history."

linear order, the most decisive of which was the Incarnation (as he preferred) or the expectation of the *Eschatos*.[29]

The relationship with the analyses and the internal polemics of these theologians – explicitly admitted by Löwith and opportunely recorded by Momigliano[30] – should be stressed from a theoretical point of view, because in exile Löwith found in these scholars of *Heilsgeschichte* [31] his own roots (that is, Heidegger's ideas on temporality,[32] but also the ideas of Karl

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[29] Hans Blumenberg, *Die Legitimität der Neuzeit* (Frankfurt: Suhrkamp, 1966), p. 1. Teil: Säkularisierung, p. 22 and passim; in English translation by Robert M. Wallace as *The Legitimacy of the Modern Age* (Cambridge MA: MIT Press, 1983). On Blumenberg's disagreement with Löwith's theses and on Jacob Taubes' book *Abendländische Eschatologie* (Bern: A. Francke, 1947), in English translation by David Ratmoko as *Occidental Eschatology* (Stanford: Stanford UP, 2009), see Odo Marquard, *Schwierigkeiten mit der Geschichtsphilosophie* (Frankfurt: Suhrkamp, 1982), pp. 14–17.

[30] Momigliano, "Time in Ancient Historiography," p. 181, a statement based on Löwith's own declarations.

[31] Oscar Cullmann, *Christus und die Zeit* (1946, 3rd ed. 1962), in English translation by Floyd V. Filsen as *Christ and Time: The Primitive Christian Conception of Time and History* (Philadelphia: Westminster Press, 1950, 1964); its Italian translation as *Cristo e il tempo: La concezione del tempo e della storia nel Cristianesimo primitivo*, has an introduction by Boris Ulianich (Bologna: Il Mulino, 1975). Ulianich notes, "The conception of time presupposed in New Testament writings is not the cyclical Hellenistic one – Cullmann will return often to this point – that holds redemption to be possible only outside of time: it implies a notion of linear time, dominated by God and in which Salvation is achieved, precisely because God is the lord of time" (pp. xxxii–xxxiii). See also Oscar Cullmann, *Heil als Geschichte: Heilsgeschichtliche Existenz im Neuem Testament* (Tübingen: Mohr, 1962). Cullmann's entire work, as is known (see *Cristo e il tempo*, pp. 6–7, 33, 52ff., 122), is defined in deep disagreement with the hermeneutic tendency today dominant, with the existentialist terminology of the Bultmann school, and above all with the thesis of de-mythification, which considered "temporal development as a simple framework." See also Rudolf Bultmann, *Offenbarung und Heilsgeschichten* (Munich: Lempp, 1941); Henri Irénée Marrou, *De la connaissance historique* (Paris: Seuil, 1954) , pp. 30–31; in English translation by Robert J. Olsen as *The Meaning of History* (Baltimore: Helicon, 1966).

[32] Cullmann, *Christ and Time*, p. 37, where he without doubt relies on Heidegger's *Sein und Zeit*: "Primitive Christian faith and thinking do not start from the spatial contrast between the Here and the Beyond, but from the time distinction between Formerly and Now and Then"; later (146, 168; 177, 201) he also considers "the conception of 'contemporaneity'" in Kierkegaard. This passage quoted in Bultmann, *Offenbarung*, p. 49, is no less revealing of readings and philosophical preferences; it first recalls Dilthey and Count Yorck von Wartenburg, then finds its orientation among contemporaries: "Kierkegaards Intepretation des christlichen Seins konnte von Karl Jaspers in die Sphäre der Philosophie transportiert werden. Vor allem scheint Martin Heideggers existentiale Analyse des Daseins nur eine profane philosophische Darstellung der Neutestamentlichen Anschauung vom menschlichen Dasein zu sein: der Mensch, geschichtlich existierend in der Sorge um sich selbst auf dem Grunde der Angst, jeweils im Augenblick der Entscheidung zwischen der Vergangenheit und der Zukunft, ob er sich verlieren will an die Welt

Barth[33] and Jaspers).[34] At another point (p. 31; 54) Cullmann polemicizes with the Heideggerian Bultmann, who "when he thus from the outset regards the temporal and historical element as a mythological covering that can be separated from a kernel, this *a priori* is not derived from a historical investigation of the Primitive Christian attitude; it must then be asked whether in reality the existence philosophy of Heidegger, with which the enduring kernel is found to agree ... is not the starting point of the entire undertaking." Indeed, "the period we have just passed through," Cullmann states, "is typified by the intrusion of existentialist philosophy in New Testament exegesis."[35] This is the most probable reason for Löwith's interest in these exegetes, an interest in which what is more important historically is not the repeated distinction between classical cyclic structures and the Hebraic-Christian linearism in the conception of history, but rather the consequent thesis (which is newer) that the origin of the modern (and Enlightenment) idea of progress is none other than a secularization (*Säkularisierung*) of the Augustininan theology of history. It has been remarked that this thesis of Löwith's – which considers Voltaire's *Philosophie de l'histoire* closer to Augustine than to the classical, pagan, i.e. non-Christian mentality[36]– finds a highly respectable precedent in Wilhelm

des Vorhandenen, des 'man' oder ob er seine Eigentlichkeit gewinnen will in der Preisgabe aller Sicherungen und in der rückhaltlosen Freigabe für die Zukunft! Ist nicht so auch im Neuen Testament der Mensch verstanden? Wenn man gelegentlich beanstandet hat, dass ich das Neue Testament mit Kategorien der Heideggerischen Existenzphilosophie interpretiere, so macht man sich– fürchte ich–blind für das faktisch bestehende Problem. Ich meine, man sollte lieber darüber erschrecken, dass die Philosophie von sich aus schon sieht, was das Neue Testament sagt." See also R. Bultmann-M. Heidgger, *Briefwechsel 1925–1975* (Frankfurt/M.: V. Klosterman, 2009).

[33] Cullmann, *Christ and Time*, p. 9; Id., *Cristo e il tempo*, pp. 6, 49, and esp. pp. 86–7, 24ff, on divergences and criticisms directed at Karl Barth's school about the definition of the "concept of linear time."

[34] Ibid., p. 32, where Cullmann – who had stated on p. 14 that he had not wanted to write a philosophical work on the *concept of time* , nor (pp. 21–2) "a philosophy of history, as Bultmann asserts in his review" – expesses his satisfaction on noting with how much comprehension a philosopher like Karl Löwith has inserted into his historical work *Weltgeschichte und Heilsgeschehen* (168–74) an objective synthesis of *Christus und die Zeit*, defined as an exposition of the "biblical interpretation of history."

[35] Ibid., pp. 12–13.

[36] About this work of Voltaire's, "more of an *Essai sur les moeurs* than the work which actually bears that title," a work not totally foreign (counter to Löwith's opinion) to Bossuet's providentialistic conceptions and to the deistic presuppositions that Voltaire defends "against atheistic attempts to interpret the world materialistically," see J.H. Brumfit, Introduction to Voltaire, *Philosophie de l'histoire*, in *Studies on Voltaire and the Eighteenth Century*, 28 (1963): 11–79, esp. pp. 32–7. On the history of the term in the period immediately following (1760–80),

Dilthey; in his *Einleitung in die Geisteswissenschaften* Dilthey had asserted that "the philosophy of history has a theological origin and constitutes in substance the translation in rational terms of the search for a meaning of history, which has its own roots in the Judeo-Christian conception of the world." "The Christian idea of an internal unity in a gradual learning process in the history of humanity ... was prepared by Clement and Augustine [and] was brought to completion by Vico, Lessing, Herder, Humboldt, [and] Hegel." This grouping together stresses, for good reasons, Löwith's paradoxical intentions, but it also aims at showing in the very origin and theological structure of the philosophy of history, "the reason for its failure."[38] One might instead wonder whether such a definition of a "historicism liberated from the theological presuppositions of the Judeo-Christian conception", faithful only to the method of Voltaire and the Enlightenment, provided that their myth of progress be omitted, would stand up today as a methodological proposal.

What I would like to stress instead is that in the pages cited thus far and which come from a wide variety of scholars, the philosophy of history is unanimously regarded as having Judeo-Christian (Mediterranean, or, if we admit a simplification that is somewhat inexact, Eurocentric) characteristics. But this tradition with only two partners cannot be taken as legitimate except within a perspective of the history of religions or, better, the history of Salvation, to use Löwith's formula.[37] Yet even in that context – let alone in

see Reinhart Koselleck, "Historia magistra vitae," in *Natur und Geschichte: Karl Löwith zum 70. Geburtstag*, ed. Hermann Braun (Mainz: Kohlhammer, 1967), 206ff., now in Koselleck, *Vergangene Zukunft* (1979), in English translation by Keith Tribe as *Futures Past: On the Semantics of Historical Time* (Cambridge, MA: MIT Press, 1985). See also Pietro Rossi preface to Löwith, *Significato e fine*, 13. Ibid., p. 20, refers to chapter 14 of Dilthey, *Einleitung*. See also Pietro Rossi, *La critica della ragione storica* in Dilthey, "Rivista critica di storia della filosofia", VII, 1952, p. 474: laica del "la filosofia della storia mantiene in tutto il suo sviluppo l'eredità della sua origine religiosa e, anche quando abbandona la forma teologica, che la caratterizzava nel Medioevo da Agostino a Bossuet, e da cui comincia a staccarsi solo con Vico e poi con Turgot, le sue formule sono una semplice traduzione primitivo atteggiamento religioso, come avviene da Lessing e da Herder fino a Hegel." Cf. A. Richardson, *History, Sacred and Prophane*, London 1964, pp. 58–9: "the triumph of the Hebraic-Christan view over the classical, achieved by the time of St Augustine, made possible the ultimate emergence, after many centuries, of modern scientific historiography ... When the Christian Church first carried its Hebraic heritage into Graeco-Roman world, it must at once have come into conflict with the cyclical view of history"; ibid., p. 24: "the whole mediaeval 'universal history' was Europe-centred."

[37] Karl Löwith, *Mein Leben in Deutschland vor und nach 1933*; in English translation by Elizabeth King as *My Life in Germany Before and After 1933: A Report* (London: Athlone, 1994), on Heidegger's famous 1933 inaugural lecture: Löwith states that there "in the last analysis, the mission is decreed by 'fate,'" "garbed as philosophy of history (*My Life*, p. 35). It is relevant that Löwith records here: "One month after Heidegger's inaugural speech, Karl Barth wrote his

the context of the history of philosophy and of the sciences – how can one leave out Islam? Without the Islamic tradition how could "poor Latinity" (as Roger Bacon and Albertus Magnus called it) recuperate Aristotle, Greek science in general, and Stoic astrology in particular?[38] The patrimony transmitted by the latter has now been well studied, but not always has its importance been emphasized as it deserves. Let us take the case of another essay justly considered to be a classic and, among others, welcomed by Löwith as a brilliant confirmation of his own theses.[39] I am thinking of the *Métamorphoses de la Cité de Dieu* by Étienne Gilson, who was a theologian but had a vocation and a very serious preparation for historical studies. Not only does he consider, as did Löwith and Frank Manuel, the case of Joachimism to be "something completely new in relation to Augustine" and in relation to the entire Christian tradition (Thomas Aquinas included), precisely for its "historical interpretation" of the *Eschaton*. Above all, Gilson is constrained – unlike Löwith and Manuel – to take at least a glance at the horoscope of religions, a doctrine that cannot be eliminated from an exposition of Bacon's

appeal to theologians against co-ordination with the reigning powers, *Theological Existence Today*. This paper was and remained the only serious expression of an academic resistance against the raging time. To be capable of an analogous act, philosophy, instead of treating 'Being and *Time*,' would have to treat 'the Being of *Eternity*.' But the crucial point about Heidegger's philosophy consisted precisely in its 'resolute temporal understanding of time': even as a philosopher, he remained a theologian on this point, in so far as eternity seemed to be identical with God, concerning whom the philosopher 'could know nothing.' Heidegger's negative interlinking of a philosophical conception of time with the theological question of eternity was made plain only in one lecture that he gave in July 1924" (*My Life*, pp. 35, 37)." The publication of this autobiographical work – which was fundamental for laying out Victor Farias well-known study on *Heidegger und Nationalsozialismus* (Frankfurt M.: Fischer, 1989) – signaled a shift in recent evaluations of Löwith. On this topic, see the ample review article by Eugenio Garin, "Prima e dopo la catastrofe," *Ib. Informazione bibliografica*, January 1989: 5–9, which rightly insists on the importance of the relation with Nietzsche and Heidegger for Löwith's study of the philosophy of history

[38] In his introduction to *Meaning in History* , extensively quoted *infra* Chapter VI, note 35, Löwith makes interesting references to the belief of the ancient world in divination: a great scholar like Polybius "felt no difficulty in prognosticating future developments" (*Meaning in History*, p. 9). Löwith saw in that disposition a fundamental difference between the classical and the Christian mentality: in fact, the ancient belief in divination would never have lost credit if the Church had not eradicated it. Here Löwith refers to Burckhardt, but he does not take into account the studies and the ideas launched by Aby Warburg, who, following the fortunes of the classical tradition in Islam and in the Latin Middle Ages, would have moderated his certainty regarding the absolute "eradication" effected by the Church.

[39] Löwith, *Sinn der Geschichte* (1956), translated in his *Storia e fede*, p. 129 (see note 5) refers to both his own *Meaning in History* and to the "recent" *Métamorphoses* of Étienne Gilson.

thought: "All religions are under the sign of Jupiter, and hence the conjunction of that planet with each of the other six exerts on the heart of men – even without offending their free will – an influence that favors the birth of new 'laws' [i.e. religions]."[40] Gilson admits his lack of interest in the "details of this religious astrology" (and this is proved by the fact that he speaks of Jupiter as a *zodiacal sign*); without ever going back to Abû mash'ar, a well-known source for Bacon, he exposes the chronological sequence of the *Opus maius* and the vicissitudes of religions:

> Here are thus the principal religious sects. How to classify them? At the lowest level there are the pagans, who know almost nothing of God, have no clergy, and render to Him the cult that each individual prefers. Next come the Idolaters, who have priests, temples and, like the Christians, big bells to call to the ceremonies. They in fact have regular prayers and specific sacrifices, but they admit several gods, none of which is omnipotent. Third come the Tartars, who adore an omnipotent God and render him worship, even if that does not prevent them from venerating the hearth and the threshold of the home; in fourth place the Jews who, according to their own law, should know more about God and wait for the true messiah who is Christ. And finally, the Christians, who follow the Hebrew law, interpreting it in its spiritual sense and completing it with the law of Christ. Let us not speak of the sect of the Antichrist, who will do nothing but ruin the other sects for a certain period, even though the elect will then have to resist in the faith of Christ despite the furious persecutions to which they will be subjected

Gilson is so conditioned by his Eurocentrism that even when he introduces this topic (one that was fairly original in 1952, when he was writing), a revealing *lapsus* betrays him: after the *Lex cristiana* and before the Antichrist – in the Bacon passage cited, in other medieval and Renaissance Latin authors, and in historical reality – there was always the law of the Muslims. Yet even as great a historian as Gilson skips right over it.

It goes without saying that Islam had a conclusive and, one might say, privileged position in the conjunctionist texts of Mâsha'allâh and Abû mash'ar: precisely at the origin of the literature on the great conjunctions and the vicissitudes that followed there was no sign of the pessimistic tone that

[40] Étienne Gilson, *Les métamorphoses de la Cité de Dieu* (Louvain: Publications universitaires de Louvain, 1952), 104–5, a page which has been quoted and commented *infra*, Chapter VI, pp. 19–20, n. 52.

Puech noted in the Greek thesis of the "degeneration" that was inevitable as time went on.[41] It also should be stressed, regarding Bacon and Gilson, that the fact of succession among the various religions – a succession determined by a criterion as heteronomic as astral conjunctions – ends up presenting them as equal and putting them all on the same natural level. This is in reality the tendency that is present – even if it is not always totally conscious – in the many texts dedicated to the topic. There is perhaps one case that provides an exception, the Joachimist case of the Antichrist that introduces a prediction of the End, of the Last Days. This Joachimist point of view is typical of Bacon, who was not famous for his orthodoxy, but this point of view is not frequent among theorists of medieval history. It was with the end of the Quattrocento, as Marjorie Reeves notes,[42] that the combination of Joachimism and conjunctionist astrology became topical, but at that point it involved a "mixed" Antichrist, that is, a phase of suffering, cataclysms, and purification that the elect must live through in order to institute the New Age.

Along with the idea of the plurality of religions and their vicissitudes, there was the topic, less threatening to orthodoxy but nonetheless relevant for the philosophy of history, of the circular conception of the varying fortunes of empires and nations. A text of the greatest philosopher and theologian of the Christian Middle Ages, the *Expositio* of Thomas Aquinas, has recently received new attention. This text concerns Aristotle's *Politics*, a work that discusses the Platonic theory of degenerescence in forms of government. Frank Manuel has noted that in the later Renaissance from Machiavelli to

[41] Puech, "Gnosis and Time," p. 43. According to Puech "the core of the Greeks' feeling about time […] was experienced as a 'degenerescence' – the notion of continuous progress in time was unheard of." This led to "the inability of the Greek mind to develop an authentic philosophy of history": in fact about time they had "essentially a cosmological conception... . Time is a part of a cosmic order; on its own level it is an effect and an expression of that order. If it moves in a circle, it is because, in its own way, it imitates the cyclical course of the stars" (pp. 43–4).

[42] Marjorie Reeves, *The Influence of Prophecy in the Later Middle Ages: A Study in Joachimism* (Oxford: Clarendon Press, 1969; Notre Dame: University of Notre Dame Press, 1993).

Bodin, this was a topical *textus* for the revival of discussions of cyclicity.[43] Thomas Aquinas saw in it a precise cyclicity of the astrological type.[44]

It might be thought that this "universal" application of astrological prediction was the most repugnant to orthodox Christianity: instead, it seems that, while individual astrology (*geniturae*, *interrogationes*, *electiones*) was censured more often because it countered the principle of free will, many masters of the thirteenth century, Thomas Aquinas, but also Bonaventure, and, even more, Albertus Magnus, indulged in such general, collective predictions ("*in communi, in pluribus, in multitudine.*").

Roger Bacon writes, "in this section a wise astrologer is able to look up and observe the stars in a useful way concerning usages and laws and religions and wars and peace etc., matters related to the state of cities, regions and

[43] Manuel, *Shapes of Philosophical History*, p. 52. According to Manuel, the principal sources of texts on cyclical theory were, above all, "the political ideas of Aristotle and Polybius." Independent of Manuel, Reinhart Koselleck, *Futures Past*, p. 16 (see also p. 36), declares that it is "not surprising that the ancient pattern of cycles put back into circulation by Machiavelli found such general support." Koselleck repeatedly notes that "astrology played a role that it is important not to underestimate; during the Renaissance it was at its peak, its effects however persisting undiminished until the natural sciences (which themselves made their beginnings thanks to it) slowly brought astrology into discredit" (*Futures Past*, 9–10), and he remarks that "Revolution, at first derived from the natural movement of the stars and thus introduced into the natural rhythm of history as a cyclical metaphor, henceforth attained an irreversible direction" (*Futures Past*, 18n). On the latter point, see Karl Griewank, *Der neuzeitliche Revolutionsbegriff: Enstehung und Entwicklung* (1955), in Italian translation with an excellent introduction by C. Cesa as *Il Concetto moderno di rivoluzione* (Florence: La Nuova Italia, 1979); Karl-Heinz Bender, *Revolutionen: Die Enstehung des politischen Revolutionsbegriffes in Frankreich zwischen Mittelalter und Aufklärung*n (Munich: Fink, 1977); and Bender, *Geschichtliche Grundbegriffe: Historisches Lexicon zur politisch-sozialen Sprache in Deutschland*, ed. Otto Brunner, et al., 8 vols (Stuttgart: Klett-Cotta, 1972–97), esp. the entries under "Revolution," "Rebellion," "Aufruhr," "Bürgerkrieg/Millelalter," written by. J. Fischer.

[44] Tullio Gregory, "Temps astrologique et temps chrétien," in *Le temps chrétien de la fin de l'Antiquité au Moyen Age (IIIe–XIIIe siècle)*, Congrès international CNRS, 1981, ed. Jean-Marie Leroux (Paris: Éditions du Centre national de la recherche scientifique, 1984), p. 560. Commenting on this passage of Thomas's commentary on the *Politics* ("Omnia quae fiunt hic secundum naturam reducuntur in superioribus in aliquam figuram caelestem... . Quia igitur respublica est aliquid causatum, hic dixit eam causari ab aliqua figura caelesti, et corrumpi per recessum ab ea in quodam periodo temporis determinato:"), Gregory sees in this something that, like a "new astrological time," he opposes to "Christian time" and traces throughout medieval culture after the twelfth century, or after the appearance of Arabo-Latin translations of the *philosophi-naturales*. This is not a conception of an irrationalist tendency: to the contrary, if it has at times been disputed regarding its limits, its reality and efficacy are admitted by all in full "respect of the principle of the causality of cycles." See also *infra*, Chapter VI, pp. 21–3, and note 63.

kingdoms."[45] Many agreed with him: in the Fourtheen Century there was a real school of conjunctionists, among whom John of Ashenden, the object of a study by J.D. North.[46] Gregory states that for these Latin authors "the drama of the *historia salutis* seems to disappear in a cosmos in which the heavens are the lords of time, the *chronocratores*."[47] This means that we are always dealing with a history dominated by a superior force external to events themselves; however, the conception of celestial influence, which for us the Moderns – at least, after Voltaire – is superstitious, primitive and scientifically false, might once, in opposition to the Augustinian conception, have had a "secularizing" function.[48] Gregory identifies a form of astrological sociology in the Latin Middle Ages: "Precisely from the planets that ruled each people and each region there came not only the characteristics, customs, religions, and rites of each one of these, but also their reciprocal relations, wars, and eventually the victory of the group that was favored by the celestial configuration."[49] We should not forget that in the second half of the fourteenth century Ibn Khaldûn wrote his *Introduction to Universal History* (*Muqaddimah*), a historical master work organized on the basis of these concepts. The name of the historian Ibn Khaldûn is in a certain sense fortunate and is recorded more often than the names of the theorists. Even Frank Manuel mentions him:[50] practically mute regarding the Middle Ages, in treating the Renaissance Manuel shows a meritorious interest in the cyclical theme, but is totally deaf to everything that does not come from a classical (or, on occasion, a Judeo-Christian) source. He writes, in fact, that "it is by now a commonplace that the rediscovery of the classical corpus during the Renaissance was accompanied

45 Bacon, *Opus Maius*, pp. 251–2 : "Prudens astrologus potest multa considerare utiliter in hac parte super moribus et legibus et sectis et guerris et pace et huiusmodi, quae pertinent ad republicam civitatum, provinciarum et regnorum", cited in Gregory, "Temps astrologique," 565–6.

46 J.D. North, "Astrology and the Fortunes of Churches," *Centaurus* 24 (1980): 181–211.

47 Gregory, "Temps astrologique," p. 565.

48 In a conference held at the Wisseschaftskolleg zu Berlin I happened to debate this point with a very brilliant colleague and friend, Kryzstof Pomian, who, speaking of Löwith and the terminological innovation introduced by Voltaire's *Philosophie de l'histoire*, considered such an astrological conception a "theology" of history: see Pomian's review of "*Astrologi hallucinati.*" *Stars and the End of the World in Luther's Time*, ed. Paola Zambelli (Berlin and New York: W. De Gruyter, 1986), in *Le Débat* 6 (1982): 88–92. After making a number of polemical points, Pomian went on to formulate a "naturalistic theology of history," but in an attempt to keep out of such theological subtleties, I try to speak simply of theory or conception of history.

49 Gregory, "Temps astrologique," p. 651.

50 Manuel, *Shapes of Philosophical History*, pp. 57–8.

by a revival of pagan cyclical conceptions of philosophical history."[51] To be sure, as long as the intellectuals remained Christian (that is, Manuel calculates, at least up to the end of the seventeenth century), the Augustinian vision of the two cities and their linear history remained profoundly imbedded in people's minds. Theory of cycles "reborn made its way surreptitiously, first insinuating itself into works on political theory, slowly carving out for itself a separate field, secular history, in which the circular views could be applied with relative impunity without disturbing the Judeo-Christian axis of world history."[52] Manuel circumscribes the Renaissance to Machiavelli, Giovanni Pico della Mirandola, and a few authors of the later sixteenth century: Jean Bodin, Louis Le Roy, Giovanni Botero, Bruno, Campanella, Fulke Greville, Walter Raleigh, La Popelinière, as well as Giambattista Vico and Boulainvilliers. Some of these, Bodin and Le Roy, for example, were not only contemporaries to the Copernican astronomical revolution, but "were, among other things, heirs to a great astrological tradition." In general, however, Manuel seems to hold that astrology and cosmology were a new aspect that joined the cyclical vision no earlier than the Renaissance. "Though Aristotelian and Polybian political ideas are the basic substance of Renaissance cyclism, the conception had penetrated deeper and spread wider than in historical consciousness alone: it had extended roots into astronomy and cosmology, into metaphysics, a sophisticated astrology, and a cabalistic numerology."[53] In short, for Manuel, "the Renaissance writers directly, almost slavishly, depended on the cyclical theories they found in the ancient texts."[54]

I may have displayed little generosity in using Manuel's study, a work more sensitive than many others to the entire problematics of the cyclical in the philosophical and historical fields, as my polemical target, but in these lectures given at Stanford University in 1964 by a historian whom everyone

51 On the "revival of pagan cyclical conceptions of philosophical history," see ibid., 48.

52 Ibid. Absent in Manuel is the highly complex question of the astrological conceptions of the Protestant reformers: Luther's diffidence in this regard is well known, on which, however, see Mario Miegge, "Ordine e novità nello spettacolo della storia universale: Sui prolegomeni di F. Melantone and di K. Peucer al "Chronicon Carionis," in Sandro Cardinali, Mario Miegge, et al., *Saggi sulla rappresentazione del tempo tra Riforma e Illuminismo* (Bologna: Cappelli, 1987), p. 37, n. 43. Miegge notes a highly suggestive shift in the context of cyclical theory: "The word and the grace of God are like a moving rainstorm that does not return to where it has been before. They were with the Jews, but now they have nothing. Paul brought them into the land of the Greeks. Now the Turks have them. Rome and the Latin lands have had them. Now the Pope has them! And you Germans cannot think that you will have them forever."

53 Manuel, *Shapes of Philosophical History*, p. 52.

54 Ibid., p. 51.

admires for his studies on theological debate in Newton age, I see an example of a *status quaestionis* that I have sought to reconstruct in summary fashion. To conclude, I would like to discuss two or three Renaissance documents, summarizing an analysis that I have already offered elsewhere.[55]

* * *

For a long time, the "great conjunctions" indubitably furnished a system of periodization and a catastrophic perspective to universal history and the history of nature. At intervals calculated variously the major planets (Saturn, Jupiter, Mars) in their conjunctions cause or at least signify "the change of religions, the mutation of reigns, and the advent of the prophets,"[56] that is, events that had consequences over the mid or long term. Giovanni Pico formulates this doctrine following its most ancient theorist, Mâshâ'allâh, and he dedicates all of book 5 of his *Disputationes adversus astrologiam divinatricem* to confuting "the principal astrologists about the great conjunctions and ... show the lie of those who have attempted to connect with them the major terrestrial events," and counters the many scholars who assert that

> there have never been changes of religion, the advent of prophets, [or] grandiose events among men that were not preceded by some great conjunction of the superior stars, Saturn with Jupiter in particular.[57]

Pico stresses a number of discrepancies in the calculation of these conjunctions and in the comparative relevance attributed to them in order to

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55 See note 67.

56 Giovanni Pico della Mirandola, *Disputationes adversus astrologiam divinatricem*, ed. Eugenio Garin, 2 vols. (Florence: Vallecchi, 1946–52), 1:545.

57 Pico's polemics are aimed at Roger Bacon, Henri Bate de Malines, and Pierre d'Ailly, discussing a number of technical questions such as, for example, the generalized habit of indicating the *motus medius* (that is, rectified and abstract, not real motion) of the conjunctions. What interests me most is chapter 9 (1:585), where he states: "On Noah's Flood the astrologers contradict themselves and the truth, and even if we concede to them what they want, they still do not succeed in proving what they claim." He continues, "Let us admit that Saturn and Jupiter have a conjunction in Cancer: was this why the world was submerged in waters? But more than ten times after then they have been conjoined in the same constellation, and not for that reason, I do not say that the world perished, but not even a part of it was submerged, let alone the entire universe" (1:589). Moreover, Noah's Flood must have occurred "in the middle of the triple igneous event, through which the superior planets had passed 159 years before the deluge and where they remained for 120 years after the submersion of the world... . It is thus clear that at the time of the universal deluge there was no conjunction such as those such people imagine."

rebut "usefully the astrological principles regarding the great conjunctions" and to persuade "the unprepared [that] there never has been a change of religion, the advent of prophets, or grandiose events among men that were not preceded by some conjunction of the superior stars, in particular Saturn with Jupiter," the planets that presided over religious worship and political power. Other arguments interest me as well. Pico criticizes the astrologists "per tot millenaria annorum discurrentes," because they based their calculations on chronologies, chronicles, and universal histories, because they used analogous periodizations in the diastematic sense, and, later, in a specifically astrological sense, indicating with exuberant certainty: "here is ... the constellation that produced the deluge, here is the one that generated Moses, here is the one that preceded the coming of Jesus, here is the one that preceded the religion of Muhammed."[58] Pico introduced into this polemical framework a relevant historical observation: this doctrine, which in its own times was considered "certain and universally accepted" was not internalized by the entire tradition of the astrologists. Not even the great Ptolemy accepted it, but only the Arabs Mâshâ'allâh (seventh century), al-Kindi (after 870), and Abû mash'ar (885), followed, unfortunately, by many Christians: among them, I might add, not only astrologists and theologians, but historians such as Giovanni Villani. In substance, the historical distinction that Pico makes is well founded: obviously, we cannot ignore the Greek doctrine of the "Great Year." With the return of all the celestial bodies to the grade zero of the ecliptic or, according to a late author such as Nemesius of Emesa, to their point of departure, the "Great Year" gives rise to a total catastrophe for both nature and civilization, followed by a generation that has no memory of what has gone before. This doctrine was largely remembered in the Middle Ages thanks to the *Timaeus* (39d), with commentary by Calcidius.

When, in the *Disputationes* in 1492–94, Pico wanted to do away with astrological theory in general and especially that part of it that framed universal history and the history of nature, not according to divine providence but according to the periodic motion of the configurations and their encounters with one another, Pico claimed "that the power of the planets in conjunction is no greater than what they have when they are separate. That this produces conjunctions is a novelty derived from a misunderstanding of a passage in Ptolemy."[59] Pico continues:

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58 Ibid., 1:520ff. (bk. V. chap. 1).

59 Ibid., 1: 544ff. (bk. V. chap. 5).

> In fact none of the ancients has ever made the great events of the world depend on what they call great conjunctions; Firmicus Maternus does not speak of them, even though he was an indefatigable investigator of things astrological; not Paul; not Hephaestion; not Astaxarebus, nor Ptolemy himself, who will be our witness here... . Ptolemy, then, in the second book of the *Apotelesmata* showing how to predict the great events of the world, refers them all exclusively to eclipses of the Sun and of the Moon ... given that great and universal effects must in fact be referred to supremely universal and efficacious causes. Now everyone admits that among all the planets only two have a universal efficacy, the Sun and the Moon.

Pico compares this chapter (II, 4) of the *Tetrabiblos* to Haly Haben Rodan, its commentator, to the pseudo-Ptolemaic *Centiloquium*, to Mâ-shâ'allâh and Abraham Avenezra, then, in particular, to Abû Mas'har, "the principal exponent of this theory."[60] He sustains that the entire defense of the conjunctionist theory is founded uniquely on "a misunderstanding of the ancients,"[61] because the "barbarous version" attributes to these conjunctions quite a bit more than Ptolemy attributes to them (even in *verbum* 50 of the pseudoepigraphic *Centiloquium*), thanks to the *Timaeus* (39d) and to the commentary of Calcidius, known throughout the Middle Ages.[62]

It has been remarked, however, that there is a notable difference between the theory of *ecpyrosis* (repeated but total regeneration that leaves no memory, nor permits the transmission of any experience) and the complex case list of conjunctions (maximum, great, median, etc.) that was introduced and calculated only beginning with Iranian culture of the Sassanid era.[63] The transmission of this tradition was assured by the three Islamic writers already mentioned, but especially by Abû mash'ar's *Introductorium maius* and his *De*

[60] Ibid., 1: 562ff.

[61] Ibid., 1: 550.

[62] Plato, *Timaeus a Calcidio translatus commentarioque instructus*. In societatem operis coniuncto P.J. Jensen edidit J.H. Waszink (London: Warburg Institute, 1962), p. 32: "Est tamen intellectu facile, quod perfectus temporis numerus perfectum annum compleat tunc demum, cum omnium octo circumactionum cursus peracti velut ad originem atque exordium circumactionis alterius revertuntur, quam semper idem atque uniformis motus dimetietur; quam ob causam cetera quoque nata sunt astra, quae per caelum meantia conversiones habent, ut quam simillimum esset omne hoc perfecto illi quod mente perspicitur animali aevoque exaequatae naturae temporis socia natura nancisceretur imaginem."

[63] E.S. Kennedy, "The World-Year Concept in Islamic Astrology," in *Studies in the Islamic Exact Sciences* (Beirut, 1983), pp. 351–71; David Pingree, "Astronomy and Astrology in India and Iran," *Isis* 54 (1963): 229–47.

magnis coniuncitionibus, translated as early as the twelfth century, retranslated and then printed as an incunabulum. Abû mash'ar is known to us not only for having introduced to the Latin world Aristotelian concepts such as necessity and contingence,[64] but also for producing a faithful synthesis of the chronology and the astrological history of Mâ-shâ'allâh.

We know that Pico's *Disputationes* is a posthumous work, but already in his earlier *Commento sopra alla canzone d'amore del Benivieni*, he presents the theory of the great year and discusses the difficulties that arose from it (no less than from the conjunctionist theory) for the Christian notions of creation and *novitas* (the beginning of the world in time):

> I have said that all the Platonists agree that the world is eternal because with Atticus and Plutarch and others who hold this present order of the world to have had a beginning, they do not on that account hold that before this there was nothing but God, as our Catholic church puts it, but believe that before this orderly motion of the heavens and present arrangement of earthly things there was a disorderly and turbulent motion governed by a depraved and sickly soul. Thus they would allow infinite worlds to have existed because the world has been reduced to order from the confusion of chaos an infinite number of times, and infinite times it has been returned to that. With this the opinion of the Talmudists seems to agree, who asked what God was doing from eternity and answered that He was creating worlds and then laying them waste, although following the basic principles of the cabalists we can give their words both a truer and more fitting sense. Aristotle attributes this opinion to Plato and on that account sometimes says of him that he alone let the world begin in time; sometimes, as in Book XII of the *Metaphysics*, Aristotle confesses that according to Plato motion is eternal.[65]

These theological and metaphysical preoccupations of the young Giovanni Pico recall the discussions and condemnations of 1277 regarding the eternity of the world; to introduce changes in the world supposing a eternally repeated passage from chaos to order, according to Pico, would be

[64] Richard Joseph Lemay, *Abû ma'shar and Latin Aristotelianism in the Twelfth Century: The Recovery of Aristotle's Natural Philosophy through Arabic Astrology*, American University Publications of the Faculty of Arts and Sciences, Oriental Series no. 38 (Beirut: Catholic Press, 1962).

[65] Giovanni Pico della Mirandola, *De dignitate hominis e scritti vari*, ed. Eugenio Garin (Florence: Vallecchi, 1942), pp. 469–70 (chapter 7), quoted from *Commentary on a Poem of Platonic Love*, trans. Douglas Carmichael (Lanham MD and London: UP of America, 1986), pp. 17–18.

to concede the playful operation of a God who is "morbidly wicked "*(infermo e pravo)*. By criticizing Plato in this manner in 1486, Pico seemed closer to Étienne Tempier than to Marsilio Ficino.

In the later *Disputationes*, chapter 17, the final chapter of book V, entitled "How lightly the astrologers sustain that there can be six religions," Pico notes "with what graceful invention they bring together, so to say, in one bundle all past religions and the one to come of the Antichrist!" But, Pico adds, their "accounts do not add up" because it is not just to distinguish the religion of the Chaldeans from that of the Egyptians, both of which are a form of idolatry; moreover, "if instead they intend to admit separately the various species of idolatry, there are not as many stars in the skies as there are religions on earth."[66]

A number of astrologers responded to Pico's criticisms. The great humanist Giovanni Pontano, in the manuscript of his *De rebus caelestibus*, and the students in his second Neapolitan school, among them some who wrote on the deluge of 1524 such as Johannes Abiosus, Luca Gaurico, and Agostino Nifo, the great scholastic "adopted" by Pope Leo X, chose the same line of defense, which consisted in turning Pico's arguments upside down without citing them. They refused to take the great conjunctions into account, with the exception of the eclipses of the Sun and the Moon, which Ptolemy had written about. Pico, too, had dealt with eclipses, but in his theories the conjunctions of the two *Luminaria* had only natural consequences linked to a shorter or longer absence of light and heat. What makes these discussions about astrology an exemplary case is that, some Neapolitan authors and some of the German ones (Melanchthon included) debated the topic in the course of the long polemic on the end of the world in 1524; this debate began after Pico and Pontano had died before, but at the beginning of the sixteenth century their arguments and remembrance of their thought were still alive. It is interesting to measure the efficacy of the ideas of a great intellectual such as Giovanni Pico at a time when, in a less elevated and less rigorous context, but one enriched by special historical circumstances, the debate involved a popular audience, propagandistic objectives, religious questions, and various national characteristics. In the context of this debate there was an anti-Arabic side (Albert Pigge, Nifo, Scepper, Tannstetter, Aegidius Camillus, Ramberto Malatesta da Sogliano and his preceptor Ruffo, Rocha, and de Beja) and a pro-Arabic side (Tommaso Giannotti da Ravenna, Michele da Pietrasanta,

[66] Pico, *Disputationes*, 1: 616–19.

Stöffler, and Johannes Abiosus). The latter sustained that the sciences are not a contribution of the Greeks alone, but also of the Egyptians and the Arabs.[67]

I have extrapolated this one point out of my researches on the debate about the deluge to take it as a pretext for a formulation – absolutely provisional – of my thesis. This polemic between Pico and Pontano, each of whom were competent in astrological theory and well read both in its sources and in philological method, invites reflection on the role and the phases of similar polemics in the classical world and the Islamic world. Various formulations of the idea of cyclicity are present in the theory of history from ancient times to the Renaissance and beyond to the libertines; that idea – although founded on the assumption of celestial influence (which I beg you to believe is not an idea to which I myself would swear!) – paradoxically had a function that was secularizing and pluralistic, hence critical in the development of Christian theology of history, which indeed admitted a progress (or *procursus*?), but in one direction alone and with a transcendent conclusion. Among the various formulations of the idea of cyclicity the one that furnished what is probably the greatest contribution in this pluralistic sense is not the Great Year or the

[67] See Paola Zambelli, "Fine del mondo o inizio della propaganda? Astrologia, filosofia della storia e propaganda politico-religiosa nel dibattito sulla congiunzione del 1524," in *Scienze, credenze occulte, livelli di cultura*, Convegno internazionale di studi Istituto Nazionale Rinascimento, 1980 (Florence: L. S. Olschki, 1982), pp. 291–368; Id., "Philosophie, Theologie oder Astrologie der Geschichte?" *Jahrbuch des Wissenschaftskolleg zu Berlin* (1983–84): 345–56; Id., "Da Giulio II a Paolo II: Come l'astrologo provocatore Luca Gaurico divenne vescovo," in *La città dei segreti: Magia, astrologia e cultura esoterica a Roma (XV–XVIII secoli)*, ed. Fabio Troncarelli (Milan: Franco Angeli, 1985), pp. 299–323; Id., Profeti-astrologi sul medio periodo. Motivi pseudogioachimiti nel dibattito italiano e tedesco sulla fine del mondo per la grande congiunzione del 1524, in *Il profetismo gioachimita tra '400 e 500. Atti del III Congresso Internazionale di studi Gioachimiti*, ed. by G.L. Potestà, Genova, Ed. Marietti, 1991, pp. 273–86; Id., 'Eine Gustav Hellmanns Renaissance?", in *Annali dell'Istituto Storico italo-germanico*, XVIII, 1992, pp. 413–55; Id., "Astrologi consiglieri del principe a Wittenberg", *ibidem*, XVIII, 1992, pp. 497–543; Id., "Die grosse Planetenzusammenkunft in den Fischen von 1524: Die grosse Wessserung von 1524", in *Aby Warburg Bildersammlung zur Geschichte von Sternglaube und Sternkunde*, hrsg. v. U. Fleckner u. a., Hamburg, Dölling, u. Galitz Verlag, 1993, pp. 300–301; Id., 'Der Himmel über Wittenberg: Luther, Melanchthon und andere Beobachter von Kometen", in *Annali dell'Istituto Storico italo-germanico*, XX, 1994, pp. 39–62; Id., "Profezie, intolleranze e incoerenze nell' 'astrologia di terra e di cielo' alla vigilia della congiunzione del 1524", in *La formazione storica dell'alterità. Studi…offerti a A. Rotondò* ,ed. by H. Méchoulan, R.H. Popkin, G. Ricuperati, L. Simonutti, Firenze, Olschki, 2001, pp. 25–50. I have repeated here some ideas from my Introduction "The Astrological Theory of History" in *'Astrologi hallucinati'* (a reviewer wrote that for the Anglophone reader the argumentation and the citations I had used were not sufficiently clear. I hope that those of my readers who are more familiar with the history of philosophy and with the Latin language will find less difficulty).

pessimistic vision of "degeneration" that Puech described among the Greeks. A more stimulating contribution came – if I am not mistaken – from Arabic theorists of conjunctions and the consequent vicissitudes of churches and empires. The horoscope of religions was to have great popularity when it was combined with the theses of Averroes' *Destructio destructionum* on the role of the religious "sects" (the so-called "imposture of the religions"), as was stressed in Nifo, Pomponazzi, Cardanus, Vanini, and all the way down to the *Theophrastus redivivus*.[68] Was this not, more than the *procursus* of Augustine, a significant precedent for Voltaire's ideas? Despite the sarcasm with which such writers treated astrological superstitions, was it not the horoscope of religions rather than Augustinian theology that prepared the way for Voltaire's *Philosophie de l'histoire*?

(Translated by Lydia Cochrane)

[68] Among the many fundamental essays of Eugenio Garin on the importance of astrology in the history of medieval and Renaissance culture, aside from those collected in *Medioevo e Rinascimento: Studi e ricerche* (Bari:Laterza, 1954), see, in particular, Eugenio Garin, *Lo zodiaco della vita: La polemica sull'astrologia dal Trecento al Cinquecento* (Rome and Bari: Laterza, 1976), in English translation by Carolyn Jackson and June Allen, translation revised by Claire Robertson, as *Astrology in the Renaissance: The Zodiac of Life* (London and Boston: Routledge & Kegan Paul, 1983), which briefly considers this aspect of the question. See also Tullio Gregory, *Theophrastus redivivus: Erudizione e ateismo nel Seicento* (Naples: Morano, 1979), esp. pp. 64ff.

V

"The Earth was like a Sponge and Men lived within it": Ideas on Spontaneous Generation of Man among Islamic and Latin Thinkers

From hair come snakes, from figs scorpions, from earth mice, and from rain frogs.

Avicenna, *de diluviis*

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1. Generatio / gignitio

In this conference,[1] whatever theme each of us has chosen to discuss in the Islamic and Latin world, we can be forgiven for not tracing our topic back to its roots in the ancient East or Greco-Roman or Hebraic traditions. I make

[1] *Islamic Freethinking and Western Radicalism: Possible Ways of Transmission*, a conference held at the Institute for Advanced Study, School of Historical Studies, at Princeton, NJ, 21–4 April 2008. No acts have been published.

no claim to be able to trace the notion of spontaneous generation from its beginnings in the ancient East, from its Hebraic roots, or from its Greco-Roman roots, although such roots surface here and there in Islamic culture and in the culture of the Latin Middle Ages and the Renaissance. I would go so far as to say that those roots are robust and highly visible. I offer only one example: the paraphrases and/or commentaries to *De generatione animalium* and other of Aristotle's works on natural history (in particular the *De generatione et corruptione*) could supply material for a thick book and would, by themselves, furnish a basic line of transmission, even for the period we are considering.[2]

> In an age dominated by common-sense observations and interpre tations, there was no need to question the occurrence of spontaneous generation. It was an observational fact. Eels were generated out of mud, fleas and lice appeared on the bodies of man and beast, and parasitic worms likewise arose internally. Insects sprang from plant galls and decaying plant and animal matter, fungi from trees and earth. Pond water generated an awesome variety of animal and plant life. Such beliefs were commonplace at the beginning of the seventeenth century, at which time explanation of such events derived from antiquity."

This is how John Farley, a biologist turned historian of science of the seventeenth to the twentieth century, expressed the situation more than thirty years ago.[3] Also an excellent historian, Jacques Roger wrote that spontaneous generation was universally accepted:

> In any case, the relevant question was that of spontaneous generation. For if it was quite easy to imagine that a living being brought forth from

[2] This has become a topical theme in the secondary literature on Aristotle's works on natural science on form and *synolon* and on teleology: see, among other works, D.M. Balme, *Development of Biology in Aristotle and Theophrastus*, "Phronesis," VIII, 1962, p. 1–104; J. Lennox, *Teleology, Chance and Aristotle's Theory of Spontaneous Generation*, "Journal of the History of Philosophy, XX, 1982, pp. 219–38; A. Gotthelf, *Teleology and Spontaneous Generation in Aristotle: A Discussion*, "Apeiron," XXII/4, 1992, pp. 181–92; Lloyd G.E.R., *Aristotelian Explorations*, Cambridge U.P. 1996, pp. 104–25 ("Sponaneous generation and metamorphosis").

[3] J. Farley, *The Spontaneous Generation Controversy from Descartes to Oparin*, Baltimore-London, J. Hopkins U.P. 1977, pp. 8. Cf. E. Mendelsohn. *Heat and Life: the Deveopment of the Theory of Animal Life*, Cambridge, Ma., Harvard U.P. 1964; Id., *Philosophical Biology*, in *Topics in Philosophy*, ed. by M. Greene and E. Mendelsohn, Dordrecht-Boston, Reidel 1976; H. Harris, *Things come to Life. Spontaneous Generation Revisited*, Oxford, Oxford U.P. 2002. See also *Transitions and Borders between Animals, Humans and Machines 1600–1800*, ed. by Tobias Cheung, Leiden, Brill 2010 (forthcoming) and Cheung, *Res vivens. Agentenmodelle organischer Ordnung 1600–1800*, Freiburg, Rombach 2008, dealing with the problem in the seventeenth and eighteenth centuries.

> another living being of the same species was animated by a formative virtue, it was much more difficult to understand how a being generated from dead or inert matter was animated. The fact [of spontaneous generation] itself was not seriously questioned by anyone. It had in its favor the unanimous authority of the ancients, as well as innumerable proofs drawn from everyday experience. It is not surprising, then, to find that neither Father Marin Mersenne, Harvey, nor Descartes questioned it. It was not, then, a belief held only by backward-looking minds and, if Jean-Baptiste van Helmont's mice might seem a bit much, at least fleas, lice, and other "worms" had full license to be born from rot, mud, dead wood, and so on. Now, if one had to give in to the evidence of facts and accept the phenomenon, it was still not easy to explain, even leaving aside the theological difficulties it occasioned, and the differing opinions possibly held on the final cause of this anarchical mode of generation. Aristotle's explanation itself lacked clarity. Indeed, according to him, this type of generation was always accompanied by putrefaction and humidity. The putrefaction was merely a sign: what rotted was merely the residue of usable matter that had become the object of a coction analogous to that which menstrual blood underwent and that seemed here indeed to be the work of the "heat of the weather in the ambient milieu. As for animation, it derived from water.[4]

[4] J. Roger, *Les sciences de la vie dans la pensée française du XVIIIe siècle La génération des animaux de Descartes à l'Encyclopédie*, Paris, A. Colin 1963, p. 79: "Quoi qu'il en soit, il est une question que nous devons étudier ici, c'est celle de la génération spontanée. Car s'il est assez aisé d'imaginer qu'un être vivant issu d'un être vivant de la même espèce est animé d'une vertu formatrice, il est beaucoup plus difficile de concevoir comment peut être animé un être né d'une matière morte ou inerte. Le fait lui-même n'est sérieusement contesté par personne. Il a pour lui l'autorité unanime des Anciens, et les preuves innombrables tirées de l'expérience courante. Il n'est donc pas surprenant de voir que Mersenne, Harvey, Descartes, ne le mettent pas en doute. Ce n'est donc pas une croyance réservée aux esprits retardataires, et si les souris de Van Helmont peuvent paraître un peu grosses, du moins les puces, poux et autres «vers» ont-ils pleine licence de naître de la pourriture, de la boue, du bois mort, etc. Or, s'il faut bien se rendre à l'évidence des faits et admettre le phénomène, il n'est pas facile de l'expliquer, sans même parler des difficultés théologiques qu'il peut soulever, ni des diverses opinions qu'on peut avoir sur la cause finale de ce mode anarchique de génération. L'explication d'Aristote, elle-même, manque de clarté. Selon lui, en effet, ce type de génération s'accompagne toujours de putréfaction et d'humidité. La putréfaction n'est qu'un signe: ce qui se putréfie n'est que le résidu des matières utilisables qui ont fait l'objet d'une coction analogue à celle que reçoit le sang menstruel, et qui semble bien être ici l'œuvre de la 'chaleur du temps dans le milieu ambiant'. Quant à l'animation, elle provient de l'eau." English trans. quoted from *The Life Sciences in Eighteenth-Century French Thought*, ed. Keith R. Benson, trans. Robert Ellrich, Stanford: Stanford U.P. 1997, pp. 60–61.

This fact is confirmed, among other things, by the fact that in the medieval vocabulary the terms for the two forms of reproduction stress the difference: *generatio* (the more general case, includes *abiogenesis*, or generation from non-living matter), as opposed to *gignitio* (reproduction by sexual conjunction).

After a memorable essay by Bruno Nardi,[5] historiography has contributed little to the notion of "autochthons" (*terrigenae*; *indigenae*), that is, earthborns or offsprings of spontaneous generation in humans and not only in animals.[6] Animal generation is a problematic that belongs within the history of the science of life, whereas human generation is a problem in the history of philosophy and theology.

There are now welcome signs of a revival of such studies. Maaike van der Lugt dedicates a chapter to the question in a book on "extraordinary generation," a work that recalls the brilliant anecdotal style of Lorraine Daston and Katherine Park, which van der Lugt transfers to the "central" Latin Middle Ages[7].

Dag Nikolaus Hasse, an Arabist who specializes in Avicenna, focuses on the exegetic tradition of Aristotle, reconstructing the idea of original generation (*Urzeugung*).[8] He considers Platonism and Aristotelianism,[9] but not even in an article where he dedicates the first paragraph to the Greeks does he take into account atomist, Stoic, and Neoplatonic currents.

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5 B. Nardi, *Pietro Pomponazzi e la teoria di Avicenna sulla generazione spontanea dell'uomo*, in Id., *Studi su Pietro Pomponazzi*, Florence, Le Monnier 1965. pp. 305–19, where Nardi treats the metaphysical question of the origin of life on earth more than the biological problem of spontaneous generation of the inferior species.

6 Nardi, *Pietro Pomponazzi* analyzes the digression of Pomponazzi's 1518 course, where it is quite clear that generation *ex putri* was equivalent to the Democritan chance generation: "Disputat Commentator an eadem specie possunt generari a casu, id est ex putredine." Pomponazzi took up the theme again in his 1522 course on the *Meteora* and in a series of treatises from his *Apologia* to his *De incantationibus*, which discusses the question at some length, and his *De nutritione* published in 1521. See below, note 14.

7 M. van der Lugt, *Le ver, le demon et la vierge. Les theories médiévales de la generation extraordinaire*, Paris, Les belles letters, 2004, p. 19n.; K. Park and L. Daston, *Wonders and the Order of Nature, 1150–1750*, New York, Zone Books 1998.

8 D.N. Hasse, *Urzeugung und Weltbild. Aristoteles, Ibn Rushd, Pasteur*, Hildesheim, Olms, 2006; Id., *Avicenna's* De anima *in the Latin West*, London, The Warburg Institute – Torino, N. Aragno, 2000; Id., *Plato arabico-latinus: Philosophy, Wisdom Literature, Occult Science*, in *The Platonic Tradition in the Midlle Ages*, eds S. Gersh and M.J.F.M. Hoenen, Berlin-New York, de Gruyter 2002, pp. 31–66.

9 Hasse, *Spontaneous Generation and the Ontology of Forms in Greek, Arabic and Medieval Latin Sources*, in *Classic Arabic Philosophy: Sources and Reception*, ed. by P. Adam, London, The Warburg Institute 2007, p. 150.

He sees in Gassendi proof that the question continued to be pertinent, but when he analyses this author he does not mention Epicurus or Lucretius: for him Gassendi shows an affinity only with the neoplatonist Themistius. For Hasse, "Thomas does not follow the Avicennian theory of the *Dator formarum*, even though it is present in the monotheistic context close to him"[10] (as if all the followers of monotheistic religions had to agree!). The *Dator formarum* is the only thematic line that interests Hasse, who writes [11] that the debate on *Urzeugung* was characterized "by a combination of images of the world and particular treatments." That combination was much more flexible than one might think, however – and this in spite of the fact that what was at stake were fundamental principles relating to the creation of the world, which depended strongly on the religious culture to which the thinker belonged.[12] Hasse fails to stress sufficiently that there is *generatio promiscua* when living creatures of the same species can be born by spontaneous generation and later *per gignitionem* (*ex propagine*); or that the maxim *Homo et sol generat hominem* refers to both of those forms of generation.

Hasse considers the idea of the spontaneous generation of man (especially of the *terrigenae* after universal catastrophes) a simple variant in the exegetic picture of some statements of Aristotle's, but, contrary to what he asserts, the problematics regarding the *autocthons*, reproposed and very much present

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10 Hasse, *Urzeugung*, p. 21: Themistius "eine platonische Position verteidigte." On Gassendi, see Roger, *Les sciences de la vie*, pp. 135–40 and passim; Robert Lenoble, *Mersenne, ou la naissance du mécanisme*, Paris: Vrin, 1971, 2nd ed., p. 234, cites Mersenne's *Quaestiones celeberrimae in Genesim*, Paris, Cramoisy 1623, col. 1823: "animalia quae nascuntur ex corruptione, quales sunt mures, pulices, muscae, et id genus." The idea of spontaneous generation in the version that limited it to the case of imperfect animals was to continue even into the time of the scientific revolution: see, for example Walter Pagel, *William Harvey's Biological Ideas*, New York, Hafner 1976, p. 233ff. In the case of worms and the like, that conception began to be contested with Francesco Redi.

11 Hasse states that he is following the approach of Jules L. Janssens, *The notions of Wāhib-al suwar (Giver of forms) and of Wahib al-'aql (Bestower of Intelligence) in Ibn Sina*, in *Intellect and Imagination dans la philosophie médievale*, eds M.C. Pacheco and J. Merinhos, Turnhout, Brepols 2006, I, pp. 551–62 and of D. Henry, *Themistius and Spontaneous Generation*, "Oxford Studies in Ancient Philosophy," 24, 2003, pp. 183–207.

12 Hasse, *Urzeugung*, p. 18. Hasse recognizes that "Thomas ist kein radikal-philosophischer Denker wie Averroes," but he does not mention that he was accused at the Council of Lyons and Albert had to go defend him. Certainly Thomas was not an Averroist, but his method of the "duae viae" was more radical than that of the Augustinians and Avicennists of the Franciscan school. One wonders if Hasse is familiar with Gilson, and in particular with his fundamental essay, *Pourquoi Saint Thomas a critiqué Saint Augustin?* , "Archives d'histoire littéraire et doctrinale du Moyen Age," I, 1926, pp. 5–127.

after the discovery of the indigenous peoples of the Americas, is respectable and interesting.[13]

2. Myths of origins

I feel no need to insist now on spontaneous generation in Plato and Aristotle, Albertus Magnus and Thomas Aquinas, Marsilio Ficino and Pico della Mirandola.[14] Naturally, much could be added to this, but going deeper into the question would carry us away from the topic at hand and throw off balance the needed comparison between Islam and modern and libertine thought, a comparison that is already risky and arduous. If we are interested in the history of this idea, however, we cannot ignore the presence of the *Timaeus* in the twelfth century, especially in Chartres,[15] nor the importance of Avicennist positions or the renewed platonic influence after Ficino had translated the *Statesman*,[16] as well as other dialogues, *Gorgias* (523a–e), and *Laws* (713a–714), where Plato presents the archaic myth of the "autochthons," connecting it to the problematic of the identical and the diverse (contingent) that is fundamental for the metaphysical conceptions of his mature works.

[13] Cf. G. Gliozzi, *Adamo e il nuovo mondo. La nascita dell'antropologia come ideologia coloniale: dalle genealogie bibliche alle teorie razziali (1500–1700)*, Florence, La Nuova Italia 1976; see also E.O. von Lippman, *Urzeugung und Lebenskraft*, Berlin, Springer 1933, p. 2 ff.; E. Garin, *Rinascite e rivoluzioni*, Bari-Rome, Laterza 1975, pp. 327–62.

[14] I have been working on this topic for some time and I had studied the ideas of these great authors on spontaneous generation in presenting an unknown syncretistic text printed by Tiberio Russiliano Sesto Calabrese, *Apologeticus adversus cucullatos* (1519), its critical edition has been published in my book *Una reincarnazione di Pico ai tempi di Pomponazzi*, Milan, Il polifilo 1994, pp. 62–7, 79–94 and passim. Naturally, much could be added to this, but going deeper into the question would carry us away from the topic at hand and throw off balance the needed comparison between Islam and modern and libertine thought, a comparison that is already risky and arduous.

[15] For the texts of the masters of Chartres see, among other works by Tullio Gregory, *La nouvelle idée de nature au XIIe siècle*, in *The Cultural Context of Medieval Learning*, ed. John E. Murdoch et al. (Dordrecht, Holland, and Boston Reidel 1975), pp. 195–6 (see below, note 57). See also Petrus Abelardus, *Expositio in Hexaemeron*, PL 178, col. 746D: "Veluti si terra sponte sua sine seminario aliquo plantas produceret vel bestias ex se, vel aqua volucres format."

[16] An entire section in *Reading the Statesman: Proceedings of the III Symposium Platonicum*, ed. Christopher J. Rowe, Sankt Augustin, Academia Verlag 1995, is dedicated to the myth of the autochthons in the *Statesman*. In these papers John Dillon, Luc Brisson, Michael Erler, Rudolph Schicker, and G.R.F. Ferrari discuss neo-Platonic (Plotinus, Olympiodorus, Severus, Proclus) interpretations of these pages of the dialogue.

Aristotle, for his part, had framed and rationalized the idea of spontaneous generation within the system of the four elements, the four elementary qualities, the four natural places, and the *elementata*. What is more, he speaks of a cyclical conception of nature and of universal history – a conception that was not without precedent, but that acquired authority with him, given that he had considered Democritus and Anaxagoras and carefully distinguished between their positions regarding atoms. In the tradition of Aristotelian commentary and in historiography, *a casu* was translated as *per accidens*, thus losing its materialistic meaning and the characteristic of Epicurean randomness (the fortuitous combination of atoms in the swirling void of primeval reality). Fragments of and commentary on the pre-Socratic physical naturalists can be read not only in Aristotle, but also in Lucretius and Firmicus Maternus; so-called Ionic geogony and zoogony enjoyed wide circulation thanks to Diodorus Siculus. Scholars ardently discuss Diodorus' inspiration, but most of them tend to subscribe to the thesis that links him to the Stoics.[17] According to Lucretius, to end the list, the generation of the primordial cosmos and, within that process, the *spontaneous* origin of animals and man, is posited *a casu*. The atomist and materialist idea of the generation of living beings *a casu* helps us to understand the polemic aimed at excluding that thesis as well as the apologetics of orthodox theologians. According to the classic definition of Ettore Bignone, "the theory of Empedocles forms a link in the zoogonic tradition that continues from the pre-Socratics to the Epicureans,"[18] a theory that has a radical orientation.

Lucretius writes:

> The earth, you see, first gave forth the generations of mortal creatures at that time, for there was great abundance of heat and moisture in the

[17] W. Spoerri, *Späthellenistische Berichte über Welt, Kultur und Götter*, "Schweizerische Berichte über Welt, Kultur und Götter," Heft 9 (Basel 1959), which reconstructs the history of the interpretation of Diodorus, comparing him (p. 118) to Ovid (*Met.* 1, 416 ss.: "cetera diversis tellus animalia formis / sponte sua peperit, postquam vetus humor ab igne / percaluit solis, caenumque udaeque paludes /intumuere aestu fecundaque semina rerum/ vivaci nutrita solo, ceu matrix in alvo, / creverunt faciemque aliquam cepere morando"). Beginning with Lactantius, who denounced Democritus (*Div. Inst.*, 7, 7, 9: "vermiculorum modo putavit effusos esse de terra homines"), and the Stoics (*Div. Inst.*, 7, 4, 3: "homines in omnibus terris et agris tanquam fungos esse generatos"; 2,10,16: "errantes quidam philosophi aiunt homines ceteraque animalia sine ullo artifice orta esse de terra…et ii maxime in ea fuere sententia qui esse providentia negant"); continuing all the way down to the humanists, to Bruno and to Vanini, the generation of man from earth was reproposed, often on the basis of Diodorus.

[18] E. Bignone, *I poeti filosofi della Grecia*, Torino, Bocca 1916, p. 584; cf. Appendix II. "Il ciclo cosmico. Cosmogonia e zoogonia di Empedocle," pp. 545–98.

> fields. Therefore, wherever a suitable place was found, wombs would grow, holding to the earth by roots; and when in due time the age of the infants broke these, fleeing from the moisture and seeking the air, nature would direct thither pores of the earth and make it discharge from these open veins a liquid like to milk, just as now when a woman has brought forth she is filled with sweet milk, because all that rush of nourishment is directed towards the breasts. Earth gave food for the children, warmth gave the raiment, the herbage a bed of abundance of down rich and soft. But the infancy of the world produced neither hard cold nor excessive heat nor winds of great force; for all things grow and gain strength together.[19]

If a similar fecundity cannot be seen in the age of Lucretius, that fact depends on the aging of the earth;[20] then, however, generation *ex putri* is

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[19] This translation comes from Lucretius, *De rerum natura* (V, vv 803–20), trans. W.H.D. Rouse, revised by M.F. Smith, Loeb Classical Library, Cambridge MA and London: Harvard U.P. 1992, pp. 441–3; Id., *De rerum natura*, ed. and Italian transl. by Guido Milanese, introduction by Emanuele Narducci, Milano, Mondadori 1992, pp. 380–81:

> "folliculos ut nunc teretes aestate cicadae
> linquunt sponte sua uictum uitamque petentes,
> tum tibi terra dedit primum mortalia saecla.
> Multus enim calor atque umor superabat in arvis.
> Hoc ubi quaeque loci regio opportuna dabatur,
> crescebant uteri terram radicibus apti;
> quos ubi tempore maturo patefecerat aetas
> infantum fugiens umorem aurasque petessent
> conuertebat ibi natura foramina terrae,
> et sucum uenis cogebat fundere apertis
> consimilem lactis, sicut nunc femina quaeque
> cum peperit, dulci repletur lacte, quod omnis
> impetus in mammas conuertitur ille alimenti.
> Terra cibum pueris, uestem vapor, herba cubile
> praebebat multa et molli lanugine abundans.
> At novitas mundi nec frigora dura ciebat,
> nec nimios aestus, nec magnis uiribus auras.
> Omnia enim pariter crescunt et robora sumunt."

[20] Lucretius, *De rerum natura* (III, vv. 1150–56), ed. Milanese-Narducci, p. 164:

> "Iamque adeo fracta est aetas effetaque tellus
> Vix animalia parva creat, quae cuncta creuauit
> Saecla deditque ferarum ingentia corpora partu.
> Haud, ut opinor, enim mortalia saecla superne
> Aurea de caelo demisit funis in arva,
> nec mare, nec fluctus plangentes saxa crearunt,
> sed genuit tellus eadem quae nunc alit ex se."

cf. P. Brien, *La génération des êtres vivants dans la philosophie épicurienne*, "Revue de synthèse," III S., n°.49–52, 1968, pp. 308–21. On bk. II of *De rerum naturae*, Brien at p. 313, wrote: "Pour l'épicurisme, comme pour toute l'antiquité, la terre est génératrice de vie. C'est dans le sein de la terre que les combinasons d'atomes prennet l'état de vie pour devenir des êtres vivants. Ils naissent par génération spontaneée."

[21] Lucretius, *De rerum natura* (III, vv. 713–21), ed. Milanese-Narducci, p. 212:

> "Semina praeterea linquuntur necne animai
> corpore in exanimo? Quod si linquuntur et insunt,
> haut erit ut merito inmortalis possit haberi,
> partibus amissis quoniam libata recessit.
> Sin ita sinceris membris ablata profugit
> ut nullas partis in corpore liquerit ex se,
> unde cadavera rancenti iam viscere vermes
> expirant, atque unde animantum copia tanta
> exos et exanguis tumidos perfluctuat artus?"

(Cf. Rouse translation, III, vv. 713–21, pp. 243–5: "Again, do any seeds of spirit remain or not in the lifeless body? Now if any are left and are in it, it will be impossible rightly to consider the spirit immortal, since it has gone away diminished by the loss of some parts. But if it has departed and fled forth with its component parts so intact that it has left in the body no particles of itself, how do corpses exhale worms from flesh already grown putrid, whence comes all the great mass of living creatures, boneless and bloodless, that surge through the swelling.")

[22] R. Sabbadini, *Le scoperte dei codici latini e greci ne' secoli XIV e XV*, Florence, Sansoni 1967, 2 ed., I, p. 80n; M. Lehnerdt, *Lukretius in der Renaissance*, Königsberg 1904, pp. 3–4; E. Flores, *Le scoperte di Poggio e il testo di Lucrezio*, Naples, Liguori 1980; M.D. Reeve, *The Italian Tradition of Lucrecius*, "Italia medievale e umanistica," 23, 1980, pp. 27–48; S. Gambino Serra, *Savoir de la nature et poésie des choses: Lucrèce et Epicure à la Renaissance italienne*, Paris, Champion 2004; V. Prosperi, *"Di soavi licor l'orlo del vaso": la fortuna di Lucrezio dall'Umanesimo alla Controriforma*, Torino, Aragno 2004; A. Brown, *The Return of Lucretius to Renaissance Florence*, Cambridge Ma., Harvard UP 2010.

admitted.[21] It is true that little is known about Islamic atomism, and in Neolatin culture atomism is above all linked to humanistic rediscovery of Lucretius and to the modest circulation of his *De rerum natura*.[22] Thus atomism is a late presence that arrived on the scene after the manuscript was found by Poggio Bracciolini, who was also the translator of Diodorus Siculus. Above all, it should be noted that Lucretius would always be an unavowed source, one that historians have to guess at and recognize. All of these cases involve great classics that in different times and in varied measure have been present in both the Islamic and the Latin traditions. In them and in other famous

classical works (as in Virgil's *Bucolica* and in Ovid on the myth of Deucalion) the point of departure is always the catastrophe prompted by astral cycles, followed by promiscuous generation.

> And while the wet was being impregnated with life by reason of the warmth in the manner described, by night the living things forthwith received their nourishment from the mist that fell from the enveloping air, and by day were made solid by this intense heat; and finally, when the embryos had attained their full development and the membranes had been thoroughly heated and broken open, there was produced every form of animal life. Of these, such as had partaken of the most warmth set off to the higher regions, having become winged, and such as retained an earthy consistency came to be numbered in the class of creeping things and of the other land animals, while those whose composition partook the most of the wet element gathered into the region congenial to them, receiving the name of water animals. And since the earth constantly grew more solid through the action of the sun's fire and of the winds, it was finally no longer able to generate any of the larger animals, but each kind of living creatures was not begotten by breeding with one another.[23]

[23] *Diodorus of Sicily in Twelve Volumes*, trans. C.H. Oldfather, Loeb (Cambridge MA and London, Harvard U.P. 1933, 1989), I. 7. 4–6, 1: 27–9. Diodorus Siculus, *De fabulosis antiquorum gestis*, in *Opera*, Basel, Henricus Petri, 1531, p.151: " Quod uero humori mixtum eodem stetisse in loco, propter gravitatem quae cum mixta essent, ex humidis quidem mare effectum, ex durioribus uero terra lutosam evasisse et omnino molle. Haec primum cum solis ardore densior evasisset, eius postmodum superficie vi caloris tumefacta, multis in locis humores quosdam esse concreatos, in quibus putredines tenui contectae pellicula sint excitatae queadmodum in paludibus et stagnis Aegyptij videmus accidere, quum frigidam terram subito aestus aeris calefacit. Quum vero in humidis, calore adhibito, generatio fiat, et noctu quidem circumfusus aer humorem praestet qui die solis virtute consolidetur tandem putredines illae ad summum perductae, adveniente veluti partus tempore exustis confractisque pelliculis omnis generis educunt animantium formas, quorum ea quae maiorem calorem sortita sunt in superiorem regionem volatilia effecta abierunt, quae vero plus terrae continebant serpentia aliaque terrestria evaserunt, animantia naturam aquosam nacta in sui generis elementum delata sunt, et appellati pisces. Terra deinceps tum solis ardore, tum ventis, in dies magis magis arefacta, a gignendis maioribus animalibus desiit. Sed quae generata erant, mutua commixtio alios animantes eis procrearunt." At p. 151 Diodorus wrote: "Hoc et Euripides, Anaxagorae physici discipulus, sentire videtur quum in Menalippo caelum et terram mixta olim fuisse tradat. Separata postmodum generasse singula, arbores, volatilia, feras ac omne mortalium genus. De prima terra generatione, quamvis praeter opinionem nonnullis esse videatur tamen ea quae nunc quoque fiunt his testimonium videntur afferre. Nam iuxta Thebaidem Aegypti quum Nili cessavit inundatio, calefaciente sole limum ab aqua relictum, multis in locis ex terrae hiatu, multitudo murium oritur." See also P. Vidal-Naquet's preface to Diodore de Sicile, *Naissance des Dieux et des hommes, Bibliothèque historique livres I–II*, ed. M. Casevitz, Paris, Les Belles Lettres 1991.

3. Fermentation of cheese, promiscuous generation

If I have mentioned Plato, Aristotle, and Lucretius, it is not so as to claim that everything comes from classical antiquity: the confines of this history are not there, nor does it begin or end there. The first evidence of the myth goes back to well before classical Greece.[24] Traces probably go back to the ancient East, but this is a field I know little about and dare not speak about. It is undeniable, however, that the survival, the fascination, and the appeal of classical naturalism (that is, materialism) are present and always recognizable in the ideas and the debates on the vital sphere, on its origin, on biological phenomena, and on the myth of spontaneous generation of "autochthons." In fact, they are the more radical aspects of this debate. Nor can we limit the history of this idea to the Latin Middle Ages or the Renaissance, because the intellectual tradition of Islam plays an important part in it.

The great Islamic thinkers took inspiration from the major Greek authors (the pre-Socratic naturalists, Plato, Aristotle, Epicurus, etc.), and then medieval Latin authors up to and even beyond the sixteenth century were to do the same. Underlying this image of the world and, within it, the image of spontaneous generation, there surely lies a generally accepted astrological concept.

Gad Freudenthal has written recently:

> At least in "spontaneous generation" the stars act as formal causes: Averroes suggests that the "heats" of the various planets are different and their effects vary as a function of their velocities and relative positions. The result is that the identity of the species produced at any given moment by the "heats" of the planets depends on the latter's velocities and positions. We have here a clear instance of what I have elsewhere called the "*astrologization of the Aristotelian philosophy of nature*" in the Middle Ages. The planets, then, not only are indispensable for the emergence of souls in matter, but through their positions and velocities they determine the identity of the "intelligible forms" emerging in sublunar matter. The heavenly bodies accomplish this through their "heats."

[24] A.Bernabé and J. Perez de Tudela eds., *Mitos sobre el origen del hombre*, Madrid, Circulos de Bellas Artes 2011.

This claim, however, raises new questions. Specifically, we were not told by virtue of what causality the "heats" of the celestial bodies contribute to the generation of animals.[25] I doubt that Greek and Aristotelian philosophy of nature were in need of an "astrologization," since they were already astrologized in Greek originals and by tradition. Everybody is ready to admit that Arabic culture was full of astrology, no less than Greek (as well as medieval and Renaissance) thought: I am persuaded, however, that the history of this idea is longer and broader than interpretations about the Aristotelian form and the Avicennian "Giver of forms." These lines of thought should not be confused with premises or developments of a magico-necromantic sort. I do not intend to consider the tradition of Jabir and the alchemistic aspect of these processes of generation. This means that I will not treat cases of artificial or alchemical generation (*per artificium*) that crop up in Arabic occult literature, for which I refer anyone interested to David Pingree, to Paul S. Macdonald,[26] to D.N. Hasse, to Remke Kruik,[27] and, as that William Newman has proposed, to the identification of Jabir corpus as a source of Paracelsian and pseudo-Paracelsian texts on the *homunculus*.[28] I will cite only one line of the *Picatrix* on magicians who "are able to create living creatures, like reptiles, snakes, scorpions, and many other of their like."[29] I cite the *Picatrix* because it presents such transformations using the famous image of the fermentation of cheese.[30] The same image was used by Guillaume d'Auvergne[31] who traced it to the Old Testament. One of the most profound treatises on astral influence is al-Kindi's *De radiis stellicis*. Avicenna's conception

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[25] G. Freudenthal, *The medieval astrologization of Aristotle's biology. Averroes and the role of celelstial bodies in the generation of animate beings*, "Arabic Science and Philosophy," 12/1, 2002, p. 11–137; Id., *Providence, astrology*, in S. Harvey ed., *Medieval Hebrew Encyclopedias of Science and Philosophy*, Dordrecht, Kluwer, 2000.

[26] P.S. Macdonald, *History of the Concept of Mind. 2. The Heterodox and Occult Tradition*, Aldershot, Ashgate, 2007. For Hasse cf. *supra* note 7–8.

[27] Cf. R. Kruik, *A Frothy Bubble. Spontaneous Generation in the Medieval Islamic Tradition*, "Journal of Semitic Studies," 35, 1990, pp. 265–82.

[28] William Newman, *The Homunculus and his Forebears: Wonders of Art and Nature*, in *Natural Particulars: Nature and the Disciplines in Renaissance Europe*, ed. Anthony Grafton and Nancy Siraisi (Cambridge MA, MIT Press 1999), pp. 321–45.

[29] *Picatrix latinus*, ed. D. Pingree, London, The Warburg Institute 1986, pp. 51–2: "facere possunt vivencia ut sunt reptilia, serpentes, scorpiones et multa eis similia."

[30] See *infra* note 83.

[31] William of Auvergne, *De universo* (II, iii, ch.XXV) in *Opera omnia*, Paris 1673, p. 1071: "Est aliquo modo ad semen foeminarum sicut coagulum lactis ad lac," compare *Book of Job*, 10,10: "Nonne sicut lac mulsisti me et sicut caseum me coagulasti? (Did you not pour me out as milk, and thicken me like cheese?)"

of life in the cosmos, of hierarchy in nature, and of reproduction either by sexual conjunction or spontaneously (*a casu*) is very near to the Platonic and Aristotelian. Nor should we ignore Averroes, to say nothing of Ibn Tofail. Averroes had declared "fatuous" Avicenna's scientific discourse on the generation of man being produced, alternatively by species or *a casus* (that is, by spontaneous generation from earth); he clearly pointed out the same tendency in Avicenna's theses, as opposed to "Democritus, who posits that the world is due to chance." This means that the eternal nature of the species posited by Aristotle faced a crisis.

> Then the same beings would be found by nature and by chance. But what is by chance is always opposed to what is by nature.[32]

Averroes discussed *generatio equivoca*, accepted not only by Avicenna,[33] but also by Aristotle – that is, the possibility that animal species or individual

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[32] Averroes wrote in his *VIII Physicorum*, t.c. 46, Digression: "Tunc eadem specie invenirentur natura et casu. Et quod fit casu, semper est oppositum ei, quod fit natura." We need to add to Averroes Ibn Tofail and – for what concerns alchemical generation – Jabir. Cf. Kruik, *A Frothy Bubble*, pp. 265–82: "To understand the belief in spontaneous generation we have to go back to classical sources. The idea that living organisms could arise from matter independently from a parent, undoubtedly generally accepted in classical antiquity, was given a theoretical foundation by Aristotle, who repeatedly explains his belief in spontaneous generation *(Historia Animalium; De Generations Animaliumr, De Anima)*." "The Aristotelian theory of spontaneous generation presents a number of difficulties (see for example on the problems of its philosophical implications, Genequand 1984, p. 24), of which one of the more obvious is the following: in 'normal' generation the sperm of the male contains the formative principle which shapes the matter provided by the female into a being of the same species as the parents. Now the problem in spontaneous generation is that the *pneuma* which sets the generation process going is, so to speak, unspecified (see the quotation above). Since this is the case, it is difficult to imagine where the specific formative 'information' which decides whether a certain quantity of matter shall turn into, say, a cockroach or an eel comes from. The quotation given above suggests that this depends on the surrounding matter."

The *Ikhwan aa Safà* (1527/1928, vol. II, p. 164) even introduce spontaneous generation as a criterion for the classification of animals: they can be either viviparous, oviparous, or spontaneously generated. An additional remark: the belief in spontaneous generation does not, in itself, run counter to the theological viewpoints about God as the Creator, as is sometimes suggested; spontaneous creation has nothing to do with creation *ex nihilo*. God created the universe and all the processes which take place in it, including generation, be it spontaneous or otherwise.

[33] M. Alonso Alonso, *Traducciones de Juan Gonzalez y Salomon*, "Al Andalus," XIV, 1949, pp. 306–8, has published Avicenna's *Capitulum in diluviis dictis in Thimeo Platonis*: "Sed forma et virtutes substantiales veniunt a principiis transmutabilibus. Si igitur est possible ut elementa congregentur secundum aliquam proportionem et faciant aliquam complexionem et

beasts first originated by spontaneous generation and then were able to reproduce *per gignitionem*.

This is a question with a strict connection to the definition of the male role (seed or "form") and the female role (place or protection, blood or nutriment, never form or essence) in reproduction *per gignitionem*. Metaphors of spontaneous generation correspond to such a definition.[34] Even in the early sixteenth century thinkers began with the current Aristotelian thesis that the formal cause of generation is furnished by the father: the vital seed necessary for conception is uniquely male, while the mother furnishes the fetus only with protection in the uterine cavity and nutriment with menstrual blood. In its long life this male-centered idea may have been reinforced by the Islamic contribution, given that in a number of passages, but especially in *De diluviis*, Avicenna bases his argument on a presupposition:

> The womb does nothing except to keep [...] The womb contributes to improvement. Yet it is not impossible that it [generation] happens because of motions and other causes, except that someone [i.e. Galen] would tell that the womb is bestowing a cause. But this is not the opinion of peripatetics.[35]

componantur secundo in aliam proportionem, et non obviavit contrario corrumpenti, tunc dator formarum dabit formas ex principiis eternis. Rectum igitur videbitur quibusdam ut omne compositum possit fieri ex elementis sine gignitione. Et si hoc non esset, tunc esset possibile secundum astronomos ut cessarent species. Non enim est necesse ut ex quolibet homine fiat homo necessario. Sed hoc est ut in pluribus et maxime quia cohitus, qui est principium generationis, est voluntarius et casus seminis in terram est naturalis non necessarius; in maiore autem parte voluntarius. Et res quae non est necessaria possibile est ut eveniat suum contrarium. Et si constellationes secundum astronomos non venirent quae facerent individua illarum specierum, esse possibile quod illae species abscinderentur sine reversione." I quote extensively this text because it was also quoted by Pietro d'Abano e Biagio da Parma; see G. Vescovini, *Le "Quaestiones de anima" di B. Pelacani*, Firenze, Olschki 1974, pp. 178–9: "ex putrefactionem hominem naturalem posse generari."

[34] Beginning with Ian McLean, *The Renaissance Notion of Woman: A Study in the Fortunes of Scholasticism and Medieval Science in European Intellectual Life* (Cambridge and New York, Cambridge U.P. 1980), this problem has been analyzed in many "genre histories." See also *The Problem of Animal Generation in Early Modern Philosophy*, ed. J.E.H. Smith, Cambridge, Cambridge U.P., 2006), 3–8, which threatens the positions of Aristotle, Galen, and Avicenna. While he examines thoroughly the theme of normal, preordered generation, this work dedicates a few mentions to spontaneous generation, in particular in the case of Gassendi (pp. 109–13, 188). Cf. Roger, *Les sciences*, pp. 53–67 on the long debate between Galenists and Aristotelians.

[35] Alonso Alonso, *Traducciones*, p. 306: "matrix nihil facit nisi retinere [...]matrix faciet ad meliorationem. Tamen sine ea non erit impossibile hoc accidere ex motibus et aliis causis, nisi quis [Galenus] dicat quod matrix est largiens causam. Sed hec non est sententia peripateticorum."

Any follower of a conception of this (Avicennian) sort is, in a certain sense, ready to accept the notion that the maternal uterus can be replaced by an appropriate cavity and an adequate source of nourishment (the earth and its humors). Albertus Magnus shows his support of this principle in many of his works, to the point of deducing, in *De causis proprietatum elementorum*, the possibility of generating cross-breeds and monsters. These are actually the product of a particular stellar influence rather than of a *seminum commixtionem*:

> Just as an animal species fecundates the uterus of a female that is not of that species: because, even if that occurs in proximate species, such as ass and horse or (perhaps) dog and wolf, or the like, it cannot in any case happen between distant species, such as man, cow, sheep; because in any event, as I have said, the philosophers often see their births, it is known that the power of the stars forms for the power of the formative virtue, which has influence over such birth.[36]

4. Nature, art, chance

"From hair come snakes, from figs scorpions, from earth mice, and from rain frogs" wrote Avicenna in his *De diluviis*. Wherefrom human beings?

In the great commentary to the *Metaphysics* Averroes argues that Platonic forms should not be considered for generation: "It is clear that everything which is generated, is generated by one of these three: or by nature, or by art, or by itself, i.e. by chance."[37] Thomas Aquinas later took up the same distinction: "Now of those things which come to be, some come to be by nature, some by art, and some spontaneously."[38] The distinction is an important one:

[36] See *Disputatio V de hominis productione* in Tiberio Russiliano's *Apologeticus* in my *Una reincarnazione*, pp. 170–83, and analysed there p.79ff.

[37] Averroes, *Metaphysics* (bk. VII, Lesson 6, 2: "Becoming – by Nature, by Art, and by Chance"); *Aristotelis et Averrois Opera*, VIII, Venice, Giunta 1562; Frankfurt/M., Minerva 1962, f.172r: "Entium alia a natura, alia arte, alia casu: omnia vero ab aliquo, ex aliquo, et aliquid fieri"; cf. Thomas Aquinas, *Metaphysica*, ed. M.R. Cathalà, Rome-Torino, Marietti 1915, p. 407 (L.VII, Lectio VI): "manifestum est omne quod generatur, generatur ab aliquo trium: aut a natura, aut ab artificio, aut ex se scilicet a casu." At ch. 9: "Cur quaedam ab arte, et a casu fiant, quaedam vero minime," Averroes deals with the case that "generatio sit non secundum cursum naturae, ut generatio muli ab equo et asino."

[38] This translation comes from St Thomas Aquinas, *Commentary on the Metaphysics of Aristotle*, trans. J.P. Rowan, Chicago, Henry Regnery 1961, 2, p. 527 (Bk. VII, lectio 6); Cf. Id., *Metaphysica*, ed. M.R. Cathalà, Rome-Torino, Edizioni Paoline 1915, p. 407: "ad destruendum ideas positas propter generationem, praemittitur eorum quae fiunt, quaedam a natura, quaedam ab arte, nonnulla a casu [automato] fieri, et omnia demum ab aliquo et aliquid fieri manifestantur."

> And the same thing occurs in the case of things produced by art as in those produced by nature; for the power contained in the seed . . . is similar to art, because just as art through certain definite intermediates attains the form at which it aims, so also does the formative power in the seed. And just as an effect produced by art may also occur apart from the intention of art or of mind, and then it is said to happen by chance, so too in the case of these things, i.e., natural ones, some things are generated both from seed and without seed. And when they are generated from seed, they are generated by nature; but when they are generated without seed, they are generated by chance.[39]

It should also be emphasized that for Avicenna and Averroes this was a philosophical problem: it was not a question pertaining to medicine, but rather to Aristotelian philosophy, or, better said, to philosophy in general. The many passages that both Avicenna and Averroes dedicate to generation do not come from the *Canon* or from the *Colliget*. Through Avicenna, the Aristotelian line prevailed over that of Galen, which admitted a female seed

[39] Aquinas, *Commentary*, transl. Rowan, 2, p. 527; Id., *Metaphysica*, ed. M.R. Cathalà, p. 407 (Bk. VII, Lectio VI): "Et hoc similiter contingit in artificialibus, sicut in factis a natura. Virtus enim quae est in spermate [...] assimilatur arti. Sicut enim ars per determinata media pervenit ad formam quam intendit, ita et virtus formativa, quae est in spermate. Sicut autem contingit effectum qui fit per artem etiam praeter intentionem artis aut intellectus fieri, et tunc dicitur a casu accidere." Aquinas goes on: "ita etiam et in illis, scilicet in rebus naturalibus, eadem fiunt et ex spermate et sine spermate. Quae quidem cum fiunt ex spermate, fiunt a natura; cum autem sine spermate, fiunt a casu [...] cum cuiuslibet rei naturalis sit determinatus modus generationis, non videntur esse eadem quae generantur ex spermate et per putrefactionem. Quod Averroes in octavo *Physicorum* sentire videtur, dicens quod non potest esse idem animal in specie quod generatur ex spermate et quod generatur ex putrefactione. Avicenna autem e contrario sentit, quod omnia quae generantur ex semine, eadem specie possunt generari sine semine per putrefactionem, vel per aliquem modum commixtionis terrenae materieae. Sententia Aristotelis videtur esse media inter has duas opiniones, quod scilicet aliqua possunt et sine semine generari, et ex semine, not tamen omnia ut infra dicet. Animalia enim perfecta videntur non posse generari nisi ex semine; animalia vero imperfecta quae sunt vicina plantis, videntur posse generari et ex semine et sine semine. Sicut plantae producuntur aliquando sine semine per actionem solis in terra ad hoc bene disposita; et tamen plantae sic productae producunt semina, ex quibus plantae similes in specie generantur."

that is by its essence capable of contributing to generation.[40] Even among the Fathers of the Church this line of thought was dominant.[41]

Among the many texts of Avicenna that one might cite, one is the chapter *De diluviis* of his paraphrase of the *Meteora*, which presents in condensed form the principal effects – zoological, eschatological, and astrological[42] – set off

[40] Cf. Albertus Magnus, *De causis proprietatum elementorum*, Bk. I, tr. II, cap. xiii, in *Opera omnia*, V, Münster 1971, ed. P. Hossfeld, p. 85: "dicit enim Avicenna virtutes stellarum commixtas viribus elementorum, omnia formare et perficere et non indigere femina nisi propter locum. Et ideo dicit 'matricem non exigi ad generationem' nisi propter bonum esse, ut scilicet formetur 'melius' ...autem signa introducit plurima, quorum unum est, quod nos videmus mures generari in aliquo loco ex terra et postea per coitum multiplicari. Aliud autem quod nos videmus serpentes magnos generari ex capillos et praecipue capillis mulierum, eo quod humidiores et longiores sunt quam capilli virorum secundum naturam, et cum generati sunt postea per coitum multiplicantur, et format in eis vis stellarum marem et feminam, ac si de posteriate sit ei solicitudo." After referring to his own *Physica*, tr. III, cap. 3, and to the *libri animalium*, bk. XVIII, tr. 1, cap. 6, Albertus continues with the passage translated above: "non enim potest aliquis dicere hoc esset propter seminum permixtionem, ita quod species una animalis proiciat serum in matricem feminae quae non est suae species: quod licet hoc contingat in vicinibus speciebus, sicut in asino et equo vel forte in cane et vulpe, et huiusmodi, in distantibus nullo modo contingere potest, sicut est homo et vacca, vel homo et porcus, cum tamen viderint saepe philosophi huiusmodi partus, sicut alibi introduximus. Constat igitur virtutem stellarum formare ex virtutis formativae fortitudine quam influunt in partus tales."

[41] Cf. Tertullianus, *De anima*, ed. with Introduction and commentary by J.H. Waszink, Amsterdam, North Holland Publ. Co. 1947, pp. 38–9 (text §27), 342–9 (commentary referring to more Fathers' texts).

[42] Alonso Alonso, *Traducciones*, pp. 306–8: "Et est diluvium victoria unius elementorum super quartam habilitabilem aut super unam partem. Et quandoque ex aqua, dicitur proprie diluvium in ydiomatibus; et dixerunt quidam quod causa diluvii est constellatio que facit unum elementum vincere cum causis accidentibus et proportionibus materialibus. Aquosum ergo accidit ex mutationibus marium subito per maximas causas ventosas aut per multas pluvias propter magnam alterationem aeris in aqua. Igneum autem accidit ex intensione fortium ventorum ac istis est fortius. Et terrestre accidit ex multis arenis cadentibus ex uno loco in alium aut propter qualitatem terrestrem frigidam et gelatam, sicut dictum est de viva terra. Aerium autem fit ex motibus ventorum fortium. Et hoc potest credi propter hoc quod narratur de diluvio aque. Et potest credi propter hanc rationem; quia res que suscipiunt magis vel minus, licet esse in eis est medium, aut proprie medium inter duo extrema, tamen non erit impossible ut sit in extremis ipsis. Et sicut accidit multotiens quod sunt sine pluvia in aliqua terra, ita potest evenire pluvia subito et potest alterari subito; et ita aliis diluviis. Et si verum est hoc quod dicunt quod mare mutatur propter mutationem celestium, in tantum quod omnes aquae cooperiunt habitationem, discooperietur unus polus aut duo. Etiam similiter in hoc quod dicunt de mutatione declinationis, si est verum in tantum quod zodiacus superponatur equinoctiali, totam cooperiet habitationem; et si non verum illud, illa ratio quam diximus, potest sufficere in hoc."

by cyclical catastrophes and great cosmic changes and on which universal history and the development of the arts and civilizations are dependent.[43]

> We know that the parts of animals were flooded and in this way mountains were formed. Now seas are southern and seas are changeable; their change is not determined, but it is possible that it happens in such a way to destroy habitability. Through the years there may have been many renewals that have been lost to memory. And according to someone known to you, it is not unbelievable that plants and many sorts of beings will be corrupted, and that later they will be produced by generation, and not by sexual conjunction (*per generationem, non gignitionem*) given that many other beings are produced *per generationem, non gignitionem*, and the same can happen to plants.[44]

[43] Alonso Alonso, *Traducciones*, p. 308: "Et tu cum consideraveris artes invenies quod omnes sunt inventae ex cogitatione vel ex revelatione divina. Et suum principium non est nisi cogitatio individui. Et id, cuius principium est particulare et novum, est novum. Ergo omnis ars est nova. Et significat hoc quod in qualibet specie augmentantur; et hoc quod sunt nove, significat quod omnes sunt crescentes post abscissionem, quoniam plures eorum sunt tales, quoniam individuum hominis quod proprie non habet revelationem a Deo, quod omnes non habent, non potest esse eis. Ergo homo qui inveniret eas, non indigebit eis per aliquam proprietatem quam ipse habuit quam nos non habeamus. Et non est rectum dicere quod illa proprietas semper fuit in primis hominibus inventa et post abscindebatur. Sed illa proprietas non est nisi in hominibus paucis notis. Ista igitur proprietas erat in quolibet homine in hac continuatione veniente ad nos et illi putabantur a quibusdam fieri sine gignitione."

[44] Alonso Alonso, *Traducciones*, pp. 306–7: "Et nos bene scimus quod pars animalis fuit cooperta aquis ita quod montes facti fuerunt. Et modo maria sunt meridionalia, ergo maria sunt mutabilia; et mutatio eorum non est determinata, sed possibile est ut ita fiat ut abscidat habitationem. Forte igitur sunt renovationes in annis multe quarum memoria non potuit retineri. Et non est inopinabile secundum quosdam quos tu scis, ut corrumpuntur et plante et multa genera eorum et post generentur per generationem, non gignitionem, quoniam multa alia fiunt per generationem et gignitionem, et similiter plante." Avicenna goes on: "Et ex capillis fiunt serpentes, ex ficubus scorpiones et mus de terra et rane de pluvia. Et omnia huiusmodi gignuntur. Et quando hec gignitio abscinditur, in multis annis possibile est ut veniat secundum quosdam constellatio et aliqua preparatio elementorum que faciat ea generari. Immo dicimus quod quelibet species que sit per complexionem elementorum in quantitatibus scitis dum elementa fuerant, et sua divisio secundum illas quantitates et congregatio earum fuerit possibilis, congregatio earum erit possibilis. Et si prima complexio non sufficit, hec generantur ex secunda et tertia. Quoniam, quemadmodum generatur animal ex complexione humorum post complexionem elementorum, non est inoppinabile quod fiat complexio secunda sine semine et sine spermate. Et si quis dixerit quod est impossibile nisi in loco determinato et per virtutem determinatam in matrice et spermate, tunc sermo de istis est sicut sermo de primo. Omnia enim ista generantur ex complexione elementorum et matrix nihil facit nisi retinere. Et radix est complexio. Et non est possibile ut una pars terre alteretur cum alterna parte aque in quantitate determinata, tunc non indiget aliquo retinente. Et dator formarum dabit virtutes agentes."

5. Islamic thinkers and Latin Aristotelians

Whereas "today Avicenna and Averroes are read only by historians of medieval thought *et pour cause* and it would be impossible to understand them without a good knowledge of Plato, of Aristotle, of the Neoplatonics, and of Islam," another author who is more popular in Paris and among the "nouvelles Annales" school in particular, is Ibn Khaldun, who "treated history, not metaphysics." This is the opinion of Krzysztof Pomian, given in a booklet dedicated to Ibn Khaldun's *History of the Berbers* and others among his better-known works, such as the *Muqaddima*.[45] Pomian states:

> The conditions of these elementary worlds are subject to generation and corruption. When a thing belonging to these worlds reaches the point of extreme corruption, one has to expect that it will pass on to generation. Similarly, when it reaches extreme generation it will pass on to corruption. Thus, when putrefaction affects material things and reaches extreme corruption, it is immediately transformed into generation, with the creation in it of animals such as worms. If this is how it is with material things, the same must be true of conditions and states [nations]. When the conditions of corruption dominate the world, the function of direction loses all regulation, what constitutes [that direction] – that is, the order of human society – is dispersed, and the corruption in all of this attains its extreme point, then one must expect . . . a return to the beginning of order. This is how God always acts regarding civilization.[46]

[45] Krzyztof Pomian, *Ibn Khaldun au prisme de l'Occident*, Paris, Gallimard 2006, p. 11. Pomian suggests that this author, who was a contemporary of late scholastics or humanists such as Coluccio Salutati, was influenced by the conception of Aristotle's *De generatione et corruptione*, whereas other Islamic thinkers, such as al Farabi and even Averroes, were instead Platonists in their conception of the cosmos, the elements, and the elementary qualities.

[46] Pomian, *Ibn Khaldun*, pp. 98–9 (who refers to the "text of the manuscript corresponding to chapter 51 of part 3," p. 1244): "Les conditions de ces monde élémentaires sont sujettes à la génération et à la corruption. Quand une chose appartenant à ces mondes parvient à la corruption extrême, on doit s'attendre à son passage à la génération. De même, si elle parvient à la génération extreme, elle passe à la corruption. Ainsi, quand la putréfaction affecte les choses matérielles et atteint à l'extrême corruption, elle se transforme d'un seul coup en génération, avec la création en elle d'animaux comme les vers. S'il en est ainsi dans les choses materielles, il doit en être de même dans les conditions et les États. Quand les conditions de la corruption dominent le monde, que la fonction de la direction se dérègle, que ce qui la constitue, c'est-à-dire l'ordre de la société humaine, se disperse, et que la corruption en tout cela atteint son point extrême. on doit alors s'attendre [...] un retour au commencement de l'ordre. C'est ainsi que

Still, Ibn Khaldun called Aristotle the "first master" and "the greatest of logicians," but he was not blindly admiring[47] and he criticized some Muslims who had integrally adopted Aristotle's ideas, "putting on his shoes."[48] Moreover, for the conception of the sublunary world, or the *elementata* subject to generation and corruption, Plato and Aristotle do not seem to differ enormously either between themselves or with respect to the pre-Socratic natural philosophers. Ibn Khaldun does not aim at a synthesis between Aristotle and Muhammad; he simply applies the conception (which seems to me not to belong uniquely to Aristotle) of the cosmos as an organism, corresponding to the four reigns of nature, to the four elements, and to the four elementary qualities, to normal reproduction, to spontaneous generation (which, as is known, also for Ibn Khaldun takes place amid the corruption and fermentation in the sphere of the *elementata*), and, to end the list, in the historical cycles that determine the beginning and the end of states and social groups.[49] Thus, as Aristotle himself says, "every life is measured by a cycle," but Aristotle was not alone among Greek and Latin thinkers to put forth this idea of cycles and the metamorphoses among living beings.[50] They all accepted the idea of the cosmos as an organism endowed with life and dominated by the influence of the celestial bodies.

Here Pomian, with his usual acumen, returns to a seminal essay of Nicolai Rubinstein, reproaching him, however, for ignoring the Aristotelian inspiration of certain Latin historians and thinkers like Albertino Mussato. This seems to me unjust: Rubinstein takes it for granted that the two contemporaries to which he attaches Mussato, Pietro d'Abano[51] and Marsilio da Padova, and

Dieu agit toujours pour ce qui est de la civilization." See also Ibn Khaldhun, *Le livre des examples*, I, ed. by A. Cheddadi, Paris, Gallimard 2002, p. 1244.

47 Ibn Khaldhun, *Discors sur l'histoire universelle, Al Muqadimma*, trad., préface et notes par V. Monteil, Paris, Sinbad – Beyrouth, Commission Libanaise 1978, p. 1070 (on *Organon*).

48 Ibid., p. 1176.

49 Pomian, *Ibn Khaldun*, pp. 51–2: "La décomposition et la recomposition des corps complexes et la trasmutation des éléments les uns dans les autres, c'est à dire la corruption et la géneration se poursuivent sans discontinuer parce que le mouvement éternel des cieux sélon l'écliptique alternativement rapproche ou éloigne le principe qui engendre par la proximité et corrompt par l'éloignement."

50 Cf. Aristotele, *De la géneration et de la corruption* (336b10–15); ed. and transl. by M. Rashed, Paris, Les Belles lettres, 2005, Introd., p. LXXXVIII.

51 Cf. Pietro d'Abano, *Conciliator*, no date, p. 3a; Differentia 29; Nicolas Oresme, *Quaestiones super Meteorologica* (cited from ms. Sankt Gallen 839: *Circa 4° Meteor. q. 59* in L. Thorndike, *More questions on the 'Meteorologica,'* "Isis," 46, 1955, pp. 357–60): "Utrum aliqua animalia possint generari per putrefactionem."

others such as Egidio Romano, are recognizable as Aristotelians. One might well ask, though, where such an "organic concept of the state" comes from, according to which "two centuries before Machiavelli, the growth and decline of a state are conceived as natural phenomena" and where Mussato found the "remarkable concept of recurring historical development, reminiscent of ancient theories of the cycles." [52]

6. "The Earth was like a sponge"

But in the Aristotelian tradition there is a cyclical theory of the origin of life and of civilization. Avicenna was thus a faithful and perspicacious interpreter of that tradition when he linked those cycles to a clear conception of universal deluges that left no survivors.

These are true deluges, not floods improperly called that, but true universal deluges that leave no survivors. The case of Noah is excluded as extraneous to natural consideration: "unless according to revelation we do not believe that they were saved in the Arc, which is certainly outside of natural reasons and is considered among the things to be merely believed." At the beginning of the sixteenth century Tiberio Russiliano did not limit himself to emphasizing the revealed (not natural) character of the biblical account, but stressed all the difficulties involved: "In fact, if a very strong ship cannot save itself in a few billows, how could a not well constructed ship have saved itself from so many waves, storms, and tempests for such a long time, if not through some miracle from the heavens?"

Not only Avicenna, who was not bound to respect the text revealed to Jews and Christians, but also anyone who cared to philosophize without theological hindrances would have to subscribe to his definition of the flood: "Speaking in natural terms, all humankind and all the animals perished in that universal deluge. Then, after the flood, in the same way there appeared men and animals, not by generation of the same species of the first . . . they came uniquely by way of putrefaction."

The possibility that life can take place from the mud of the earth was reconnected to the *De diluviis*, which Tiberio Russiliano was to summarize

52 N. Rubinstein, *Some Ideas on Municipal Progress and Decline in the Italy of the Communes*, in *Fritz Saxl 1890–1948, Memorial essays from his friends in England*, ed. D.J. Gordon, London, Nelson 1957, pp. 165–83; reprinted in Rubinstein, *Studies in Italian History in the Middle Ages and the Renaissance*. I: *Political Thought*, ed. by G. Ciappelli, Rome, Edizioni di Storia e Letteratura, 2004, pp. 43–60; see in particular pp. 46–51.

faithfully,[53] enriching it with materialistic details from his reading of classical and Renaissance poets from Manilius to Pontano. Avicenna had given an astrological and materialistic explanation of the question: "All the animals are dissolved in the elements, thus they can come out of them immediately. The stars and the elements can immediately destroy all the animals without any divine aid of particular causes or agents, because they can also be generated immediately. What is more, the superior virtues are stronger than the inferior ones, because if the inferior ones generate by means of seed, the stronger ones can generate without seed." The power of the *colcodea* (i.e. *Dator formarum*) is so strong that it even succeeds in generating animals outside of their natural environment, like the calf that Avicenna is reported to have seen – according to a topos of magical literature used by Tiberio – materialize itself in the cloudy sky and then glide over the earth. Normally, however, these phenomena occur thanks to celestial influence on the world of elements: Avicenna wrote in the *De diluviis* that if that could happen for the primordial origin of life on earth, it could repeat itself after the floods: "Plants and many types of beings are corrupted and later regenerate . . . in the same way as animals are generated by humors' complexion coming after elementary complexion, it is not absurd to think that a second complexion will happen without seed and without semen."

Spontaneous generation of living creatures was in many instances connected with cycles and catastrophes that had destroyed every form of life: thus Francesco Patrizi da Cherso would write about caverns "full of life" ("di vita empiute") thanks to the heavenly heat of the age of gold:

> Then was the earth like a sponge, and men lived within it in the manner in which *a thousand little worms* live in it now.[54]

The Greek natural philosophers (Empedocles, for example), developed a similar conception of chaos.

> They concede the confusion of the world, from which all the animals are gone; but soon after the soft earth, hardened by the heat of the sun, began to break up into thin strata, out of which there emerged

[53] This and following quotations are taken from Tiberio Russiliano's *Apologeticus*, f. 19v, 20v (ed. in my *Una reincarnazione di Pico*): "Sicque homines et animalia cuncta infinities reparata fuere, et infinities corrupta, infinitiesque reparabuntur et infinities corrumpentur."

[54] F. Patrizi, *Della retorica dialoghi X*, Venice, Francesco Senese, 1562, f. 5v: "Era adunque la terra in guisa di una spugna et gli huomini vi habitavano per entro alla maniera che vi habitano al presente *mille vermicelli*. Ma era la lor vita allora felice molto e senza male alcuno" (Italics mine).

> different animals, diversified according to various mixtures: out of the lighter ones [came] the birds, out of the heavier ones, the terrestrial animals; later the hardened earth broke up once more into more noble cells or cavities, out of which perfect animals emerged; from the more perfect cells or cavities, they say that men were generated.

According to Tiberio, all who accepted the notion of floods (Avicenna first among them) were persuaded of this: the flooded earth remained "gravid and pregnant"; when the waters had withdrawn, its "mixture" with the sun produced a number of cavities (*cellulae*) in which, thanks to the beneficent influence of the sun and of the other stars – that is, by Hippocrates' natural heat, an idea accepted by Aristotle and emphasized by Averroes in his commentary on the *Physics* – *spiritus et animae* were generated. This was the order that explained the vicissitudes of all living species in perfectly natural terms: "In this way all of men and animals were endlessly restored and endlessly corrupted."[55]

It is hardly surprising that Leon Battista Alberti should write on the care of walls, but no one would expect this famous "Renaissance man" to go on to recommend the use of oil-based products as a repellent for "every kind of animal that breeds in corruption."[56] It seemed obvious to Alberti that mice, bedbugs, and worms are produced *ex putri*. He speaks of this question at some length in the context of infected air:

> That poison dislikes fire is demonstrated by the fact that the dead bodies of poisonous animals do not breed worms like any other. The nature of poison is to destroy and utterly extinguish the whole force of life; but if their bodies are struck by lightning, they will produce worms, because their poison is destroyed by fire. Worms are bred in a dead body by that certain fiery force in Nature producing that liquid which is here joined

[55] Cf. Note 53: "Sicque homines et animalia cuncta infinities reparata fuere, et infinities corrupta, infinitiesque reparabuntur et infinities corrumpentur."

[56] Leon Battista Alberti, *On the Art of Building in Ten Books*, English trans. by Joseph Rykwert, Neil Leah, and Robert Tavernor, Cambridge MA: MIT Press, 1988, p. 354; *L'Architettura*, ed. and transl. Giovanni Orlandi, Milan: Il Polifilo, 1966, p. 356; Id., *Architettura*, pp. 973–4: "Et odisse venena ignem inditio est quod annotarunt, venenosa animalium cadavera non gignere vermes uti aliorum, ex ea re, quod veneni natura est necare atque protinus extinguere vim omnem vitae; sed eadem si tacta sint fulgure, gignere tum quidem vermes, eo quod sit eorum venenum extinctum igni. Gigni autem' in cadaveribus animalium vermes non aliunde quam ab vi quadam naturae ignea movente humidum id illic aptum ignibus, quos extinguere proprium est veneni, ubi superet, ubi vero supertur igne, nihil posse."

> by fire; it is the property of poison to extinguish fire by overwhelming it, but if poison is itself overwhelmed it loses all its strength.[57]

Alberti goes on to suggest that "low, marshy, and humid" land should be drained in order to destroy the "poisonous animals that arise from such places."[58]

7. From Plato to Ficino

Ficino mentions the myth of spontaneous generation in one of his earliest personal writings, the *Di Dio et anima* of 1457, that is, when he was closer to naturalistic and Lucretian ideas. In this work he refers to Heraclitus, Hippocrates, Xenophon, Parmenides, Democritus, and Leucippus (discussing the last two in depth). According to Ficino, Prometheus considered the body to be "of putrefied earth," but accepted the idea that the soul is "of celestial fire."

> Alcmaeon states that from the substance of the sun, by the vigor of its rays, nature and form similar to the sun are produced in earthly bodies, the which [substance] is soul, which moves continuously in the way and order of the sun's movements.[59]

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[57] Alberti, *On the Art of Building*, p. 356; Id., *Architettura*, p. 981 "Omnium erit commodissimus paries valitudini, qui fiat crudo latere per biennium ante exiccato. Crusta ex gypso inducta aerem spissitudine insalubrem reddit et pulmonibus cerebroque nocua est... locus… sorice et cimice fortassis fieret infestus. Id vitabitur, si intervacua olleveris calamo, sive latebras omnes et profugia bestiis obstruxeris. Creta et rapillo et amurca subacta rectissime obstruentur."

[58] Alberti, *On the Art of Building*, p. 354; Id., *Architettura*, p. 973. Alberti had written, in *Architettura*, p. 973: "Harum rerum causam ex puritate impuritateque illic spirantis aeris esse interpretantur. Nam crassum quidem tardius moveri, sed diutius servare, quae a gelu aestuve impressa sint, praedicant; tenuem vero aerem sese habet gelationi aptum, et cito radiorum commutationibus affici. Et aiunt agrum incultum et neglectum aerem praestare crassum et immitem.…Ubi etiam materia excrevit conferta it, ut eo neque sol neque venti penetrent, nimirum erit aer crudior. Averno in lacu antra silvarum densitate ita ambiebantur, ut exhalans sulphur alites per angustias supervolantes necaret." Soon after this. *Ibid.*, p. 981, he writes that in order to avoid having mice and bed bugs invade the plaster work, one should use oil: "oleum enim genus omne id animantis, quod ex putrefactione ortus sit, penitus abhorret"; with great technical optimism he writes that to avoid these creatures it was enough to live on upper floors (as in the towers of Alexandria, in Egypt, or in Ferrara inside the circle of the city walls, where fire and smoke sufficed to chase them away.)

[59] P.O. Kristeller, *Supplementum ficinianum*, I, p. IX, CLIX–CLX, (§ XLIII); vol. II, pp. 128–58, in particular p. 143: Ficino, *Di Dio e anima*: "Alcmeone vuol che dalla substantia del sole per vigore dei suoi razzi nei terreni corpi si produca natura et forma, al sol consimile, la qual sia anima che si mova continuamente in quel modo e ordine che sol discorre. e non si generavano accoppiandosi l'un l'altro." Cf. P.G. Ricci, *Aneddoti di letteratura fiorentina, Il Pigli*, "Rinascimento," II, 1962, pp. 37–9; S. Gentile, *L'epistola de divino furore*, "Rinascimento," S. II, xxiii, 1983, pp. 41–4, 50.

In the *Statesman* (268b–271b), one of his later and more complex dialogues, called also *Politicus*, Plato has a "Stranger from Elea," who had already appeared in the *Sophist*, speak of spontaneous generation as "a famous story," probably meaning that it was as old as Hesiod[60] or older.[61] And this was certainly an ancient myth.

That it is an idea transmitted from the distant past is clear if we read Diodorus Siculus[62] and Aenaeas of Gaza.[63] Ficino[64] had already encountered this thesis, even before he translated this dialogue, which he entitled *Civilis*

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[60] Plato's reference is indicated by commentators of Hesiod (*Works and Days*, vv. 106–201). Cf. Jean-Pierre Vernant, *Mythe et pensée chez les Grecs: Étude de psychologie historique*, Paris, Maspero 1981, in polemics with Goldschmidt on Hesiod.

[61] Plato, *The Statesman, Philebus*, ed. Harold N. Fowler, Loeb Classical Library (Cambridge MA and London, Harvard University Press 1942), l, p. 47 (268B). For what follows, see ibid., l, p. 49 (269B). Commenting on this page Lewis Campbell observes in *The Sophistes and Politicus of Plato*, ed. and trans. L. Campbell, Oxford, Clarendon Press 1867, p. xxxiv, that this myth is also cited in the *Protagoras*, *Symposium*, *Republic*, *Sophist*, *Timaeus*, and *Critias*.

[62] One witness to this Ionic geogony who was much read and esteemed in the Renaissance is Diodorus Siculus: a page of the first book of his *Bibliothecae Historicae* on the theme of spontaneous generation has often been compared to verses of Ovid's *Metamorphoses*, to the horoscope of the world of Firmicus Maternus (*Matheseos* L. III, 1, § 149) and to book V of *De rerum natura*, which in their turn elaborated motives borrowed from the Ionic naturalists. Cf. Diodori Siculi *Bibliothecae Historicae*, Poggio Bracciolino interprete, [ed. princeps 1492 and many other editions], ed. Hannover 1604, pp. 6–8. Among other works, cf. Anne Burton, *Diodorus Siculus book I*, Leiden: Brill, 1972, pp. 14–17, 44–51; J.W. Spöerri, *Späthellenistische Berichte*. Cf. E. Bignone, *I poeti filosofi della Grecia. Empedocle*, Torino 1916, pp. 545–98. T. Gregory, *La nouvelle idée de nature*, pp. 195–6 notes a similar but not identical geogony for the Middle Ages in the texts of Honorius Augustodunensis (Migne PL CLXXII, 55) and William of Conches (Migne PL XC, 11337–8).

[63] Aeneas of Gaza, *Theophrastus de resurrectione*, trad. Ambrogio Traversari, Venezia, Paganini, 1513, f.Bviiir: "apes cum defecerint, humana arte restitui quae huiusmodi est. Mactant fustibus taurum ii qui reparandarum apum studium et cura est atque intra cellulam mortuum, modice operientes humo ac diligentissime claudentes, corrumpere ac putrescere sinunt. Atque mirabili modo corruptio unius ac putrefactio, apum innumerabilium generatio et vita efficitur. Praeterera et phoenix avis ultra quingentos annos et vivere dicitur ea vero ubi mortua fuerit ac resoluta denuo reviviscere putatur. Succurrit multitudo animalium quae ex corruptione cepere principium, sed enim nihil huiusmodi rebus movetur Theophrastus, solumque hominis corpus reviviscere miratur, idque ut credat induci vix potest qui Athenienses maiores suos indigenas esse non ambigit."

[64] Cf. P.O.Kristeller, *Supplementum ficinianum*, I, pp. IX, CLIX–CLX, (§ XLIII); vol. II, pp. 128–58, in particular p. 143.

seu de regno. In this dialogue (*Statesman*) Plato refers to the archaic myth of spontaneous generation: he himself and many others have "often heard the tale of the reign of Chronos" – that is, the golden age of origins – and heard "that the ancient folk were earthborn and not begotten of one another." Cycles, the eternal return were "necessarily conatural" with the cosmos, hence they were dependent on the laws that governed the course of the stars and on physical nature in general, which was also subject to those laws – in short, they were dependent on the finite (astral and sublunary) and cyclical cosmos. And this was true on the basis of the Eleatic principle dear to Plato, who differentiates, as an essence, between the "identical" of divinity and the "different" (contingent) of finite reality.[65]

Plato then asks a question: in the golden age dominated by Chronos, "when all the fruits of the earth sprang up of their own accord for men," "how did animals enter into existence in those days? How were they begotten of one another?" The Stranger from Elea gives a detailed response:

> It is clear [...] that being begotten of one another was no part of the natural order of that time, but the earth-born race which, according to tradition, once existed, was the race which returned at that time; and the memory of it was preserved by our earliest ancestors, who were born in the beginning of our period and therefore were next neighbors to the end of the previous period of the world's revolution, with no interval between. For they were to us the heralds of these stories which are nowadays unduly disbelieved by many people. For you must, I think, consider what would result. It is a natural consequence of the

[65] Plato, *Statesman* (269d–e) Fowler translation, pp. 50–53: "Absolute and perpetual immutability is a property of only the most divine things of all, and body does not belong to this class. Now that which we call heaven and the universe has received from its creator many blessed qualities, but then, too, it partakes also of a bodily nature; therefore it is impossible for it to be entirely free from change; it moves, however, so far as it is able to do so, with a single motion in the same place and the same manner, and therefore it has acquired the reverse motion in a circle, because that involves the least deviation from its own motion. But to turn itself for ever is hardly possible except for the power that guides all moving things; and that this should turn now in one direction and now in the opposite direction is contrary to divine law. As the result of all this, we must not say either that the universe turns itself always, or that it is always turned by God in two opposite courses, or again that two divinities opposed to one another turn it. The only remaining alternative is what I suggested a little while ago, that the universe is guided at one time by an extrinsic divine cause, acquiring the power of living again and receiving renewed immortality from the Creator, and at another time it is left to itself and then moves by its own motion, being left to itself at such a moment that it moves backwards through countless ages, because it is immensely large and most evenly balanced, and turns upon the smallest pivot."

> return of the old to childhood that those who are dead and lying in the earth take shape and come to life again, since the process of birth is reversed along with the reversal of the world's revolution; for this reason they are inevitably earth-born, and hence arises their name and the tradition about them, except those of them whom God removed to some other fate.[66]

This is a famous page and a disturbing one.

9. Humanists and Paracelsians

It is relatively rare to find humanists who explicitly expound on the Arab thinkers and enter into a debate with them, even if they scorn and banish them along with the Scholastics, as was usually the case. Still, there must have been some discussion about the Arabs, if Pico was able to carry on his quodlibetic dispute. In his *Conclusiones nongentae*, the fifth of the twelve *Conclusiones secundum Avicennam* (thus among those not "secundum opinionem propriam"), he asks: "It is possible for man to be generated from putrefaction?" ("Possibile est hominem ex putrefactione generari?)" It should be noted that the question regarded the spontaneous generation of the most noble animal species, man, and not just amoebas, worms, bees, mice, etc. Pico had also quoted Averroes' theses against Avicenna: "It is not possible that the same species be generated by progeny and by putrefaction."[67]

Antonio de Ferrariis, called il Galateo, launched a polemic precisely against Pico by summarizing and supporting the thesis on spontaneous generation:

> Avicenna considers that floods have been and will be in the future, and that mankind has been lost and will disappear, and has been reborn many times and will be born from earth's rottenness and from the various mixing of the elements, without man and woman's copulation, in the way that mice and other beings are generated in the Nile's floods.[68]

[66] Plato, *Statesman* (271a–c), Fowler translation pp. 55–7.

[67] Pico, *Conclusiones*, ed. B. Kieszkowki, Geneva, Droz 1973, p. 36 ; ed. A. Biondi, Florence, Olschki 1995, p. 25: ibid. see also Thesis no. 3: "In coelo est materia eiusdem rationis cum materia inferiorum" and all of the "conclusiones secundum doctrinam Arabum, qui ut plurimum peripateticos se profitentur: Avenroem, Avicennam, Alpharabium, Avenpatem, Isaac, Abumaron, Moysem et Mahumeth [Tolletinum]."

[68] Antonii Galatei Liciensis philosophi et medici doctissimi, qui aetate magni Pontani vixit, *liber de situ elementorum*, Basileae, P. Perna, 1558, p. 43: "Avicenna illuviones et fuisse et futuras esse arbitrantur, et genus humanum et periisse, et periturum esse, et renatum saepe

He attributed this thought to Avicenna, but he also reached back to Plato, to the classical poets (Ovid on Deucalion), and to Holy Scripture: "Many are persuaded, as it has been told, that floods and conflagrations happen over very long periods and will happen in the future: Plato agrees with this opinion, and poets and historians do not dissent."[69]

Galateo was quite aware that Thomas Aquinas had discussed the question, but avoided difficult questions and took refuge in subterfuges and dodging blows, however:

> Our Thomas [Aquinas], while he seeks to escape from [the theses] of the mortality of souls or of [their confluence in intellectum's] unity or their infinity [in time], admitted, according to Aristotle, the eternity of the world, as if he avoids and bends away from blows, answers not to the question itself, but to the unsuitable nature of [his counterpart], that men have not always been or will be, but that they have been extinguished for long intervals of time and later on reborn.[70]

Given his university degrees in the arts and in medicine,[71] Galateo was at home among Plato, Aristotle, and Thomas Aquinas, but he probably found

fuisse, et subinde nasciturum ex terrae putredine et varia elementorum mixtione, sine maris et foeminae concubitu, quemadmodum mures et quae in Nili inundationibus gignuntur." In this epistolary writing dedicated to Sannazaro, Galateo (1444–1517) mentions the disputes *de genere dicendi philosophorum*, the theme of the famous epistle of Giovanni Pico to Barbaro, and supports the position of the latter: "odi tamen eos qui doctrinas superstitiose …tractaverunt"; prosegue dichiarando: "atticam plusquam parisiensem aut patavinam philosophiam amo. Illa magis veri indagatrix est, ista nugatrix et garrula."

[69] Ibid.: "Multi, ut dictum est, et illuviones mundi et exustiones in maximis periodis factas et subinde futuras confitentur, cui opinioni Plato assentiri videtur, nec poetae et rerum scriptores dissentiunt." On de Ferrariis and his "Byzantine" formation, cf. A. Romano, s.v. *Dizionario biografico degli italiani*, 33, Rome, Enciclopedia italiana, 1987, pp. 738–41.

[70] Ibid.: "Noster Thomas dum vult vitare mortalitatetm aut unitatem aut infinitatem animarum, concessa aeternitate mundi secundum Aristotelem, respondit quasi subterfugiens et declinans ictum, non ad rem, sed ad importunitatem hominis, homines non semper fuisse, aut fore, sed per longa intervalla temporum extinctos fuisse et rursus renatos. Multi, ut dictum est, et illuviones mundi et exustiones in maximis periodis factas et subinde futuras confitentur, cui opinio Plato assentire videtur, nec poetae et rerum scriptores dissentiunt."

[71] Galateo, *Liber de situ elementorum*, p. 43; I introduce, in parentheses, an observation that corresponds to a subject much cultivated in recent decades: he is a defender, if not precisely of animal rights, at least of their dignity, superior in many cases to that of man, especially when men define their nature as a man of arms. Galateo, *Epistola de dignitate disciplinarum ad Pancratium*, ed. and Italian transl. by E. Garin in *La disputa delle arti nel Quattrocento: Testi editi ed inediti*, Florence, Vallecchi 1947, pp. 136–9. From the viewpoint of morality and in comparison

Diodorus Siculus more enjoyable reading. Giulio Cesare Vanini also refers to the latter in a dialogue whose sources have been traced to Pomponazzi,[72] Cardanus,[73] Scaligero[74], and della Porta[75]: "Diodorus Siculus brought forth that the first man had been generated by chance and with earth mud."[76] According to Francesco Fiorentino, Telesio admitted spontaneous generation for superior animals (in the same way as for plants) "given the inclusion of a soft and warm substance" (i.e. spiritus) in the earth. Telesio does so in Bk. VI of *De rerum natura* and in *Quod animal universum*, both of which were put on the Index.

The way the inquisitors put it to Giordano Bruno – whether he had "ever said, believed, or thought that men are created of corruption, like the other animals, and that this occurred from the flood on" – demonstrates that the spontaneous generation of animals was a common belief and not a reason for condemnation. Bruno answered:

> I believe that this is the opinion of Lucretius, and I have read that opinion and heard talk of it; but I do not know that I have ever referred to it as my own opinion, neither have I held or believed it, and when

with humankind, it should be recognized "quam multa animalium genera prudentissima sint. Mittamus magna animalia, ut leones, ursos, equos, elephantes, et aves quae statutis temporibus ex aliis in alias migrant regiones. Apes, et ipsa pusilla animalia furmicae, quis nescit quanta utantur parte prudentiae? Iustitia et pietas, ausim dicere, in multis animalibus magis quam in quibusdam hominibus conspicitur. Grues volantes vicissim ducunt agmen, vicissim agunt nocturnas vigilias. Palumbes cum incubant, vicissim pascuntur. Multa animalium unica coniuge contenta sunt, quibus cura est filiorum; multis a natura datum est, ut multas ineant feminas. At humanum genus pronum est in adulteria, quamvis illi hoc a natura negatum est, quoniam parentes habere debent maximam filiorum curam. Ciconias senio confectas natae alunt. Maximum est hoc pietatis documentum." E. Garin, *Storia della filosofia italiana*, Torino, Einaudi 1966, I, p. 278, underlines more aspects in this text.

[72] Pomponazzi, *Apologia*, in Id., *Tractatus acutissimi*, Venice, Scoto 1525, f. XXVIIIv: "non videmus hominem vel equum sic ex putri materia generari, quod certe non facit fidem, sed quandam probabilitatem ut apertum est." Andrea Cesalpino in his *Peripateticae quaestiones* (L. V, q. 1) returns to Pomponazzi's theses and texts (cf. *supra* notes 3 and 4).

[73] G. Cardano, *Exotericarum exercitationum libri XV de subtilitate*, Parigi, Morellus 1557, p. 627 (*CXCIII, d.1*).

[74] G.C. Scaligero, *De subtilitate*, Frankfurt/ M., Wechel, 1582, p. 33 (*VI d.6*).

[75] G.B. Della Porta, *Magiae naturalis libri XX*, Naples, Salviani 1589, p. 20 ff. (L. I, chapters 1–4).

[76] G.C. Vanini, *De admirandis naturae arcanis*, in Id., *Opera*, a c. di L. Corvaglia, II, Rome, Albrighi e Segati 1934, p. 178 ("Diodorus Siculus prodidit primum hominem fortuito et limo terrae genitum").

> I have reasoned or read of it, it was referred to as the opinion of Lucretius and Epicurus and their like.[77]

Two condemnations in Paris confirm that doctrines and writings supporting the spontaneous generation of humans were viewed as radical. The first is one of the articles in the famous condemnation of bishop Étienne Tempier in 1277:

> That if in some humor by the power of the stars such a proportion could be achieved as is found in the seed of the parents, a man could be generated from that humor; and thus a man could be adequately generated from putrefication.[78]

Precisely three centuries later the Paris Faculty of Theology condemned this idea again, reproducing the accusations that Thomas Erastus and Dessen von Kronenburg directed at the followers of Paracelsus, and condemning fifty-nine propositions, the twenty-first of which went as follows:

> The great mystery of Paracelsus, which sometimes is called 'limbum' by him, is the first matter from which come salt, sulphur, and quicksilver; he tells that all principles of things have not been created, but come from separation, in the same way as from milk come butter and cheese, and from cheese come worms, which before were hidden in it as it happens to powers in medicaments (*Libro de vita longa*).[79]

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[77] Cf. L. Firpo, *Il processo di Giordano Bruno*, ed. by D. Quaglioni, Rome, Salerno, 1998, p.187 (5° Costituto, held in Venice 1592): "Credo che questa sia l'opinione di Lucretio, et io ho letto quest'opinione e sentitone parlar; ma non so d'haverla mai refferita per mia opinione, né meno l'ho mai tenuta né creduta, et quando ne ho raggionato o letto, è stato refferendo l'opinione di Lucretio et Epicuro et altri simili."

[78] This translation has been taken from A. Hyman and J.J. Walsh, eds., *Philosophy in the Middle Ages: The Christian, Islamic, and Jewish Traditions*, 2nd ed., Indianapolis, Hackett, 1986, pp. 545–6. Cf. H. Denifle-A. Chatelain, *Chartularium Universitatis Parisiensis*, Bruxelles, Culture et civilisation, 1964, I, pp. 553–4, §188: "Quod si in aliquo humore virtute stellarum deveniretur ad talem proportionem, cuismodi proportio est in seminibus parentum, ex illo humore posset generari homo; et sic homo posset sufficienter generari ex putrefactione"; cf. K. Flasch, *Aufklärung in Mittelalter? Die Verurteilung von 1277*, Mainz, Dieterich 1989, pp. 237–8.

[79] D. Kahn, *Cinquante-neuf thèses de Paracelse censurées par la Faculté de Théologie de Paris le 9 Octobre 1578*, in *Documents oubliés sur l'alchimie, la kabbale et Guillaume Postel, offerts…à F. Secret*, ed. S. Matton, Geneva, Droz 2001, pp. 173: "Mysterium magnum Paracelsi increatum, quod et aliquando Limbum magnum vocat, est materia prima ex qua sal, sulphur, argentum vivum: omnia rerum principia non creata, sed separata fuisse dicit: quemadmodum ex lacte butyrum et caseus et ex caseo vermes, qui antea latebant in eo, ut vires in medicamento. *Libro de vita longa.*" The idea that animals (and even *homunculi*) could be generated from corruption and putrefaction as vital sources was a fundamental notion, according to Walter Pagel, *Paracelso*, Milan, Il Saggiatore, 1989, pp. 95–7 and the texts cited therein, pp. 307–8. See Gliozzi, *Adamo*, p. 306 f., and *ibid.* on Cardanus, Scaligerus, Caesalpinus, Paracelsus and in particular Bruno.

Erastus had insisted on the cheese image, which can be found earlier in Aristotle, Honorius Augustodunensis[80] and other sources, for example, in the *Picatrix*, where metamorphosis had already taken on the image of fermentation in the cheese-making process:

> We see the master working to prepare enzymes and the same is done by he who produces cheese and butter and other products compounded of milk or honey.[81]

Erastus had wondered whether by "mysterium magnum" Paracelsus meant "locum universi" or something else. He concluded, however, that he must have meant "materia,"

> in part because he himself gives this interpretation, in part because he claims that everything is made by the same thing, in the same way that butter and cheese come from milk and worms come from cheese. He maintains as certain that this mystery was not created, and that all other things were created in this [being] not created by God. By all means, for him this uncreated mystery was nothing different from Anaxagoras' chaos […]. so for him creation is nothing different from separation. In an absolute sense, he calls this mystery uncreated; he does not only deny that it was created without any form, as Scholastics do. […]. It is even more absurd that he maintains that all things go forth, while he denies that it is in act. Although I do not understand how he can deny it, given that he writes that from his mystery creatures have come forth by separation, in the same way as cheese, butter, and whey come from

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[80] Honorius Augustodunensis, *Clavis physicae*, ed. P. Lucentini, Rome, Edizioni di storia e letteratura, 1974, p. 181. "*De sexta die.* Dixit quoque Deus: Producat terra animal viventem' id est producat terra animal vivens totum […] totum animal, hoc est corpus et animam a terra produci iubetur dum anima omnino terra non sit sicut neque corpus anima; quoniam vero ipsa corpori adhaeret in unitate animalitatis, simul de terra fieri scriptura testatur. Vel per terram totius naturae substantialis visibilium et invisibilium incommutabilis soliditas insinuatur." Id., *De universo* (II, iii, cap. XXV) in his *Opera omnia*, Paris, 1673, p. 1071: "est aliquo modo ad semen foemineum sicut coagulum lactis ad lac," cf. *Job* 10,10 cited in n. 31.

[81] *Picatrix latinus*, ed. D. Pingree, p. 52: "videmus operari magistrum facientem fermentum et idem operatur ille qui facit caseum et butirrum et alia opera quae ex lacte seu melle sunt composita."

> milk that divides up when vinegar is injected into it, and as different metals held together in earth are separated by fire.[82]

Many of us will remember the title that Carlo Ginzburg gave his highly popular book, *The Cheese and the Worms*. In it his miller, Menocchio, states that "all was chaos, that is, earth, air, water, and fire were mixed together; and out of that bulk a mass formed – just as cheese is made out of milk – and worms appeared in it, and these were the angels." God himself emerged from the same mass, after which he created the living creatures.[83] As we have seen, Menocchio was not alone in using that image.

9. Ancient and Renaissance Naturalist Thinkers

Here I would like to jump to the conclusion by citing one of the works of the high season of the "History of Ideas"[84]: Aram Vartanian's *Diderot and Descartes*, a book that made a strong impression on me when I read it in my student days. I should immediately clarify, however, that the idea of a living being generated spontaneously (*a casu*) is certainly quite different from the mechanistic concept of *bête machine* or *homme machine*[85] that Vartanian took as his guiding thread for

[82] D. Kahn, *Cinquante-neuf thèses*, p. 17, cites this and other passages published by Erastus in 1571–73: "partim quia aperte sic ipsemet interpretatur, partim quia tam crebro matrem rerum vocat, partim quia ex eodem sic facta esse cuncta dicit, quomodo ex lacte butyrum et caseus, et ex caseo vermes generantur. Hoc tamen mysterium affirmate ait increatum esse, atque in hoc increatum a Deo creatas fuisse res caeteras omnes. Sane ut non aliud ei fuit mysterium hoc increatum, quam Anaxagoricum chaos [...] ita nihil aliud ipsi est creatio quam separatio. Primum enim mysterium increatum absolute nominat , non autem cum scholasticis absque forma aliqua creatum esse negat tantum. [...] Absurdius est, quod per separationem cuncta prodiisse asserit, si actu fuisse negat Quanquam quomodo negaturus sit non videam, cum sic scribat ex Mysterio suo res creatas per separationem emersisse, quomodo ex lacte per acetum injectum diviso caseus, butyrum et serum prodit, et quomodo in igne metalla a se invicem in gleba aliqua una contenta separantur."

[83] C. Ginzburg, *Il formaggio e i vermi*, Torino, Einaudi 1976; Id., *The Cheese and the Worms*, trans. J. and A. Tedeschi (Baltimore: Johns Hopkins U. P. 1980), pp. 5–6.

[84] Cf. G. Boas, *The Happy Beast in French Thought of the Seventeeenth Century*, Baltimore, J. Hopkins U.P. 1933; L. Cohen Rosenfield, *From Beast-Machine to Man-Machine*, Oxford U.P. 1940.

[85] See Sten Lindroth, "Uralstringen: Ett Kapitel ur biologiens ädre Historia," *Lychnos* (1999), pp. 159–92. Lindroth distinguishes between one line of Platonic-Avicennian thought, accepted by Cardano and by Fernel, according to which one must admit a "form" that comes from the outside, another line of thought that goes from Aristotle to Harvey and considers the form of *potentia materiae*, and a third line of thought centered on seminal forms, which claims that "the partisans of Cartesian doctrines adopted a theory of spontaneous generation based on the mechanical explanation of nature proposed by Descartes."

materialism in the modern age. That living beings do not multiply out of matter was already clear to Galileo's followers investigating the question with the aid of a microscope. When one of their number, Francesco Redi, performing experiments based on a rigorous respect for sterile conditions, he proved that matter in putrefaction (*ex putri*) failed to produce even the inferior species – that is, those that, classified in ever-changing ways, included amoebas, corals, worms, and so on up to mice. But the debate had not been definitely brought to a close in that period. John Turbeville Needham (whose contemporaries dubbed him "the eel man"), demonstrated, "on the basis of numerous experiments with infusions of vegetable and animal substances, that putrefaction was capable of producing worm-like micro-organisms"; he "had rehabilitated in the eyes of many the doctrine of spontaneous generation."[86] A century after Redi, a debate arose that was focused on "Trembley's polyp" but included corals, aquatic plants, molluscs, zoophytes, and more.[87] As late as Pasteur's time, the tradition that admitted spontaneous generation was the enemy to be defeated. Still, it is worth recalling, as does Vartanian, the debate on "Trembley's polyp," i.e. on "living beings that multiply by sectioning themselves." Such a view, supporting the notion of continuity in the multitude of living forms, worked towards the removal of artificial barriers erected traditionally among the "reigns" of vegetable, animal and human nature.[88] Acceptance of spontaneous generation was also an important aspect of Paracelsian teaching, which enjoyed a wide vogue in the seventeenth century. With generation of any natural object being part of a universal chemical putrefaction, there was nothing particularly unique or unexpected about organisms generated spontaneously. Just as milk was the matrix or "mysterium" out of which cheese was generated, so cheese was the "mysterium" of maggots or worms.[89]

Only when the cosmos was no longer felt to be a living organism and this image of the world was replaced, on all cultural levels, by the image of a clock-like machine did the idea of spontaneous generation lose the premise that made up its necessary context and begin to disappear.

[86] Aram Vartanian, *Diderot and Descartes*, Princeton U.P. 1953, p. 258. After an article *Trembley's polyp, La Mettrie and 18th Century French Materialism*, "Journal of the History of Ideas," XI, 1950, pp. 259–86, Vartanian here consecrated to Needham chapter IV.

[87] Vartanian, *Diderot and Descartes*, pp. 252, 258.

[88] Vartanian, *Diderot and Descartes*, p. 258. In his *Observations* (1747) John Tuberville Needham states "on the basis of many experiments carried out with infusions of vegetable and animal substances, that putrefaction was capable of producing microorganisms similar to worms."

[89] Farley, *The Spontaneous Generation Controversy*, pp. 8–9.

This long debate provided the framework for the crisis that broke down the neatly constructed steps in the *scala naturae*.[90] The image of the world as an organic whole in which "levels" were each endowed with varying degrees of potentiality and perfection (that is, vegetable, animal, or rational souls) gradually faded. Think, for example, of the hierarchy of nature as depicted in the *De sapiente* of Bovelles (one of the most famous illustrated books of the early sixteenth century); the classification of natural species in that work had held firm for centuries, if not millennia. Even such great humanist physicians of the sixteenth century as Niccolò Leoniceno, Giovanni Mainardi, and Gerolamo Fracastoro, although they restored medicine from the viewpoint of philological criticism and eliminated astrological determinism from it, precisely because of their insistence on contagion and the proliferation of parasites did not abandon the idea of the spontaneous generation of the inferior species. [91]

The idea of the cosmos as a great animal is the necessary premise of the idea of spontaneous generation: it presupposes the unity and confluence of all levels or reigns of nature. Corresponding to it was the idea that all parts of nature can be derived from the four elements and their basic qualities; even in the mineral and the vegetable spheres life springs from fermentation.

Remke Kruik rightly wrote:

> Thus we see that the concept of a hierarchical "chain of being" has contributed to the belief in spontaneous generation, first by emphasizing the idea that the borderlines between the different realms of nature were not clearly defined, thus making it acceptable to believe that unspecific matter could turn into plants or animals fairly easily; and second by its introduction of the idea that gradually more perfect types of matter come into being and are connected to the hierarchy of living beings, thus allowing for the possibility of spontaneously generated higher (but still sublunary) beings. Whether this kind of spontaneous generation still in fact takes place is, in this context, immaterial.[92]

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[90] The same fate awaited the "scale of beings" and the "scale of truth" – that is, the classification of the realms of nature and the grades of passage among animals and plants, thrown into crisis by the same eighteenth-century debate.

[91] Girolamo Fracastoro, *De contagione*, in Id., *Opera*, Venice, Giunta, 1555, f. 114v (bk. I, ch. 13): "Terra quoque ubi plurimam insectorum generationem propter putrefactiones conceptas nuntiat"; cf. Enrico Peruzzi, *La nave di Ermete: la cosmologia di G. Fracastoro*, Florence, Olschki, 1995; on Niccolò Leoniceno and Giovanni Mainardi see my book *L'ambigua natuta della magia*, Venezia, Marsilio, 1996, pp. 76–118.

[92] Kruik, *A Frothy Bubble*, p. 276.

The scientific revolution and the Galileian-Cartesian mechanistic view of the universe were not sufficient to cast aside, immediately and on all cultural levels, the conception of the world as an organism. What is more, as Vartanian observes, the theologians welcomed "this aspect of Descartes's thesis, based on the postulate that beasts were perfect automata devoid of sensibility"[93] (or, rather, without a sensitive soul: with self-regulated movement but without life in the strict sense). "Diderot endeavored to reduce the dichotomy between the living and the non-living to an ultimate variability in the inherent motions of an homogenous matter," i.e. Nature. He went on to ask: "Is any difference to be assigned between *matière vivante* and *matière morte* other than their organization and the real and apparent spontaneity of motion? Is not what one calls living matter merely a matter that moves by itself? And what is called dead matter something that is moved by another material object?"[94]

Earlier, during the debate on Trembley's polyp, Maupertuis and "certain thinkers found it all the more necessary to conceive of Nature, i.e. the ensemble of physical particles and the laws governing their complex motions, as possessing self-direction."[95] The crisis was more profound, however; the debate was, in fact, not about simple questions of botanical or zoological classification, but also involved the relationship between soul and body in terms that went back to Greek philosophy. The question was whether there

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[93] Vartanian, *Diderot and Descartes*, p. 208.

[94] Vartanian, *Diderot and Descartes*, p. 267. On pp. 270–71 Vartanian cites Diderot, *Interprétation de la nature*. According to Diderot, Maupertuis "makes desperate efforts to avoid all suspicion of atheism, and it is evident that he advances his hypothesis . . . only because it seems to him to satisfy the most difficult phenomena without materialism being a result." In his letter to Henry More of 5 February 1649 (AT, V, p. 276), Descartes distinguishes between the rational soul and the corporeal soul attributed to animals. The corporeal soul, a "physical organization, was judged capable of all functions excepting only cogitation." For other disciples of Descartes, he had "put life and sentiment – and potentially intelligence – into the machine simultaneously with his mechanizing the organism": ibid., pp. 211, 212.

[95] Ibid., p. 279. Within the Cartesian school (with the exception of Régis, Rohault, and Guillaume Lamy), many took these claimed "apologetics" as true. "The *bête machine* in fact became the principal nucleus of an entire school of apologetics. . . . Interpreted thus in the age of the Enlightenment, automatism, along with many adaptations of it, was presented as a general argument in favor of a number of Christian dogmas." Promptly bringing himself up to date with Trembley's polyp, Bonnet sought to update a "scale of created beings" (but the *Journal des savants* of 1745 ridiculed it). See Fabio Todesco, "Il polipo di Trembley (1740) e la catena delle verità," *Giornale critico della filosofia italiana*, ser. 6, 10 (1988), pp. 342–65, esp. p. 350, note 43, and the bibliography cited. Even if they differed over details (from Malebranche to Bonnet, from the "ovists" to the "animaculists"), the intention of a number of supporters of the *emboîtement des germes* (the theory of species preformed at the moment of creation) was analogically apologetic.

existed various types of souls (animal, vegetable, rational), while all that could be categorized under the element of "earth" (stones, marbles, soils, sands, etc.), but also as "water" or "air" was, according to the mechanistic conception, without a soul, hence without life.

Bayle observes in the entry in his *Dictionary* under *Rorarius*:

> If a dog differs from a stone, it is not that he is composed of a body and a soul, while the stone is only body; but it is solely in this, that he is composed of parts ranged after such a manner as to form a machine; which the ranging of the particles of a stone does not. This is the opinion of Mr *Des Cartes*. This idea is very proper to make us understand the opinion of Dicaearchus.[96]

Dicaearchus was a peripatetic philosopher well versed in Pythagorean science and a precursor of the atomist Strato of Lampsaco.[97]

> Dicaearchus . . . has his orator assert that the soul does not exist at all, and that it is a completely empty term; that it is vain to speak of animals, that soul does not exist either in man or in the beast. All this force by which we operate or feel anything is also diffused in all living bodies, and it is not separable from the body, like the [force] that does not exist and is none other than the one, simple body configured in such a way as to have strength and sensibility out of natural temperament.[98]

Dicaearchus was not a name picked out by chance. For Bayle as for Ficino,[99] "of all the philosophers, none said the soul was nothing if not Dicaearchus."

(Translated by Lydia Cochrane)

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[96] Pierre Bayle, *Dictionnaire historique et critique*, Rotterdam, Leers, 1697; Id., *The Dictionary Historical and Critical of Mr. Peter Bayle* (1734, 2nd ed.), London: Routledge-Thoemmes Press, 1997, 2, p. 225.

[97] See T. Gomperz, *Griechische Denker*, cf. Engl. trans. *Greek Thinkers: A History of Ancient Philosophy*, 4 vols (London, Murray 1901–12)]; Ital. trans. by L. Bandiini and D. Faucci Firenze, La nuova Italia, III, 1953, p. 305; IV, 1962, p. 748. P. Vidal Naquet, *Temps des dieux et temps des hommes* (1981), reprinted in his book *Le chasseur noir*, Paris, La Découverte 2005, pp. 361–6, who notes that in the late fourth century Dicaearchus was cited for his idea that the age of gold was historical.

[98] Cicero, *Tusculanae*, I, 19 e 21 cited in R. Mondolfo, *Il pensiero antico*, Florence, La Nuova Italia, 1950, p. 356

[99] Ficino, *Di Dio et anima* in Kristeller, *Supplementum ficinianum*, p. 141.

VI

Astrologers' Theory of History*

1. For the general title of this seminar I have drawn on a letter written by Luther to Spalatin on March 3, 1524. The phrase I have chosen is extremely and typically critical and concerns certain "astrologers who had been deluded that year into announcing (or denying) the imminent end of the world due to a flood brought on by the conjunction of the three upper planets in the sign of Pisces."[1] This statement seems worthy of our attention, and not only in order to underline the fact that for sixteenth-century Latinists the term *hallucinari* carried less weight than in classical Latin. Without encroaching on Ms. Ludolphi's territory, I would like to make two preliminary points. First of all, Luther is included in Gustav Hellmann's valuable bibliography of prognostications concerning the 1524 flood. As Josef Benzing has acutely pointed out[2], one of Luther's 1522 Advent sermons was excerpted and published in three different but contemporaneous editions at the beginning of 1524. With the dread events still more than a year away[3], in December 1522 Luther did not feel their actuation could be entirely dismissed:

* I am very grateful to Dr. Ann Vivarelli for translating this introduction and my paper (infra, pp. 239–263).

[1] Luther, *Werke,* Kritische Ausgabe (Henceforth: WA); Briefwechsel (Henceforth: Br.), III, (Weimar, 1933), p. 260, Nr. 724. (and cf. ibid., Footnote 1): in the same letter, written from Wittenberg, Luther dwells upon Gaurico's Horoscope of his own birth: "Genesim istam meam iam ante videram ex Italia huc missam. Sed cum sic sint hoc anno hallucinati astrologi nihil mirum, si sit qui et hoc nugari ausus sit". As it is well known, Gaurico' Nativitas was "rectificata", h.e. he gave a wrong date to feign a coincidence between Luther's birth and the bad 1484 conjunction in Scorpio.
In Renaissance latin "hallucinari" (alucinari) simply means "to be wrong"; cf. W. Pirckheimer, *Opera,* ed. M. Goldast (Frankfurt M., 1610) p. 234, complaining about an uncorrect ms. which "me hallucinari coegit"; see also the modern examples in Forcellini, *Lexicon totius latinitatis* compared with classical ones *ibid.* or in *Thesaurus latinae linguae.*

[2] Gustav Hellmann, 'Aus der Blütezeit der Astrometeorologie', in his *Beiträge zur Geschichte der Meteorologie* (Berlin, 1914), I, p. 37; Josef Benzing, *Lutherbibliographie* (Bibliotheca Bibliographica Aureliana, vols. X, XVI, and XIX; Baden Baden, 1966) pp. 232–233.

[3] Already on 14th January 1521, writing from Wittenberg to Wenzeslaus Link about the many discussios at the Eve of Worms Reichstag ("rem tumultuosissimo tumulto tumultuantem"), Luther comments in an ironical mood: "forte haec est inundatio illa praedicta anno 24° futura", cf. WA, Br. II (1931), p. 248 Nr. 367.

„Darumb ich darauff stehe, das der hymlischen scharen bewegung sey gewisslich die tzukunfftige constellation der planeten, daruber die sternmeyster sagen, es solle eyne syndflut bedeutten, got gebe, das der iungst tag sey, wilchen sie gewisslich bedeuttet. Und hie soltu aber dich nit yrren lassen, das disse constellation sich auss des hymels laufft naturlich begibt, es ist dennoch eyn tzeichen von Christo genennet. Und ist fast wol seyn wartzunehmen, weyl es nitt alleyn, ssondernn gleich mit dem hauffen der andern tzeichen sich samlet und tzu gleicher tzeitt mit eyntrifft. Lass die unglewbigen tzweyffelln und vorachten gottis tzeychen unnd sagen, es sey naturlich geschefft, hallt du dich des Evangelion. Es sind noch mehr tzeychen, die an andern orttern beschrieben sind, als da sind erdbeben, pestilenz, theur tzeytt und kriege, Luce. 17 und Matt. 24 . . ."[4]

However, he criticized astrology;[5] he held it to be a pagan and naturalistic belief based by its followers on Aristotle's *Meteorologica*. If startling events or universal catastrophes had to take place, they must be attributed not to the stars but to God's will. Luther's judgment, delivered from the pulpit in 1522, was prompted by a controversy which by the end of that year was extremely animated and widespread. His concept of history, together with many of his other ideas, was deeply rooted in the thought of Augustine. Supernatural by definition, God is master of moments and instants in time; He is surely aware in advance of individual and collective events, without, obviously, predetermining them. However, there is no reason that He announce them except in exceptional circumstances as He did through the prophets, nor does He avail Himself of "secondary causes", i.e. those "celestial movers" so dear to the Dominicans' Aristotelian tradition which was seeking to justify astrology according to Aristotelian concept of cause. Luther belonged to the opposite Augustinian school of thought, and he must have been

[4] *Adventpostille 1522* in WA (1925), I,2, p. 108; a contemporary witness, Johann Magenbuch relates from Wittenberg to Wolfgang Rychard in Ulm on 26th December 1524, that is just after Luther's sermon (cf. Hamburg SUB, Codex Rychardi, fol. 290r, cit. in WA, Br. II, p. 248 n. 8): "multi sunt qui putant futurum esse diluvium in anno 24°. Martinus parum de hoc statuit, sed credit mutationem quandam totius terrae futuram esse, aut aqua, aut igni, aut bello aut, cui magis accedit, extremo iudicio".

[5] Cf. Ingetraut Ludolphy, "Luther und die Astrologie", *infra*, pp. 101 ff.; Klaus Lämmel, "Luthers Verhältnis zu Astronomie und Astrologie (nach Äußerungen in Tischreden und Briefen)", in: *Lutheriana. Zum 500. Geburtstag Martin Luthers von den Mitarbeitern der Weimarer Ausgabe*, hg. v. G. Hammer und K.-H. zur Mühlen (Wien, 1984), pp. 299–312 (hence I have found the quotation of the 1521 letter to Link; but Lämmel as well as Ludolphy do not pay attention to the debate on 1524 Flood or to astrological theory and technique). Extremely near to Luther's philosophy of astrology are Stephan Wacker, *Eyn wairhafftige Pronosticatio, dat keyn Synflusz werde usz der hilligen schrifft bewert . . .* (Köln, S. Lupus, 1523 cf. Hellmann, p. 64), and Pamphilus Gegenbach, *Ein Christliche und ware Practica* (n.p.n.d, but Basel, 1523; cf. Hellmann, p. 35).

aware of the serious aporias which Oresme, Heinrich von Langenstein, and more recently Giovanni and Gianfrancesco Pico had focused on concerning the concept of astrology. Not to mention the polemics in Paris between the theologians Pierre d'Ailly and Jean Gerson. Therefore, Luther, who did not hesitate to admit the devil's direct intervention in human affairs and to legitimate the existence of divinatory meaning in exceptional natural phenomena, did not accept astrology.[6]

Let me make it clear immediately that I have no desire to pass judgment on either the Augustinian or the Aristotelian-Thomistic thesis, or to say which is more modern or acceptable today. Both can be smiled at with no hesitation, and one cannot approach either as one would approach the task of explaining Spinoza or Kant to one's students. I only wish at the outset to differentiate two ideal and undoubtedly not very rigorous models, which, in my opinion, played a very important part in intellectual history between the Middle Ages and the Renaissance.

Ms. Höss and Mr. Caroti will soon be discussing two close collaborators of Luther, Georg Spalatin and Melanchthon. More interested than the Reformer in the renaissance of classical antiquity, they were also much more open to astrology, perhaps for ulterior, propagandistic reasons. Although Luther was their undoubted intellectual superior, it would be pointless to speculate as to whether their position or his was the more "advanced." Such a question simply has no bearing on the variegated and international nature of the documents involved in this eschatological debate.

The scientific revolution was still two decades away in 1524. Nevertheless, as is known, long after Copernicus and even long after Galileo, horoscopes were calculated, commissioned, and paid for. We may be scandalized by the fact that Galileo himself made one for his son,[7] but

[6] Fundamental for the whole purpose of both this introduction and the whole volume is A. Warburg, *Heidnisch-antike Weissagung in Wort und Bild zu Luthers Zeiten* (Heidelberg, 1920); reprinted: Id., *Gesammelte Schriften*, hg. v. G. Bing (Leipzig–Berlin, 1932) pp. 487–558; on the subject of sorcery, see now Beatrice Frank, "Zauberei und Hexenwerk", in *Lutheriana* (cf. n. 5), pp. 291–297.

[7] Cf. Antonio Favaro, "Galileo astrologo secondo documenti editi e inediti", *Mente e cuore*, 8 (1881), pp. 99–108: v. tra l'altro Firenze, Bibl. Nazionale, ms. Galileiani 81. Cf. Germana Ernst, "Aspetti dell'astrologia e profezia in Galileo e Campanella", in: *Novità celesti e crisi del sapere*, ed. P. Galluzzi (= Suppl. agli Annali dell'Ist. e Museo di Storia della Scienza; Monografie, 7; Firenze, 1983), pp. 264–266.
Of methodological interest are previous researches on similar astrological debates at different dates of the Scientific Revolution, such as Julius Rauscher, "Der Halleysche Komet im Jahre 1531 und die Reformatoren", *Zt. f. Kirchengeschichte*, 32, 1911, pp. 259–276, esp. pp. 263–65 on Luther; Elisabeth Labrousse, *L'entrée de Saturne au Lion. L'éclipse de Soleil du 12 Août 1654* (La Haye, 1974); and James H. Robinson, *The Great Comet of 1680. A Study in the History of Rationalism* (Northfield, Minnes. 1916), who counts 99 contemporary publications on this comet only in Germany and Switzerland,

we can scarcely link this moment of weakness or this survival in him of ancient and rooted beliefs with his entire conception of the world. Such information helps us to realize that even the most original and scrupulous thinkers are not always as perfectly and absolutely systematic as we would like to think of them as being. My impression is that we can find analogous survivals in many areas, and that there is, as Ernst Bloch said, an unavoidable element of *Ungleichzeitigkeit* in intellectual history. I use the neutral term "intellectual history" in order to forestall possible objections from my Berlin colleagues. Actually, I prefer to use the French definition "histoire des mentalités" as seldom as possible, because my modest aim would be to look a bit more closely at the theoretical connections and presuppositions of a political and religious phenomenon. However, I humbly disclaim any pretence that my problematics could fit into a philosophy manual. Astrology must certainly be studied over the *longue durée.* Its obstinate survival, even in the face of strong and destructive criticism, is due in part to its mathematical apparatus and to the systematical way in which it could be expounded. Both features are much more impressive and apparently objective than is true of related "sciences", beliefs, and occult practices which, incidentally, were also founded according to the same principles. However, in the case under study the *longue durée* is not helpful, because we are examining an episode which can be said to extend over barely a quarter of a century, which concentrated during the years 1512–1524, and which exploded in the last three years of that timespan.[8]

This was the period of the Italian Wars and the Gallican *conciliabulum* in Pisa, of Luther's Theses and the Reichstag of Worms, and of the elections of Charles V and his preceptor Adrian VI; the latter was fully as interested in astrology's potential for publicity as were his predecessor Leo X and follower Clement VII. Many of our pamphlets

and about 45 in France, Holland, England, America, Italy. Being more than 150 years away, these figures are less impressive than the 160 entries of Hellmann's bibliography, now to be increased by several newly found Prognostications and other relevant documents.

[8] Cf. H. J. Köhler, The *Flugschriften* and their Importance in Religious Debate, *infra,* p. 155 on the "exceedingly high pamphlet publication" in 1523–1524. "During 1524 alone no less than 16 percent of the pamphlet editions of the thirty years [1501–1530] period were produced five time the annual average of the entire period".
The result of previous researches is to be found, after Hellmann, in L. Thorndike, *A History of Magic and experimental Science,* V (New York, 1941), pp. 178–233; P. Zambelli, "Astrologia, magia e alchimia", in *Firenze e la Toscana dei Medici nell'Europa del Cinquecento,* IV (= XVI Esposizione del Consiglio d'Europa; Firenze, 1980), pp. 318–322, 406–418, giving a chronological, not alphabetical arrangement of almost all the *Prognostica;* Id., "Fine del mondo o inizio della propaganda?", in *Scienze, credenze occulte, livelli di cultura,* Convegno Intern. di Studi / Ist. Naz. Studi sul Rinascimento; ed. P. Zambelli (Firenze, 1982), pp. 291–368; Ottavia Niccoli, "Il Diluvio del 1524 fra panico collettivo e irrisione carnevalesca", *ibidem,* pp. 369–392.

were dedicated to all these popes.[9] The names of some of the writers involved in the polemic are of great interest to a seminar held in a German institute about five hundred years after Luther's birth: there was Luther himself, with Spalatin and Melanchthon in the wings; but there was also Lichtenberger's heritage (about whom Mr. Kurze will speak) and Sebastian Brant, Hans Virdung von Hassfurt, Alexander Seitz, Georg Tannstetter, and such theologians as Wacker or Pastoris. I mention some of these names because I would have been pleased if a number of recent specialists on them had accepted our invitation to participate in these talks.

I hope that this small seminar may cover two sides of the problem. For the first side, with the help of Mr. John D. North and of Mr. Krzystof Pomian, we will try to clarify – for the benefit of the unbelieving – the nature of the conceptions of the world and of history which lay behind the prognostications of the 1524 flood. We will also see how the predictions provided the pretext for a much more broadly-based discussion of the problems and theories which Giovanni Pico's *Disputationes adversus astrologiam iudiciariam* had brought out into the open several years previously. The second aspect to be studied, thanks to another old friend Mr. Hans-Joachim Köhler, will be the new forms in which the astrologers (together with many other propagandists) expressed themselves after the discovery of printing. We will begin with Johannes Lichtenberger who was the most important model in the Germanic area for the Joachimite-astrological prognostications of the '20s. Lichtenberger drew much of his astrological data from Paul of Middelburg's twenty-year prognostication, and the latter wrote one of the 1524 *prognostica consolatoria* as well. The specialists mentioned earlier will then illustrate the reactions of the three eminent Wittenberg religious leaders.

Actually, the debate began in the German-speaking world at a slightly later date than in Italy. Two Italians began it. The first was Luca Gaurico in 1512, but already earlier in 1502 and 1507, and again in 1522. He hid behind an anonymity which was indispensible for the adventurer and provocateur which he was. The second was Agostino Nifo da Sessa in 1519, whose opposite, comforting bent was widely imitated in Germany. These Italians were eminent in their own right, but their writings were aimed at the German Empire, and it was from there that the most timely reactions came. A prognostication, unfortunately lost, was sent by Gaurico in the spring of 1512 to the Reichstag convened at Trier by Maximilian I: the first answers to it were commissined by the Palatine Elector to two astrologers from his Universities. The first was Johannes Stöffler of Tübingen; he quoted his answer in a piece written in 1523 in

[9] See infra my *Many Ends for the world,* p. 240 n. 3.

defense of the by then old *Ephemerides* (which had been the first warning of the planetary conjunctions causing the flood), now being criticized by Tannstetter, a professor at Vienna. The second, from Heidelberg, was Johann Virdung who had been writing annual prognostications for twenty-five years. He had a confutation of Gaurico printed in both Latin and German which, fortunately for us, contains extensive quotations from his adversary.[10] Nifo's prognostication, dedicated in 1519 to Charles of Hapsburg (not yet crowned Emperor) and published in many languages and editions, shows that he was already very sensitive to the problem of restoring religious unity in the face of Luther. After the appearance of Nifo's "bestseller", many writers (more than sixty in all) joined the debate. They came from the Germanic area, from Italy, and even from the Iberian peninsula and from Cracow, seat of Poland's great and unique university.[11] We have only one fragmentary and insignificant document from England, rather backward in terms of interest in astrology, and, what is more curious, from France only an illuminated manuscript which contains an allegorical dream concerning the Great Flood; it was composed by the Cabalist Jean Thénaud for the Queen Mother Louise of Savoy.[12] Although this precious courtly curiosity was not destined for circulation, we have reason to suspect that Luca Gaurico's first provocatory piece of 1512 was, instead, instigated and paid for by the French. Once his hopes collapsed of reversing Maximilian's ecclesiastical policies by announcing a flood and other calamities already anticipated for 1512, Gaurico announced that he wanted to take refuge in Paris "per disperato."[13]

But now we must abandon these Mediterranean intrigues which I will treat later on and concern ourselves with the Germanic area. Here, while not all the participants in the debate were outspokenly Evangelical, it is also true that there were fewer and less incisive Catholic elements.

Two recently discovered documents are particularly interesting. The first allows us to give an attribution to one of the most elegant prognostications of the period. Published in Augsburg in 1523 under the name of Johann Gereon, it was actually written by Veit Bild,[14] a Benedic-

[10] *Ibid.*, p. 248.

[11] Cf. my "Fine del mondo" (cf. n. 8), p. 300 ss. and passim on Nifo; pp. 295–299 on the spread of the debate among european astrologers; on P. Ciruelo p. 311 ss.; on the polish astrologers, pp. 331–334.

[12] Anne-Marie Lecoq, "D'après Pigghe, Nifo et Lucien: le rhétoriqueur Jean Thénaud et le déluge à la cour de France", infra, pp. 215–237.

[13] See infra *Many Ends for the World,* p. 251 n. 30.

[14] Veit Bild (1481–1529) studied at the University of Ingolstadt (1499ff.) under the direction of Jacob Locher (Philomusus) and Johann Stabius: the latter introduced him to mathematics and astrology. Bild was later well acquainted with several astrologers, as Johann Stöffler (one of the authors of the famous *Almanach nova* of 1499), Johann Schöner, Regiomontanus, Sebastian Sprenz (Sperantius), Nikolaus Pol (physician at Innichen-S. Candido, where the mss. and books bought by him are still kept) and Jakob Stoppel from Memmingen. Bild entered his Order at the Convent of St. Ulrich and Afra at Augsburg, and stayed there until his death with one only absence in 1511, when he visited the famous convent of Melk to study the reform movement there. At Augsburg he acquired an important position in the circle of humanists connected with the Fugger family. He studied Latin, Greek and Hebrew, build "Kalendäre" and Clocks, and kept a correspondance with B. Adelmann, K. Peutinger, his teacher of Humanities Locher, Otmar Nachtigall (Luscinius, editor and translator of Paul of Middelburg's *Progonosticon* for 1524, with a dedication to Raimund Fugger). Both Bild's correspondance and unpublished treatises are still kept in the Ordinariatsbibliothek (Bistum-Archiv) at Augsburg; it is my intention to embark upon a close study of these mss. For bibliography on Bild's life and works, cf. A. Bigelmair, s. v., *Neue Deutsche Biographie,* II, München 1955, p. 235.

tine humanist who had been an early sympathiser of the Reformation movement but who had returned to his old Faith.[15] His correspondence with Konrad Peutinger reveals the monk's authorship, and Peutinger admired Bild's satirical elegance. Published in both Latin and German,[16] the principal aim of the piece was the confutation of an argument

[15] Bild wrote also two letters to Luther and his correspondance with Oekolampadius shows warm interest and liking for the first stages of the Reformation; but after the Eucharistic Controversy and the Paesants War he was absolutely contrary to it. Cf. A. Bigelmair, "Oekolampadius in Kloster Altomünster", *Beiträge zur Gesch. d. Renaissance u. Reformation. Joseph Schlecht . . . Festgabe* (München–Freising, 1917), p. 23, who cites both correspondances and especially Veit Bild's letter written to Oekolampadius in Summer 1519 to ask esplanations on Luther's Theses, which he had been unable to read in Augsburg.

[16] Konrad Peutinger, *Briefwechsel,* ed. by E. König (München, 1923), pp. 390–392, Nr. 244: letter of Peutinger written to Bild on 20 March 1524: "Is tuus Gereon, quisquis est, non fucate, non temerarie, non frivole, non nugaciter ut plerique, sed pocius ita scripsit, ut taxari atque reprehendi merito non possit. Quoniam autem coniunctionum illarum de anno salutis 670 recordatus est ad historiarum plerosque scriptores me compulit, qui tamen tempore illo de inundacione aliqua facta dicunt nihil, quod et hoc mense februario plane cognovimus. Mathematicos istos indoctos! Non omnes, sed quosdam male suppuntates audaculos, qui vulgo indocto nugis suis non solum timorem incusserunt, sed et divinae potestati laqueos, licet falso, ponere attentarunt. Scriptum est: Non est vestrum, nosse tempora et articulos temporum, quos Pater in sua constituit potestate". After several historical quotes on these floods of the High Middle Ages, Peutinger asks: "Suprascriptum 586 annum et eius tunc coeli figuram sive thema praecipue in mense octobri observa ac me certiorem redde, num tunc astra inundationem praescriptam significarint et an coniunctio illa planetarum maxima anni 570, cuius Gereon tuus mentionem facit, inundacionem aliquam perfecerit vel ne". Bild answers on 3 April 1524 (*ibid.*, p. 392–393, Nr. 245): "Caeterum Ioannis Gereonis supputationem ad 670 annum veram esse credas, sed neque anno eodem neque sequenti aliquam inundationem alteriusve rei quid notatu dignae contigisse. Diversitatem quorundam, quam adsignasti, me latuisse scias minime, etsi horum sententiae, quoas aeque doctissimos atque integerrimos facillime crederim, multum tribuam qui restitutae salutis annis 570 validam inundationem, similiter 586 diluvium ingens aput Venetos et Liguriam kal. Octobris maximis cum tonitruis et peste Rhomae subsecuta, necnon 589 vim aquarum maximam evenisse scribunt".

brought into the debate by the Evangelical astrologer, Johannes Carion. Carion had published a widely-read prognostication in Leipzig in 1521. Written in German only, it evoked the flooding of the Tiber and Adige rivers in the eighth century, an event which had led to the invasion of Rome by terrifying dragons and to expiatory processions and ensuing plagues during which eighty people had died, including a Pope, who left his throne to the great reformer, Gregorius Magnus. Despite the fact that it only circulated in German, Carion's apocalyptic account had a vast echo.[17] From a small city in the papal states, Niccolò Peranzone wrote an imitation of it and added example after example of additional floods.[18] His piece forced the Bishop Paul of Middelburg, who had scorned astrology for thirty years, to take up his pen in order to elucidate the difference between universal "diluvia", true scourges sent by God, and the normal overflows of badly-regulated rivers or of the polders in his native Holland.[19] Alarmed rumours even circulated amidst the German soldiers who had followed the Emperor to Spain; these rumours are recognizably inspired by Carion's prognostication, and they are attested to by Peter Martyr of Anghiera.[20] The Benedictine monk composed his humanistic satire in order to counterbalance the "bestseller" written by the Brandenburg court astrologer, officially a Catholic, but, as noted by Warburg from Carion's correspondence with Melanchthon, a secret convert to the Reformation.[21] Bild consoles and reassures his readers by ridiculing Carion's apocalyptic predictions. However, it was too late, and irony was but a blunted tool to counter such universal panic. Carion and many others insisted that the only salvation lay in widespread conversion and advocated the reconciliation of the two powers: "unum ovile sub uno pastore", in other words a reconciliation under the aegis of the new Evangelical faith.[22]

Additional, even less well-known documents coming from the great Nürnberg family, the Pirckheimer, confirm an increased interest in astrology. We know that in 1514 Willibald had his horoscope cast by Lorenz Behaim,[23] and many signs of his concern for the occult can be

17 Cf. my "Fine del mondo" (as note 8), p. 306ff.
18 *Ibid.*, pp. 303–305.
19 *Ibid.*, pp. 305, 310–311;
20 *Ibid.*, p. 350ff. and n. 155.
21 Cf. Warburg, *Gesammelte Schriften* (as note 6), pp. 492ff., 533ff., 536ff. See now Hermann F. W. Kuhlow, "Johannes Carion (1499–1537). Ein Wittenberger am Hofe Joachim I", *Jahrbuch f. Berlin-Brandenburgische Kirchengeschichte,* 54, 1983, pp. 53–66, who reviewing the secondary literature and all the known documents stress this point (but without an analysis of Carion's astrology).
22 On "unum ovile sub uno pastore", cf. my "Fine del mondo" (as note 6), pp. 326–27.
23 W. Pirckheimer, *Briefwechsel,* ed. by E. Reicke (Humanistenbriefe IV–V; München, 1940–1956), II, 362–373: Dr. Lorenz Beheim calculated an horoscope on behalf of Pirckheimer for his forty-fourth year on 17 April 1514.

found in his Nachlass in Nürnberg and London.[24] Bernhard Adelmann, a friend of his and also of Veit Bild, often pointed out to him the shortcomings of current "genethliaci", either because they had not given sufficient warning concerning the greatest calamity of the time, the French pox,[25] or because, like the previously mentioned Virdung ("quem plurimi in sua arte commendant"), they had provided ridiculous explanations for a recent famine.[26] However, it has not been noted that Willibald's sister, Caritas, abbess of an aristocratic convent of the Poor Clares

24 Most striking are the Horoscopes Pirckheimer calculated on behalf of at least twelve persons of his own family in CLM 27083, described in an exhibition Catalogue: L. Kurras - F. Machilek, *Caritas Pirckheimer 1467–1532* (München, 1982), p. 55 and Table 3. Cfr. also *W. Pirckheimer 1470–1970. Eine Dokumentation in der Stadtbibliothek Nürnberg* (Nürnberg, 1970), n. 53 concerning mss. 95 and 360 of his Nachlass kept there, as well as concerning London BL, ms. Arundel 274 and 175. A cursory investigation I have undertaken at Nürnberg Stadtbibliothek, has unveiled numerous documents relating to Pirckheimer's astrological and occult interest: ms. 360.9 (1) astrological "Revolutio" for 4 December 1511; ms. 360, 11; 360.15; 360.17; 360.19 astrological notes and calculations; ms. 360.23 Geomantical "Tabula significationum omnium figurarum", with at fol. 50–53 two horoscopes; 360, 1–2, Chiromantia. Another Note on Geomancy written by Pirckheimer during his italian stay (1488–1495) in ms. Vindobon. lat. 12466 is mentioned by H. Rupprich, "Willibald Pirckheimer", *Schweizer Beiträge zur Allgemeinen Geschichte,* 15, 1957, p. 71. On the history of Pirckheimer rich library and his own ms. writings, cf. K. Pilz, "W. Pirckheimer Kunstsammlung und Bibliothek", *W. Pirckheimer 1470–1970. Dokumente Studien Perspectiven,* (Nürnberg, 1970), pp. 106–107. See Adelmann's Epistola XXXVII to Pirckheimer, 27 June 1520, in J. Heumann, *Documenta litteraria* (Altorpi, 1758), p. 201: "De sideribus quid tibi respondeam? quam eorum virtutem ac vim penitus ignorem, unum tamen plurimum admiror, quod genethliaci isti morbum istum, quem gallicum appellant non praedixerint; non enim memini me apud ullum hoc legisse, cum mihi vix quicquam nostra aetate pestilentius videatur exortum fuisse". Cf. Niemeyers, *W. Pirckheimer* (quoted by Höfler, as note 29 at p. 3 n.) p. 479 who translate Pirckheimer's strong astrological these: "Es sind nun schon 10 Jahre, dass ich jene schrecklichen Kriege, welche Italien zerütten, vorhergesagt habe. Wer mich damals auslachte, siht nun doch welche grosse Dinge Gott durch die Gestirne ausrichtet. Auch den Ruin des Papstes, die Veränderung der Gesetze, die Gefangenschaft des K. Franz, den Bauernkrieg habe ich vorausgesagt und zwar nicht aufs ohngefähr, sondern auf astrologische Principien gestutzt".
25 Adelmann's Epistola XV to Pirckheimer, on 11 January 1518, *ibidem,* p. 168: "Mitto tibi prognosticon huius anni Ioannis Virdung (quem plurimi in sua arte commendant) non ob aliam causam, quam ut videas quam ridiculam causam sterilitatis ac mathematico non convenientem praeteriti anni adducat, quasi et non eadem causa compluribus annis praeteritis fuerit, atque utinam hoc anno cesset: sed nimirum hoc est (pace tua scripserim) et theologorum et mathematicorum refugium. Sed quid de his sentiat Richardus Pace, qui nuper Basileae fuit impressus, malo ex eo quam ex me percipias, quam derisorem mathesim putas. Cf. F. X. Thurnhofer, *Bernhard Adelmann von Adelmannsfelden, Humanist und Luthers Freund (1457–1523)* (Freiburg i. B., 1900), p. 87 n. 6, 39ff., 103. Pirckheimer wrote to Oekolampadius on 23 January 1524 "de obitu communis nostri amici Bernhardi Adelmanni", cf. Joannes Oekolampadius, *Briefen und Akten,* ed. by Stähelin (Quellen u. Forschungen z. Reformationsgesch., 10, 19; New York-London, 1971) I, p. 266, Nr. 182.

("ein frau lateinische sprach fast kundig und wohlberedt"),[27] has left us a precious document illustrating the connection between Evangelical reforms and sermons on the flood.[28] The topic, in fact, opens her memoir:

> „Zu wißen, das etwan lange zeit pronosticirt ist worden auf dy zeit, wen man zellen wirt anno domini 1524 sollt ein große sindfluß kumen, durch dy alles, das auf erden ist, verandert und verkert soll werden und wywoll solchs gemeynglich auf ein waßersindfluß verstanden ist worden, hat es sich doch in der erfarung erfunden, das daz gestyrn nit als gar waßer angezaigt hat als vill trubsal, angst und not und nachvolgent groß plutvergyßen; dann in dem vorgemelten jar hat es sich begeben, das durch dy newen lere der luterey gar vil ding verandert sind worden und vil zwyspaltung in dem cristlichen gelawben sich erhebt haben, auch dy ceremonia der kirchen vil abgethun sind worden und nemlich der standt der geistlichen an vil ortten schyr gancz zu grunt gangen, dann man prediget dy cristlichen freyheit, das dy gesacz der kirchen und auch die gelub der geistlichen nichs gelten sollten und nymant schuldig wer sy zu hallten."[29]

[27] Cf. J. Pfanner, "Caritas Pirckheimer. Biographie einer Äbtissin", *Caritas Pirckheimer Ordensfrau und Humanistin – ein Vorbild für Ökumene. Festschrift zum 450. Todestag*, ed. by G. Deichstetter (Köln, 1982), p. 45ff.; and ibid. 178ff. Bibliographie: amongst biographical sketchs are to be mentioned F. Binder, *Charitas Pirckheimer* (Freiburg i. B., 1873), esp. pp. 187–188 with notes on sources and studies; *W. Pirckheimer 1470–1970. Dokumente* (as note 24), pp. 45–46; and the catalogue of exhibition by Kurras and Machilek (as note 24).

[28] At least another sister of St. Clara was affected by the preaching and the debate on the "universal" flood; cf. Felizitas Grundherr's letter to her father Leonhard, in July 1524, warning him against Lutheranism widely spread in Nürnberg and mentioning still (four month after the date supposed for the flood) this fear and danger as a punishment of the heresy; cf. *Briefe von, an und über Caritas Pirckheimer (aus den Jahren 1498–1530)*, ed. "pro manuscripto" by J. Pfanner (Landshut, 1966), pp. 249–250: „God sey uns genedig, von dem wir diß und größers wol verdynen mügen, dem wir wol zu dancken haben, der uns nit gelingen uberfelt, sunder uns vor treulichen warnt, als er pey der zeit Noe 100 jar thet, an das sich auch nymant wolt keren, wie wol man sich yezo mit behilft got hab gesworen, die welt nit mer gancz mit der sindfluß zu verderben." This passage is quickly mentioned from an older edition by H. Robinson Hammerstein in her Introduction to the facsimile ed. with english transl. of Heinrich Pastoris, *Practica Teutsch* (Dublin, 1980), p. 2.

[29] These are the first words of Ch. 1 of *Die 'Merkwürdigkeiten' der Caritas Pirckheimer*, ed. "pro manuscripto" by J. Pfanner (Landshut, 1982), p. 1; cf. *Der hochberühmten Charitas Pirckheimer 'Denkwürdigkeiten' aus dem Reformationszeitalter*, ed. by C. Höfler (Bamberg, 1852) p. 3; *Die 'Denkwürdigkeiten' der Äbtissin Caritas Pirckheimer*, in modernes Deutsch übertragen v. Sr. Benedicta Schrott (St. Ottilien, 1983), p. 1 (ibid. Bibliography and Chronology). It is very interesting that the same correspondent, Wenzeslaus Link (cf. note 3), former augustinan brother and colleague of Luther at the University of Wittenberg, was in 1524 a leading evangelical preacher in Nürnberg and concerned

This storm of debate and sermon concerning the flood broke out before Luther was able to return from his segregation in the Wartburg; hence he had no direct control over propaganda and, as we would say today, the "media."[30] One wonders, if this had not been so, if there would still have been so many Evangelically-inspired writings on the flood, both by competent astrologers (Seitz and Carion; and later Copp, Volmar, Reynmann, and in my opinion also Virdung and Ranssmar his imitator) and by theologians (Stephan Wacker, still a Catholic, and the Lutheran Baltzer Wilhelms and Heinrich Pastoris), who used this literary genre as an excuse for offering numerous pertinent scriptural citations. One may also ask whether the insistence with which several imitators of Lichtenberger drew on the figure of the hermit, who delivers prophecies "im Wald verborgen", did not constitute a web of allusion which was comprehensible to many people and which was preparing for Luther's reappearance on the scene.

Many of the German astrologers and theologians writing about the flood used the announced event as an excuse to urge immediate conversion to the new Faith. Alexander Seitz, who defended the peasants in the Württemberg civil war and who was a radical Reformer close to Zwingli, is perhaps the most solid example of a spontaneous unsponsored propagandist. At the Diet of Worms he distributed an anonymous pamphlet which was one of the most elegant and efficacious in circulation. A French version exists which also had a fairly large public. The astrologers Johannes Copp and Leonhard Reynmann showed similar sympathies for the peasants' wars. In conclusion, it can be said in a general way that with-

himself with the attempted Reformation at St. Klara Convent: cf. Pfanner, "Caritas Pirckheimer" (as note 27), p. 53–54: „Wenzel Link verfaßte lange Schriften, die Caritas abschreiben ließ und die uns in den „Denkwürdigkeiten" zur Gänze überliefert sind und in denen die wichtigsten Unterschiede zwischen der alten und der neuen Lehre dargelet werden. Caritas ihrerseits legte in zwei ebensolangen, auch in den „Denkwürdigkeiten" enthaltenen Schreiben ihrer Standpunkt dar".

[30] I refer here to the best-sellers by Alexander Seitz (cf. my "Fine del mondo", as note 8, p. 336–340) and Johannes Carion (*ibid.*, p. 336ff., 328ff., 342–346): the first was released not later than May 1521, at the Reichstag of Worms; the second one was probably released before Luther's return to Wittenberg at the beginning of March 1522: being an answer to Seitz, it is easy to believe it was printed already in 1521, as Warburg, *Heidnisch-antike Weissagung* (as note 6), p. 510 affirms on the basis of a copy owned in 1919 by the Berlin Staatsbibliothek. Add the Einblattdruck by P. Gengenbach (1519–20) published in facsimile in "Fine del mondo", table 11, and p. 340–41, n. Nifo's *De falsa diluvii prognosticatione* was reprinted in Vienna by S. Grimm and M. Wyrsung on 20 December 1520; a lost german translation of it by Johann Böhm von Aub (cf. E. Schmidt, *Deutsche Volkskunde im Zeitalter des Humanismus und der Reformation* n. p., 1904) p. 71, was probably ms.: but its latin edition and the two first german booklets are sufficient to explain the enormous spread of the debate. Fewer documents are available concerning the preaching; however, the case of Nürnberg and Caritas Pirckheimer provides a good evidence highlighting the point.

in the panorama of German-speaking writers or writers active in Germanic territories at least three positions can be discerned: the comforters who are loyal to Emperor and papacy, the magisterial Evangelicals, and the radical Reformers (if indeed this label can apply to authors of this period).

2. The evaluation of the debate we have underlined has not just archeological interest. Indeed, recent debates on the philosophy of history have relied upon apriori reconstructions of the issues we will be concerned with in this conference. Karl Löwith's *Meaning in History. The Theological Implications of the Philosophy of History* was first published in America in 1949. In 1953 it was reissued in revised form in Germany with the clearer and more revealing title *Weltgeschichte und Heilsgeschehen.* Even today, most specialists in the field think of it as a classic and still find it useful. While other works by Löwith were criticised and questioned, especially during the rationalistic and historicist pre-1968 period, in more recent times his 'Habilitationsschrift' *Nietzsches Philosophie der ewigen Wiederkehr des Gleichen* (1934) has found a new audience, precisely because of its anti-historicist bias. Clearly, *Meaning in History* and this work have much in common.[31] According to Pietro Rossi (a well-known student of German *Historismus*), in *Meaning in History* Löwith was deploying polemical and paradoxical intentions "in demonstrating the theological origins of the philosophy of history and in showing that the reasons for its failure lay in its very structure."

Rossi's analysis seems exact although it stems from his own point of view in defense of a type of *Historismus* "free from the theological presuppositions of the Judaeo-Christian world view" and faithful to the method of Voltaire and of the Enlightenment minus their myth of progress.[32] But this is not the point which concerns us here. Löwith's thesis may be traced back to a respectable and classic precedent, Dilthey's *Einleitung in die Geisteswissenschaften,* where the author had already maintained that "the philosophy of history has a theological origin and actually consists of a translation into rational terms of the search for meaning in history which has its roots in the Judaeo-Christian world view."[33]

31 The american version of *Meaning in History* will be quoted here from the second printing (Chicago, 1950), the passages here discussed have been compared to the german seventh ed. (Stuttgart–Berlin etc., 1979). *Nietzsches Philosophie* . . . (Stuttgart, 1935; here I quote from the revised ed. Hamburg, 1978) was translated into italian as late as 1982.

32 P. Rossi, "Prefazione" to Löwith, *Significato e fine della Storia* (Milano, 1963) pp. 20–21.

33 Ibid., p. 13; W. Dilthey, *Einleitung in die Geisteswissenschaften* (Gesammelte Schriften, 1; Stuttgart–Göttingen, 1969), p. 90: Bk. I, 14: „Der Ursprung der einen dieser Wissenschaften lag in dem christlichen Gedanken eines inneren Zusammenhangs fortschreitender Erziehung in der Geschichte der Menschheit. Clemens und Augustinus bereiten sie vor, Vico, Lessing, Herder, Humboldt, Hegel führten sie aus".

From the very outset, I would like to point out the exclusively Judaeo-Christian and Europe-centered orientation which is so characteristic of the tradition of philosophy of history. Within the context of history of religions or Salvation history it may be possible to maintain these exclusive points of reference, but now can we ignore Islam's contribution to the history of ideas, philosophy, and science? Without the Islamic tradition, *pauper latinitas* (according to the definition of numerous Latin masters such as Albertus Magnus and Roger Bacon[34]) would never have succeeded in rediscovering Aristotle and Greek science. However, for Löwith, whose points of reference were exclusively Judaeo-Christian, Augustine was the unavoidable model from whom later philosophers rarely succeeded in freeing themselves.[35] Löwith was confirmed in his idea after reading Gilson's *Metamorphoses de la Cité de Dieu* which was published in 1952.[36] In a later study he quoted from it enthusiastically and stated his agreement with Gilson's thesis. We must keep in mind that *Meaning in History* was written while Löwith was teaching in America at the Hartford Theological Seminary, which may

34 Cf. my "Da Aristotele a Abū Ma'shar", *Physis,* 15, 1973, pp. 1–26, and "Albert le Grande et l'astrologie", *Recherches de Theologie ancienne et médiévale,* 49, 1982, p. 148, nn. 27–28.

35 *Meaning in History* (as note 31), p. 174, ch. IX. Cf. *ibid.,* p. 9–10: "The fact that Polybius felt no difficulty in prognosticating future developments indicates the fundamental difference between the classic and the Christian outlook and attitude in regard to the future . . . the fullfillment of prophecies as understood by the Old and New Testament writers is entirely different from the verification of prognostications concerning historico-natural events". Löwith is considering here Burckhardt's *Weltgeschichtliche Betrachtungen* and its thesis "that what separes us most deeply from the ancients is that they believed in the possibility of foreknowing the future, either by rational inference or by the popular means of questioning oracles and of practicing divination, while we do not". "It was therefore a common feature of Greek and Roman life to make decisions dependent on an inquiry into fate. This ancient trust in divination had never lost its reputation until the church uprooted it. But the church, too, believed in predestination, though not by fate, while modern man does not believe in guidance, either by fate or by providence". Concluding the Introduction, *ibid.,* p. 19, Löwith writes: "the Church Fathers developed from Hebrew Prophecy and Christian eschatology a theology of history focused on the supra-historical events of creation, incarnation, and consummation; the moderns elaborate a philosophy of history by secularizing theological principles and applying them to an ever increasing number of empirical facts". It seems as if the two great conceptions of antiquity and Christianity, cyclical motion and eschatological direction, have exhausted the basic approach to the understanding of history". It is worth noting that the continuity of astrological research until the period I am studying in this paper and the discussions Luther himself devoted to the topic, have to be set against the observations and the thesis put forward by K. Löwith.

36 K. Löwith, "Sinn der Geschichte", *Wissen, Glauben und Skepsis* (Göttingen, 1956); translated into italian by A. M. Pozzan in *Saggi sulla storia* (Florence, 1971), p. 61, where he cites together his *Meaning in History* and Gilson's *Métamorphoses.*

explain the frequent use of such secondary sources as the theologians Bultmann and Cullmann,[37] side by side with Kierkegaard and Heidegger. Nevertheless, the seventh paragraph of *Meaning in History* is dedicated to Bossuet's *Discours sur l'histoire universelle,* held to be "the last theology of history to follow the Augustinian model." In another passage in paragraph five, he affirms that Voltaire's *Essai sur les moeurs et l'esprit des nations,* published in 1756, was, instead, the work which ushered in the discipline of philosophy of history.[38] His periodization has been accepted and frequently quoted. An entirely different writer, Krzystof Pomian, for example, used it as the partial basis for his entry *Ciclo* in the Einaudi Encyclopedia.[39] According to Pomian, the cyclical theory which astrologers drew on in order to interpret the vicissitudes of

37 Cf. Rudolf Bultmann, *Offenbarung und Heilsgeschehen* (München, 1941); Oskar Cullmann, *Christus und die Zeit* (Zürich, 1946), both mentioned several times by Löwith, *Meaning in History* (as note 31) ch. 11 and Epilogue.

38 *Meaning in History* (as note 31), p. 137ff., 104ff., esp. p. 104: "The crisis in the history of European consciousness, when providence was replaced by progress, occured at the end of the seventeenth and at the beginning of the eighteenth centuries. It was marked by the transition from Bossuet's *Discourse on Universal History* (1681), wich is the last theology of history on the pattern of Augustin, to Voltaire's *Essay on the Manners and Mind of Nations* (1956), which is the first "philosophy of history", a term invented by Voltaire. The inauguration of the philosophy of history was an emancipation from the theological interpretation and antireligious in principle ... Voltaire attempted to destroy ... the christian interpretation of history".

39 K. Pomian, "Ciclo", *Enciclopedia,* II (Torino, 1977), pp. 1141-1199, esp. p. 1148ff.: "Nella cronosofia cristiana dell'alto medioevo, il solo tempo lineare ed irreversibile è quello della storia sacra, della storia il cui autore è Dio. Questo tempo è anche quello della Chiesa, che, pur essendo un'istituzione visibile, è nondimeno soprannaturale, e la cui capacità di perdurare mostra che è sottratta all'azione distruttrice del tempo profano. Questo, infatti, è considerato ciclico ... Gli Stati, tutti gli Stati, nascono, si sviluppano, raggiungono il loro apogeo, decadono e muoiono. Senza l'intervento divino non si può sfuggire al ciclo ed accedere alla durata che è l'equivalente temporale dell'universalità ..." [p. 1151], "quanto al *tempus,* è ridotto al tempo ciclico, poiché ogni essere corporeo percorre un ciclo di generazione, seguito da uno di corruzione" [p. 1152-53]. "L'idea stessa di fondare la linearità e l'irreversibilità del tempo sull'attività degli uomini è al di fuori dell'orizzonte intellettuale dei filosofi e teologi medievali, a tal punto che non prendono nemmeno in considerazione una simile eventualità ... Gli uomini non hanno il potere necessario per provocare, dove che sia, un cambiamento irreversibile. Si capisce allora che il problema del tempo, nella misura in cui si pone nel campo della storia profana, si presenta nella forma di una scelta fra *aevum* e tempo ciclico ... I rappresentanti della Chiesa attribuiscono a quest'ultima il privilegio esclusivo di esistere nell'*Aevum;* quanto agli Stati, li considerano sottoposti a vicissitudini cicliche ... Una tale *filosofia della storia,* per usare un termine *anacronistico,* può essere professata solo a condizione di ammettere che il presente non si oppone né al passato prossimo né a quello lontano, anche quando vi aggiunge qualcosa. Il presente non è considerato altro che un prolungamento del passato". Supposing that "philosophy of history" is an anacronistic term in the Middle Age, Pomian aggrees with Löwith, whom he does not mention; however, when he excludes that the Fortunes of Churches are cyclical, he seems to ignore all the conjunctionistic Astrology, widely reflected in medieval and Renaissance Historiography.

Churches and Empires and the great turning-points of history was not a philosophy of history. In his more recent entry *Periodizzazione* where he brings in Ibn Khaldūn's cycles, he somewhat modifies his view.[40] He will take part in this conference, and his paper, which we will soon read, also seems to contain a new perspective.

I am particularly interested by the fact that Karl Löwith himself

40 "Periodizzazione", *ibid.,* X (Torino, 1980), p. 608-610: "Per più di mille anni la teoria delle quattro monarchie è coesistita con una periodizzazione introdotta da Sant'Agostino, che divideva la storia terrena dell'umanità in sei epoche corrispondenti ciascuna a una giornata della creazione e a un'età della vita dell'individuo; viene poi la liberazione dalla condizione carnale e l'entrata in una domenica eterna ... La periodizzazione agostinaiana, presente tra il VII e il XIV secolo in un gran numero di autori, - di cui alcuni, come Isidoro di Siviglia o Beda, hanno esercitato un'enorme influenza - differisce dalla teoria delle quattro monarchie [Daniele, 2,31-44] per il suo carattere assai più teocentrico, se non cristocentrico ... In opposizione al teocentrismo agostiniano, il naturalismo dei lontani discepoli di Aristotele concepiva il tempo non come lineare, bensì come ciclico. Duramente condannata dalle autorità ecclesiastiche, non sembra che questa opinione abbia approdato, nel pensiero occidentale precedente il XVI secolo, a una periodizzazione elaborata e applicata allo studio della storia. Una periodizzazione del genere la si trova in compenso presso Ibn Khaldūn (1382), che la giustifica ricorrendo all'analogia tra la durata di una dinastia e la vita di un individuo ... 'la loro durata dipende dalle congiunzioni astrali' [*al Muqaddimah* III, 12] ... La teoria delle quattro monarchie e la periodizzazione agostiniana si oppongono alla storia, secondo Ibn Khaldūn, come il sacro si oppone al profano ... Egli ritiene che Dio intervenga nella storia altrettanto quanto Daniele e Sant'Agostino ... Tuttavia, e contrariamente a Daniele e Sant'Agostino, non sono gli interventi divini che punteggiano il tempo e lo dividono in periodi. L'idea stessa di una periodizzazione considerata valida per tutti i popoli e diversa da quella che divide la storia in due epoche separate dall'Egira, sembra del tutto estranea a Ibn Khaldūn. Tanto per lui come per Daniele e Sant'Agostino, il tempo è finito; al termine di un certo numero di anni, che non può essere conosciuto dagli uomini - pur essendo determinato in anticipo - la storia terrena giungerà alla sua conclusione ... Il solo tempo attivo secondo Ibn Khaldūn è un tempo ciclico ... Sembra che in Ibn Khaldūn essa [l'universalità della storia] dipenda dall'identità della natura che regge le storie di tutti i popoli, dal fatto che i loro destini sono costantemente legati alle 'congiunzioni astrali', dal momento che il cielo non è nient'altro che la natura visibile". By Pomian, see also "Evento", *ibid.* V (Torino, 1978), pp. 972-973 on Voltaire, and p. 985 on XVIth century historians, whose "riferimento alla fortuna dimostra in pratica la crisi dello schema teologico che appare inapplicabile alla storia profana, perché l'uomo non può penetrare le vie della Provvidenza. Lo si vede molto bene in Guicciardini". After this paper was written and the conference took place in Berlin, the original french version of this and others articles for the Einaudi *Enciclopedia* have been published: Pomian, *L'ordre du temps* (Paris, 1984). Cf. also his review of the conference held in 1980 on *Scienze, credenze occulte, livelli di cultura* (as note 8) in *Le Débat,* 1981, p. 89ff. As the reader will easily understand I don't agree with Pomian on the reception of what he calls Aristotelian naturalism: the "philosophi naturales" of the late XIIIth Century read not only Aristotle, but Ptolemy and Abū Ma'shar, and many of them - readers of Aristotle through Avicenna as e.g. Guillaume d'Auvergne or Bacon - gave a cyclical periodisation and an astrological interpretation both of civil and religious history. Cf. Pomian, "Astrology as a Naturalistic Theology of History", infra, pp. 38-39, where he distinguishes strongly this theory of history from the "theocentric theologies of history".

dwelt at some length on Nietzsche's thesis of "the eternal recurrence of the identical."[41] Löwith emphasized the continual presence of this theme which he found not only in a few chapters of part three of *Zarathustra* ("Of Old and New Law-Tables", "The Convalescent", "The Seven Seals"),[42] but also in Nietzsche's youthful writings, and he considered it a leitmotiv running through the German philosopher's entire *oeuvre*.[43] More recent interpreters are not in agreement; some of them suggest, however, that the scattered references from *Zarathustra* are an echo of a forgotten book with an interesting title: *L'éternité par les astres* written in "le cachot du fort du Taureau" by the Socialist writer Auguste Blanqui and published in 1871–72.[44]

Blanqui's name figures in the bibliographical notes taken by Nietzsche during the autumn of 1883 while he was writing *Zarathustra,* and several Nietzsche specialists (Henri Lichtenberger, Mazzino Montinari) have indicated that it might have been one of the sources for the "eternal

41 "Nietzsche nach sechzig Jahre", in Löwith, *Gesammelte Aufsätze* (Stuttgart, 1960) p. 127–151; Id., *Meaning in History* (as note 31), p. 214 and pp. 16–17, where he analyses Toynbee and his chinese cyclical sources, without mentioning analogous classical ones: 'But how can the elemental rhythm of yin and yang and the cycle of growth and decay be adjusted to the belief in a meningful goal and a 'progressive revelation' of divine truth in history? How can the 'economy of truth', as Toynbee, with a phrase of the catholic Newman, calls the masterly dispensation, be reconciled with Greek and Chinese speculation? . . . According Toynbee 'It looks as if the movement of civilization may be cyclic and recurrent, while the movement of religion may be on a single continuos upward line'". Cf. notes 39–40 (Pomian's similar thesis). Löwith, *Nietzsches Philosophie* (as note 31), p. 194: "every inclusion, contrapposition and opposition is always overcome by the omnicomprehensive being of the living physical world, which is a constant circle of being born and dying, of creating and being destroyed" (translation mine).

42 Friedrich Nietzsche, *Sämtliche Werke,* kritische Studienausgabe v. G. Colli und M. Montinari (Berlin, 1980), IV pp. 246ff.; *Thus spoke Zarathustra,* engl. transl. by R. J. Hollingdale (Harmondsworth, Middl., 1984), pp. 214ff. "Of Old and New Law-Tables"; 232ff. "The Convalescent"; 244ff. "The Seven Seals".

43 Löwith, *Nietzsches Philosophie* (as note 31), p. 127.

44 Auguste Blanqui, "L'étérnité par les astres", *Revue scientifique,* II S., II, 1871, p. 800, begins with the idea that "la matière . . . ne peut, malgré sa fécondité, dépasser un certain nombre de combinaisons spéciales" and he concludes to the plurality of worlds both in space and in time. This way the cyclical recurrence is demonstrated and of it "fait partie naturellement une terre identique avec la nôtre, une terre sosie quant à sa constitution matérielle et par la suite engendrant les mêmes espèces végétales et animales, qui naissent à la surface terrestre. Toutes les Humanités, identiques à l'heure de l'éclosion, suivent, chacune sur sa planète, la route tracée par les passions et les individus contribuent à la modification de cette route par leur influence particulière. Il résulte de là que malgré l'identité constante de son début, l'Humanité n'a pas le même personnel sur tous les globes semblables, et que chacun de ces globes, en quelque sorte, a son Humanité spéciale, sortie de la même source et en partie du même point que les autres, mais dérivée en chemin par mille sentiers, pour aboutir en fin de compte à une vie et à une histoire différentes". Later this essay was published as a book (Paris, 1872, p. 65ff.).

recurrence of the identical" theory.[45] Blanqui's thesis of astrological cycles and "the great year" did not, however, mean that each cycle had an identical course. Nietzsche conceived the 'eternal recurrence' by way of earlier and infinitely more refined and complex texts, which added greater richness, consistency, and nuances to Blanqui's vague but more limited formulations.

> 'Up to now, this delusion has orbited about prophets and astrologers. Once people *believed* in prophets and astrologers: and *therefore* people believed: "Everything is fate: you shall, for you must!"
>
> Then again people mistrusted all prophets and astrologers: and *therefore* people believed: "Everything is freedom: you can, for you will!"
>
> O my brothers, up to now there has been only supposition, not knowledge, concerning the stars and the future: and *therefore* there has hitherto been only supposition, not knowledge . . .'.[46]

Nietzsche's extensive and deep knowledge of Greek and Hellenistic texts must have permitted him to remember the aphorism attributed to Ptolemy, "Sapiens dominabitur astra", as, shortly below, he wrote the phrase, "O Will, my essential, *my* necessity, dispeller of need![47]

But the most complete and the clearest statement of the thesis of the eternal recurrence is in the animals' speech to the "convalescent" Zarathustra: "Everything goes, everything returns; the wheel of existence rolls for ever. Everything dies, everything blossoms anew; the year of existence runs on for ever. "Everything breaks, everything is joined anew; the same house of existence builds itself for ever. Everything departs, everything meets again; the ring of existence is true to itself for ever."[48]

According to Löwith, "Nietzsche's hypothesis of the eternal return

45 Mazzino Montinari, *Che cosa ha veramente detto Nietzsche* (Rome, 1975), pp. 87–88 on the eternal recurrence, 91f. on Löwith's as well as Lou von Salomé's, Charles Andler's and Henri Lichtenberger's interpretations. By Lichtenberg, *Die Philosophie F. Nietzsches* (Dresden–Leipzig, 1899), p. 204f. was first mentioned the note written in 1883 by Nietzsche to find the book just published by Blanqui, note here mentioned by Montinari (p. 92), who underlines some chronological difficulty; but the main difficulty comes from the very weak philosophical standards of this writer, notwhistanding the "somiglianze sorprendenti" observed by Montinari. See also his and G. Colli's Studienausgabe, Nietzsche, *Sämtliche Werke* (Berlin, 1980), X, p. 560, where in the "Nachgelassene Fragmente" the bibliographical note on Blanqui (72 [73]) is surroundend by notes on Zarathustra (17 [72; 75; 77]).

46 *Thus spoke Zarathustra* (as note 42) p. 219 (cf. p. 218 where is quoted Heraclitus' "Everything is in flux").

47 *Ibid.,* p. 232 (cf. the previous lines on "a star . . . a sun" . . .).

48 *Ibid.,* p. 234. On all these texts see Eugen Fink, *Nietzsches Philosophie* (Stuttgart, 1960) Pt. III, §§ 4–6.

of the identical, a theme already present in Oriental and Greek thought . . . is merely frightful, it is not edifying . . ." Löwith reaches this conclusion because he links the theme with Nietzsche's later theories of the death of God and of *Dasein,* "a constant circle of birth and death, of creation and destruction."[49] This modernization explains the present favour which Löwith's *Habilitationsschrift* (translated into Italian two years ago) is enjoying. It is, however, unfortunate that his brief notice of Oriental and Greek concepts of cyclical recurrence in history has not been noticed, and that Löwith himself did not pursue the theme further in his previously cited work on universal history and Salvation history. Looking at these concepts more closely, he would have realized that medieval theories of history were influenced by Ptolemy and Abū Ma'shar as well as by Augustine, and that these classical and oriental sources pointed in a direction which was not strictly theological. These two classics of astrology – to which could be added the works of Māhā' allāh, al-Kindi, Avenezra and those of numerous Latin philosophers and theologians (for example Cardinal Pierre d'Ailly) – all of these works insisted in different ways on the cyclical character of nature and history. However, their utilization during the Middle Ages and the Renaissance tended in most cases to secularize history rather than the contrary.

Löwith and Gilson consider Joachimism "entirely new in its relationship to Augustinianism." The heresiarch and his disciples were proposing something which Christian dogma "from Augustine to Thomas Aquinas had excluded for fundamental reasons: in other words, an historical interpretation" of the *Novissima* and of the *eschaton.* According to Joachim of Flora, the Scriptures and history must illuminate each other reciprocally because "on the one hand, history is full of religious meaning, and, on the other, the Gospel is *'rotulus in rota',* the pivot of earthly becoming.[50] We will not discuss here Karl Löwith's comparison in the same book of the Joachimite Third Age with the

[49] Löwith, *Nietzsches Philosophie* (as note 31) pp. 122–123, admits that Nietzsche was aware of the doctrine of eternal circularity as it was taught by Heraclitus and Empedocles, Plato and Aristotle, Eudemus and the Stoics, and (p. 172) that the hypothesis which Nietzsche formulated on the "ewiges Wiederkehr des Gleiches" was already present in oriental and greek doctrines; but Löwith does not considers as important Nietzsche's knowledge of ancient learning obtained when he was teaching as a classical philologist: more important is to note that the cyclical idea had been criticized by Justin, Origen, Augustine against Porphyrius or Celsus, and to emphasize the historical coincidence of ancient and modern criticism to Christianism. Cf. *ibid.,* pp. 187 and 194.

[50] Löwith, *Meaning in History* (as note 31) p. 158 ff. It is worth noting that when speaking of Cola di Rienzo as a "pathetical caricature" of this political-religious eschatology Löwith quotes D'Annunzio's biographical novel instead of Burdach's historical researches.

Third International and the Third Reich, nor that of Joachim himself with Lessing, Fichte, Schelling, and Hegel, or with Comte and Marx.[51]

The theologian Étienne Gilson took the historical vocation more seriously: in his *Les Métamorphoses de la Cité de Dieu* he was unable to ignore Roger Bacon, a Scholastic author who had much in common with Joachim and was no less unorthodox. Writing about Bacon, Gilson also mentioned the general theory of the horoscope of various religions, sects or *Leges:* "Toutes les religions étant placées sous le signe [!!] de Jupiter, sa conjonction avec chacune des six autres planètes exerce sur le coeur des hommes, sans porter atteinte à leur libre arbitre, une influence qui favorise la naissance de nouvelles *lois* religieuses."[52] But he preferred not to linger over "le détail de cette astrologie réligieuse." This is perhaps wise, since, as we see from the quotation above, he makes no distinction between signs and planets. The Arab sources did not interest him either, to the point of not mentioning Abū Ma'shar's *De magnis coniunctionibus* from which Bacon derived his theses which Gilson described in order to give an idea of the chronological sequence and vicissitudes of religions:

> Voilà donc les principales sectes religieuses. Comment les classer? Les plus bas sont les paiens, qui ne savent presque rien de Dieu, n'ont pas de clergé et lui rendent le culte qui plaît à chacun. Puis viennent les Idolâtres, qui ont des prêtres, des temples et, comme les chrétiens, de grosses cloches, pour les appeler à l'office. Car ils ont des prières régulières et des sacrifices déterminés, mais admettent plusieurs dieux dont aucun n'est tout-puissant. Au troisième degré, les Tartares, qui adorent un Dieu tout-puissant et lui rendent un culte. Il est vrai que cela ne les empêche pas de vénérer le feu et le seuil de leur demeure. Au quatrième rang sont les Juifs qui, selon

[51] *Ibid.,* p. 208 ff. and 159: "The revolution which had been proclaimed within the framework of an eschatological faith and with reference to a perfect monastic life was taken over, five centuries later, by a philosophical priesthood, which interpreted the process of secularization in terms of a "spiritual" realization of the Kingdom of God on earth. As an attempt at realization, the spiritual pattern of Lessing, Fichte, Schelling, and Hegel could be transposed into the positivistic and materialistic schemes of Comte and Marx. The third dispensation of the Joachites reappeared as a third International and a third Reich, inaugurated by a dux or a Führer who was acclaimed as a savior and greeted by millions with Heil!". The historical subject of Joachimism seems to inspire this sort of modernization and rethorics also in a scholarly "Presidential Address"": cf. Richard W. Southern, "Aspects of the european Tradition of historical Writing", *Transactions of the Royal Society,* 5thS. vols. 20–22 (1970–1972), esp. vol. 22, p. 176: "These ideas . . . in a very precise way . . . make Joachim the Karl Marx of medieval prophecy"; p. 180: "Newton might have become another Joachim of Fiore. But fortunately he was content to leave this role for an actor temperamentally better suited to it – Karl Marx".

[52] *Les Métamorphoses de la Cité de Dieu* (Louvain–Paris, 1952), p. 99.

> leur loi même, devraient en savoir plus sur Dieu et attendre le vrai Messie, qui est le Christ. Enfin, les Chrétiens, qui suivent au sens spirituel la lois juive et la complètent par la loi du Christ. Ne parlons pas de la secte de l'Antichrist, qui ne fera que ruiner les autres pour un temps, bien que les élus doivent alors tenir bon dans la foi du Christ en dépit de furieuses persécutations.[53]

Gilson is so entrenched in his Europe-centered mentality that he betrays himself by a *lapsus* in this summary. In Roger Bacon's and others' works, and above all in historical reality, the Muslims invariably came after the Christians (and before the Antichrist!). Here he manages to forget them. It is especially important to note that all religions are equal and exist on the same natural plane (except perhaps for that of the Antichrist, the final Joachimite element which reveals Bacon's heterodox leanings and which would not have been included by his source Abū Ma'shar).

3. At this point, it must be argued that the idea of the Millennium actually owed its origins to the cultural, religious, political and military problem which Islam had represented in Christian Europe for so many centuries. In the thirteenth century the *Reconquista* was still far in the undreamed-of future, and the Muslims were flanked by the Tartars.[54] Therefore, the only hope for a unity "sub uno ovili et sub uno pastore" lay in the *deus ex machina* of the Antichrist, whose kingdom, however, was but a prelude to the Day of Judgment or the end of the world. According to Marjorie Reeves,[55] this mixture of astrology and apocalyptic belief intensified during the Renaissance. This can be seen from our documents concerning the Universal Flood and the end of the world in February 1524. It is a mixture which complicates the historian's task because the apocalyptic Joachimite inspiration obviously runs counter to the naturalism of Arabic conjunctionist astrology. Nevertheless, in a number of documents - in John of Ashenden (in whom there is no "suggestion of Antichrist")[56], in Italian astrologers writing on the flood (Luca Gauricus, Niphus, and others), in Machiavelli and in Jean Bodin[57] - the conjunctionist thesis leads imperceptibly and unconsciously to the idea of variability and pluralism in religions and political regimes. If changes depend on the movements and conjunctions of the upper planets with certain signs of the zodiac, then major historical events can

53 *Ibid.*, p. 98.

54 Davide Bigalli, *I tartari e l'Apocalisse* (Firenze, 1971).

55 Marjorie Reeves, *The Influence of Prophecy in the Later Middle Ages* (Oxford, 1969), pp. 347–51 (on Lichtenberger), 359ff. (on Gengenbach), 503–504; cf. Id., *Joachim of Fiore and the Prophetic Future* (London, 1976).

56 John D. North, "Astrology and the Fortunes of Churches", *Centaurus*, 24, 1980, p. 195.

57 Cf. "Fine del mondo" (as note 8), pp. 292–293 and passim.

only be considered "providential" (Löwith) in the metaphorical sense. The astral system is the most regular and perfect of mechanisms, and even such Christian theologians as Albertus Magnus depict it in a way which still today makes us think of a giant computer, deaf to human prayers and quite distinct from the personal or anthropomorphic Deity of the Old and New Testaments. In later times, Pomponazzi, Jêrome Cardan, Giordano Bruno, and others based their natural philosophies upon this interpretation of astrology; it was one in which the movers of the celestial bodies were neither angels nor demons but neutral mechanisms. In my analysis, I will try to consider this type of document as a separate case. North, even though he is studying "the vicissitudes of Churches", has assured us that "astrology cannot be held responsible for the greater part of this wild apocalyptic extravaganza" deriving from Joachimism and other millenary sects.[60] Recently a number of distinguished historians have reexamined certain aspects of "universal" astrology: aside from John D. North, Tullio Gregory for the Late Middle Ages and Eugenio Garin *(Lo zodiaco della vita)* for the Age of Humanism.[61] Concerning the historiography of these centuries, the recent translations of Ibn Khaldūn's *al Muqaddimah* shows that the Arab believed (1) that "the only active time was cyclical time", limited moreover to different regions and religious traditions before and after the hegira, and (2) that there was a relationship of dependence on the starry conjunctions.[62]

But we can get more salient examples if we look at a second type of documentation, a type concerning the fortunes of empires and nations. In his remarkable study, "Temps astrologique et temps chrétien", Tullio Gregory recently focused upon and commented the following passage from Aquinas's *Politicorum Aristotelis expositio:* "Given that everything

58 Cf. Löwith, *Meaning of History* (as note 31), ch. 4; but it surprising that the Author when analysing Augustin and his polemics against the "unuseful cycles" and reviewing Augustin's sources (ch. 9) fails to mention Ptolemy, Manilius, Firmicus Maternus as wells as other Stoic philosophers as Marcus Aurelius and Seneca. Cf. *ibid.*, pp. 4ff. (Introduction).

59 Cf. my "Albert le Grand et l'astrologie" (as note 34), p. 144ff.

60 "Astrology and the Fortunes of Churches" (as note 56), p. 199. Cf. on Pomponazzi my "Le problème de la magie naturelle à la Renaissance", *Magia, astrologia e religione nel Rinascimento. Convegno polacco-italiano* (Accademia Polacca delle Scienze, Roma; Conferenze, 65; Wrocław, 1974), p. 72.

61 Tullio Gregory, "Temps astrologique et temps chrétien", *Le temps chrétien de la fin de l'antiquité au Moyen Âge. IIIe–XIIIe siècles* (Colloques intern. du CNRS, 604; Paris, 1984), pp. 557–574; Ibid. cf. J.-H. Waszink, "La conception du temps dans le commentaire sur le Timée de Calcidius", pp. 363–368. The book by Garin here quoted (original ed. Bari, 1976) has been transl. into english as *Astrology in the Renaissance: The Zodiac of Life* (London 1982).

62 Pomian, "Periodizzazione" (as note 40), pp. 609–610.

which takes place on earth must by its very nature depend upon superior bodies, according to some celestial sign" ("secundum naturam reducuntur in superioribus in aliquam figuram celestem"). Even for Thomas, this "transmutatio" takes place not only in natural phenomena but also in the great events of universal history. Vast political organisms and small communities alike are regulated by the course of the stars ("periodus eius naturalis"). "Since the state is something which has a cause, Aristotle is affirming here that it is caused by a certain celestial sign and that it will weaken in the degree to which it is distant from that sign for a certain specified period" ("Quia igitur respublica est aliquid causatum hic dixit eam causari ab aliqua figura caelesti, et corrumpi per recessum ab ea in quodam periodo temporis determinato"[63]). While individual astrology *(geniturae, interrogationes, electiones)* was in more strident contrast with the Christian principle of free will, a number of theologians such as Thomas and Bonaventure held that "universal" astrology was legitimate and that it was both easier and more accurate to predict events "in communi, in pluribus, in multitudine." Roger Bacon summed up current opinion with the following statement: "Prudens astrologus potest multa considerare utiliter in hac parte super moribus et legibus et sectis et guerris et pace et huiusmodi quae pertinent ad rempublicam civitatum, provinciarum et regnorum."[64]

According to Gregory, while Biblical time "est qualifié et défini à partir d'une série d'interventions divines uniques, . . . [astrological time] est rythmé par la succession des conjonctions, qui qualifient le temps selon les qualités des planètes et éliminent l'intervention directe de Dieu dans l'histoire, dont la trame – bien que tracée par le Créatuer – se développe sous l'emprise des chronocratores céléstes."[65] Soon, "le drame de l'*historia salutis* semble disparaître dans un cosmos, où les cieux sont les seigneurs du temps, les chronocratores."[66] One could almost speak, with Gregory, of *gesta Dei per astra!* In some of these examples we can perceive both a *translatio imperii* ruled by the stars and a sociology which is truly astrological: "C'est des planètes preposés à chaque peuple et à chaque région, que dépendent non seulement les caractères, les coutûmes, les religions, et les rites de chacun, mais aussi les relations, les guerres"[67] and, we might add, victories. If there is sociology, there is also

63 S. Thomae Aquinatis *In octo libros Politicorum Aristotelis Expositio,* cura et studio R. M. Spiazzi (Torino–Roma, 1966) p. 305: lectio XIII, 935, quoted by Gregory, "Temps chrétien" (as note 61) p. 559ff.

64 Roger Bacon, *Opus maius,* ed by J. H. Bridges (reprint. Frankfurt M., 1964), p. 389, quoted and analysed by Gregory, "Temps" (as note 61) p. 565.

65 "Temps" (as note 61) p. 560.

66 *Ibid.,* p. 565.

67 *Ibid.,* p. 561.

propaganda.[68] In other words, in order to earn the consensus and confidence of the small audiences he encountered, the astrologer began to assume a public function. With the development of printing and publishing, which our soothsayers quickly and enthusiastically put to use, their audience enormously grew.[69]

In the middle of the fourteenth century, John of Ashenden promised victory to the King of England if he acted before a conjunction ended; he also announced that the Church of Rome would not be able to avoid being ruled by secular sovereigns; and he stated that Scotland would be depopulated. His French colleague and contemporary Jean de Murs wrote Clement VI that the 1365 conjunction was an announcement of France's ruin by the Hundred Years War, unless a peace treaty was signed with England. John D. North gives these examples and others involving economic, meteorological, and natural misfortunes.[70] We must recognize the propagandistic nature of these and other examples of this mixture of universal history and conjunctionist astrology.

The sector of artificial divination which we have been examining was correctly called "universal" astrology, but certainly not by virtue of the rational exactitude which one might reasonably associate with "universal" propositions. Nevertheless, in his *Apotelesmata* of 1521 Pedro Ciruelo wanted to call universal astrology "a true and Catholic philosophy" "iuxta doctrinam Aristotelis in proemio *Physicorum.*" For Aristotle, "necesse erit . . . volentem scire particularia ut observet prius universalia." Ciruelo does admit that Aristotle himself used the two terms in an ambiguous way and that the universal cause has a double ("bifaria") meaning in Book Two of the *Physics:*

> Sed universalium iudiciorum quidam sunt valde generalia, quae ad multa loca ed tempora praetendunt, causantque generales aquarum inundationes et oppositas siccitates, quae ubique terrarum fere similiter accidunt; item causant morum et vitium [?] et atque imperiorum permutationes et alia huiusmodi, quae ex magnis planetarum coniunctionibus et ex luminarium eclipsibus provenire solent. Alia sunt minus universalia quae in his regionibus contingunt aliter quam in aliis, nec sese extendunt ad magna tempora, ut caloris, frigoris, ventorum, pluviarum et aliarum impressionum

68 Very perceptive for propaganda and other historical problems is still Friedrich von Bezold, "Astrologische Geschichtskonstruction im Mittelalter", *Deutsche Zeitschrift für Geschichtswissenschaft,* 8, 1882, pp. 165–195, 399–411.

69 Cf. R. W. Scribner, *For the Sake of Simple Folk* (Cambridge, 1981); Id., "Practice and principle in the German Towns: preachers and people", *Reformation Principle and Practice. Essays presented to A. G. Dickens,* ed. P. N. Brooks (London, 1980). Cf. "Fine del mondo" (as note 8), p. 294 n. 8.

70 "Astrology and the Fortunes of Churches" (as note 56), pp. 195–198.

alterationes, quae ex revolutiones singulorum annorum ... contingunt.[71]

These Aristotelian texts were not interpreted by Ciruelo in a freer way than was usual at that time: by using them, he was legitimating a distinction between Universal Floods (Noah's flood and the one that was imminent) and "particular" floods (phenomena limited to one region and much more frequent in the sixteenth century than in modern times). Actually, we also have the pages in Giovanni Villani's *Chronicle* on the "gran diluvio d'acque" in Florence in 1333[72] and some pamphlets concerning "diluvi" in Rome in 1530 and 1598 (the Tiber often overflowed, until 1880), and the word preserves its ambiguity both in Latin and in the Romance languages.[73] The distinction between particular and universal floods was invoked twenty years later by Augustinus Niphus; it was the basis for the *prognostica consolatoria* of 1524; and all these texts are in agreement in that they are announcing floods limited ... to enemy countries. The classification of floods by the universal and the particular comes from Albertus Magnus's *De causis proprietatum elementorum*. As pointed out by Hissette in a recent article, he also speaks of "floods" of earth, air, and fire, i.e. earthquakes, hurricanes, and fires. At this point, I believe I have indicated the entire spectrum of dangers writers were discussing before 1524.[74]

This is precisely why the sixteenth-century debate concerning Abū Ma'shar was so important. As has been mentioned, many of the authors who wrote about the 1524 flood participated in this debate. Recent research has confirmed the validity of the thesis expounded by Giovanni Pico della Mirandola in his critique of astrology: the theory of the Great Year was present in Greek philosophy (*Timaeus,* 39^{D}), while that

71 Pedro Ciruelo, *Apotelesmata astrologiae christianae* (Alcalà 1521), fol. giiii^{r}: Bk. II, ch. 1; cf. also ch. 2-3; I am preparing a thorough study of this author: for data and bibliography see my "Fine del mondo" (as note 8) p. 311-312 and n. 53.

72 G. Villani, *Cronica,* ed. by I. Moutier and F. Gherardi Dragomanni, (Firenze, 1944-1945), p. 203ff., Bk. 11 ch. 1: "Nel suo cominciamento faremo memoria d'uno grande diluvio d'acqua che venne in Firenze e in tutta Toscana". Cf. on the same flood ch. 2: "D'una gran questione fatta in Firenze se'l detto diluvio venne per giudicio di Dio o per corso naturale", and ch. 3 p. 217: "Noi dovremo appropriare il singolare diluvio a' particolari peccati, siccome lo universale diluvio fu mandato da Dio per gli universali peccati".

73 Both booklets (*Del Diluvio di Roma del 1495,* s.l. 1495; *Diluvio di Roma che fu a VII d'Ottobre l'anno 1530,* Venetia 1530) contain verses and illustrated frontispice. Very different are the meaning of Flood (*Oxford English Dict.* IV, 339-340 § b) and Sündfluß (*Grimm Dt. Wörterbuch,* X, iv, 1167-1174) from less religious and vaguer neolatin synonims (cf. *Le Robert,* II, 95).

74 Cf. "Fine del mondo" (as note 8) p. 300ff. both for Nifo and Albert the Great, his source. See Roland Hissette, "Albert le Grand et l'expression 'diluvium ignis'", *Bulletin de philosophie médiévale,* 22, 1980, pp. 78-81.

of cycles caused by conjunctions was not. The second theory came from Sassanid Persia, and the oldest texts we have are not earlier than Mâshallah, al-Kindi, and Abū Ma'shar.[75] Pico confutes it in the fifth of the twelve books comprising his *Disputationes adversus astrologiam divinatricem* published posthumously in 1498. He maintains: "that the power of conjoined planets is no greater than that of divided planets; that these great conjunctions are a new invention which derives from a misunderstanding of a *locus* in Ptolemy."[76] No ancient writer ever made a great world event depend upon what these people call great conjunctions; Firmicus Maternus, though a tireless student of astrological matters, does not mention them, nor does Paul, Ephestion, Astaxarcus, nor Ptolemy himself, who will be our witness here ... Ptolemy, then, in the second book of his *Apotelesmata* in the process of showing how to predict great world happenings, only speaks of solar and lunar eclipses. Nor could anything have been more reasonable, since great and universal effects must derive from supremely universal and efficacious causes. Now everyone will admit that of all the planets only two, the Sun and the Moon, are universally efficacious and that lunar light is merely solar light reflected upon the earth as by a mirror."[77] Pico sets this chapter of the *Tetrabiblos* up against the commentary by Haly Eben Rodan, the pseudo-Ptolemaic *Centiloquium,* Māsshā'allāh,[78] and Abraham Avenezra[79]; in conclusion he concentrates on Abū Ma'shar, "the principal exponent of this theory."[80] He maintains that the entire defense of the conjunctionist theory is based on a mere "misunderstanding of the ancients", because "... the barbarous version grants much more to these conjunctions than Ptolemy does [*Centiloquium,* verbum 50], in whose writings is nowhere affirmed that there is no higher science than one deriving from a knowledge of what is happening to the cosmos."[81] There was also a misunderstanding of the number of the conjunctions: 119 according to Ptolemy's original and 120 according to the translators, as Pontano himself, an astrologer but also a humanist,

75 E. S. Kennedy, "Ramification of the World-year concept in Islamic Astrology", *Proceedings of the Tenth Intern. Congress of the History of Science* (Paris, 1962), pp. 23-43. See also David Pingree, "Astronomy and Astrology in India and Iran", *Isis,* 54/2, 1963, pp. 229-246; E. S. Kennedy - D. Pingree, *The Astrological History of Māshā'allāh* (Cambridge/Mass., 1971).

76 Ed. E. Garin (Firenze, 1946ff.) I, p. 544ff. = Bk. V, ch. 5; on Pontano cf. *ibid.,* Introduction, p. 16 and on Pontano's pupils disputing against Pico "Fine del mondo" (as note 8) pp. 352ff.

77 *Disputationes* (as note 76) pp. 546-548.

78 *Ibid.,* p. 548 n.

79 *Ibid.,* pp. 562ff.

80 *Ibid.,* p. 562.

81 *Ibid.,* p. 550.

observed.[82] The discrepancy is due to making no distinction, as the *Centiloquium* did, between eclipses and the other conjunctions.

Pico attacks Roger Bacon, Henri Bate de Malines, and Pierre d'Ailly and discusses various technical matters such as the general habit of indicating the movement involved in conjunctions as *motus medius,* that is, a rectified and abstract movement rather than the real one. Chapter nine is more pertinent to our argument: "Concerning the conjunction under which Noah's flood took place, the astrologers contradict themselves and truth, and even if we grant them what they claim they are still unable to prove what they advance." "Let us admit that Saturn and Jupiter were conjoined under Cancer: was this then the reason that the world was submerged by the waters? They were subsequently conjoined under the same constellation at least ten times, and yet not only do I say that the whole world did not perish, but not even a part was submerged, not to mention the universe."[83] Actually Noah's flood, according to Pico, took place ". . . during a triplicity of fire which the upper planets passed through 159 years before the flood and which they stayed in for 120 years after the submersion of the world . . . It is therefore obvious that at the time of the Universal Flood none of the conjunctions which these men imagined existed; however, even if we accept their calculation of the years, we will find that these were constellations which would have produced the combustion rather than the flooding of the world."[84] The seventeenth and last chapter of Book five is also important: "How superficial of the astrologers to maintain that there can only be six religions." Pico points out, "with what gracious invention do they gather into one bundle, so to speak, all past religions and the religion to come of the Antichrist!" But their "sums do not add up" because, since both are forms of idolatry, it is incorrect to differentiate the religion of the Chaldees from that of the Egyptians; or, ". . . if they grant separate admission to all species of idolatry, there are not stars in the sky to equal the religions on earth."[85]

Adopting a common line of argument, a number of astrologers responded to Pico's criticisms: the eminent humanist Giovanni Pontano in his *De rebus caelestibus,* and several students of his second Neapolitan school among which figured a few of our flood writers, Abiosus, Luca Gaurico and Niphus, a great Scholastic writer "adopted" by Pope Leo X. Their defense consisted in using Pico's argument (without citing his source), but voiding it of all significance. They ceased to take the great conjunctions into consideration, aside from the lunar or

82 *Ibid.*, p. 552 n.
83 *Ibid.*, p. 589.
84 *Ibid.*, p. 591.
85 *Ibid.*, pp. 616–619.

solar eclipses admitted by Ptolemy. However, according to Pico, lunar and solar conjunctions *only* produced natural consequences pertaining to a longer or shorter absence of light and warmth.

Pico and Pontano were both dead before the astrological debate actually began in earnest. However, what makes these ideas so exemplary is the fact that they figured prominently in the participation of Pontano's Neapolitan followers and in that of some Germans (including Melanchthon[86]) involved in the course of the long polemic on the predictions of 1524.[87] It is interesting to measure the efficacy of the ideas of the great intellectual Giovanni Pico when mediated through a context which was certainly less lofty and rigorous, but nevertheless rich in historically significant elements: a large and popular audience, the aims of propaganda, religious controversy, and national differences. In fact, only such a multi-faceted historical context can justify the study of a polemic whose epistemological outcome leaves no room for doubt and of a system which has long been falsified and deprived of any conceptual interest.[88] Nevertheless, the astrological habit of thought remains an important test for the deep and widespread motivations of many centuries of intellectual history. The polemic on the flood has a number of interesting aspects, and it would not have been impossible to excerpt at

86 Philip Melanchton, *De sphaera:* Praefatio 1531 in *Werke* (Corpus Reform.: Halle-Braunschweig, 1843–1860) II, p. 532, n. 1002: "Nam etsi Arabes desertam a Graecis possessionem magna vi invaserunt, adeo ut has artes in occidentem et Hispaniam usque propagaverint . . . non tam elaborasse in observandis motibus, quam in divinationibus, quarum adeo cupidi fuerunt, ut non contenti Ptolemaei astrologia, quae pars quaedam physices existimari potest, sortes etiam . . . commenti sint". On this and other passages cf. Stefano Caroti's paper in this volume, p. 115 and his "Comete, portenti, causalità naturale e escatologia in F. Melantone", *Scienze, credenze occulte* (as note 8) p. 386 on *Initia doctrinae physicae.* The opposition between Ptolemy and Arabs Astrologers is to be still found both in Cardano and in Campanella: cf. Germana Ernst's paper in this volume, pp. 268 n. 4, 274.

87 Amongst the authors of 1524 prognostic, Tannstetter is to be added as a follower of Pontano's thesis: cf. Franz Stuhlhofer, *Georg Tannstetter Collimitius. Ein Wiener Humanist und Naturwissenschaftler des beginnenden 16. Jahrhunderts* (Dissertation Wien, 1979), p. 66 quoting his *Libellus consolatorius . . . de futuro diluvio* (Wien, 1523) fol. b2r–v: "Er sagt einmal, daß er von der Lehre des Ptolemaeus möglichst wenig abgewichen ist in seinen Vorhersagungen. Die Planetenkoniunktionen des Februar 1524 wurden von ihm unter anderem deshalb nicht so schwerwiegend angesehen, weil Ptolemaeus die Koniunktionen von Planeten in seiner Lehre kaum erwähnt. Albumasar und seine Anhänger dagegen schätzen Planetenkoniunktionen sehr hoch ein".

88 I agree with one of the speaker of this conference, Mr. North, and I am not persuaded by the new formulation ("naturalistic theology of history": is not this one a contradictio in adiecto?) given *infra,* p. 29ff. by Mr. Pomian, with some changes with regard to his *Enciclopedia* Einaudi entries. Cf. North, "Astrology and the Fortunes of Churches" (as note 56) p. 205: "a doctrine [Arabs' conjunctions] which was always in a sense aimed at nothing less than the reduction of history to natural philosophy. Had short titles been in vogue, he [Pico] might have called his work *The Poverty of Historicism*".

least one which might interest my colleagues in the history of science. Many authors writing on the 1524 flood also wrote on the reform of the calendar: from Luca Gaurico (who wanted an "exclusive" on it) to Paul of Middelburg, from Johannes Stöffler to Pedro Ciruelo, and from Georg Tanstetter to Hans Virdung.[89] If I have not studied the latter subject, it is not only because of the modesty of their chronological inventions. It is also because I feel that it would be equivocal and misleading to treat from the point of view of history of science a political-religious debate, where theories which were respectable at the time were manipulated in order to obtain propaganda effects. History is not a rigorous system, and I prefer to reconstruct it for what it is. Therefore, I am particularly fond of such documents as the ones I have been discussing, which highlight the complex connections between theory and praxis.

[89] See "Fine del mondo" (as note 8), p. 310 n. 50.

Many ends for the world
Luca Gaurico Instigator of the Debate in Italy and in Germany

Thanks to the ephemerides published in 1499 by two interesting German astrologers, Johannes Stöffler and Jacob Pflaum,[1] it was already common knowledge that the great conjunction in the sign Pisces would have taken place in February 1524. However, only by 1512 and more pronouncedly in 1519 did this observational datum begin to occasion widespread collective fear and animated debates between astrologers and theologians, both Catholic and Lutheran; these writers supported catastrophic or consolatory interpretations which no doubt had political innuendos. A large number of the approximately seventy pieces – which have been traced with some difficulty – are dedicated to the popes of the time. Even more are dedicated to members of the Imperial family, beginning with Agostino Nifo's famous first prognostication inscribed to Charles V.

The Italian prognostications dedicated to Adrian VI (by Francesco Rustichello, by the poet Livio di Francesco Brusoni, the Neapolitan astrologer Johannes Elysius, and by the Perugia mathematicians Vincenzo Oradino and Girolamo Bigazzino)[2] should probably also be seen in connection with the political line shared by Charles V and Gattinara;

[1] *Almanach nova* (Ulm: J. Reger, 1499), unnumb.: "Hoc anno [1524] nec Solis nec Lunae eclipsim conspicabimur, sed praesenti anno errantium syderum habitudines miratu dignissimae accident. In mense enim Februario 20 coniunctiones cum minimae, mediocres, tum magnae accident, quarum 15 signum aqueum possidebunt, quae universo fere orbi, climatibus, regnis, provinciis, statibus, dignitatibus, brutis, beluis marinis cunctisque terrae nascentibus indubitatam mutationem, variationem ac alterationem significabunt, talem profecto qualem a pluribus saeculis ab historiographis aut natu maioribus vix percepimus. Levate igitur viri christianissimi capita vestra." On J. Pflaum see Robert E. Lerner, *The Powers of Prophecy* (Los Angeles–Berkeley, 1983), p. 160ff.

[2] See my "Fine del mondo o inizio della propaganda? Astrologia, filosofia della storia e propaganda politico-religiosa nel dibattito sulla congiunzione del 1524," in *Scienze, credenze occulte, livelli di cultura* (Florence, 1982) pp. 291–368 for these and other references concerning the 1524 debate; new or particularly significant material will be referred to separately. See too the references to G. Hellmann and Lynn Thorndike here cited on p. 1 n. 2 and p. 4 n. 8 *supra*.

a line invoking a Council to restore peace in the Church and have "unum ovile, unum pastorem." Adrian of Utrecht had shown his awareness of the propaganda value of these astrological phenomena or offshoots of the practice of natural divination: he had been convinced of their efficacy since the moment during his vice-regency in Spain when he had rejoiced over certain signs (parhelia) in the sky of Oudenarde as the new Emperor had come out in front of the church; the event seemed to Adrian an excellent occasion for widespread propaganda.[3]

There were a number of dedications and references to the two Medici popes, and addresses to Clement VII or at least his coat of arms were particularly frequent: Fra Michele da Pietrasanta, the chief of the Domenican Studio at the Minerva, wrote for him in 1521 before he was pope; Paul of Middelburg, bishop of Fossombrone, from Rimini on December 1, 1523; Ramberto Malatesta 'the philosopher', squire of Sogliano, and Francesco Ruffo, Ramberto's "scriba et filiorum praeceptor," from Faenza in January 1524; Ludovico Vitali, an astrology professor at the Bolognese Studio from Bologna in 1523, and Silvestro Lucarelli, an obscure Camerino astrologer from Rome on 31 January 1524. These writers seem, by contrast, to avoid the conciliar question purposely, and they occasionally indulge in anti-Lutheran propaganda. Writings, mainly Lutheran, from the Germanic area feature the Medici popes as polemical targets rather than inspirational sources.

In order not to make Cardinal Adrian of Tortosa seem a solitary figure among his peers, I would like to note that Cardinal Gregorio Cortese refused the "fable" of the flood in an epistle,[4] and that the eminent Imperial chancellor Mercurino Gattinara, just before achieving his hoped-for cardinalship, had apprehensively consulted Peter Martyr

[3] L.-P. Gachard, *Correspondance de Charles V et Adrien VI* (Brussels, 1859), pp. 242–53. Writing from Vitoria on January 17, 1522, Adrian congratulates the Emperor for his victories in Milan and Tournai and, in an equally heartfelt tone, on the "milagrosa aparición de las tres cruces del glorioso apóstol sant Andrés que se mostraron sobre V. M. en la vigilia del mismo santo, despues de vísperas, de lo cual se han dado acá infinitas gracias a N. S., y de todo ello escrevimos a diversas partes de estos reynos para animar y alegrar los pueblos."

[4] Gregorii Cortesi Benedictini Cassin. *Opera* (Padua, 1774), vol. II, pp. 128–29. In an undated (but of 1524) letter to the Genoese cosmographer Cassiano Camillo, Cortese, referring to another lost letter he wrote Filippo Sauli, writes: "non quod diluvii fabulam hanc pertimescam, imminent enim maiora et graviora non in palustribus tantum locis, sed in ipso etiam Alpium iugo pertimescenda et quae non ex astrorum consideratione, sed in ipsis iam rerum initiis nemo est qui coniecturam assequi nequeat. Quare ubicunque fuerimus omnes nos in eadem navi futuros esse suspicor. Quae vero me retrahunt ea sunt eiusmodi, ut etiam in maxima rerum omnium pace quamlibet possint retrahere." G. Fragnito mentions this letter in "Il cardinal Gregorio Cortese (1483?–1548) nella crisi religiosa del Cinquecento," *Benedictina,* 30 (1983), p. 29. My thanks to the author for allowing me early access to this information while her article was in proofs.

of Anghiera. In his answer, Peter discussed the predictions which Lutheran propaganda was spreading through Spain and Giovanni Pico's arguments against astrology.[5] Other prelates played this dangerous game of intimidation or consolation, the final outcome of which was not a more or less universal flood but the Sack of Rome.

The focal-point of these politico-religious polemics and their secret propaganda aim regarded the relationship of Papacy to Empire, especially in the presence of the crisis occasioned by Lutheranism. Due to the spread of printing, propaganda was facilitated, and there was a qualitative leap in respect to the still medieval forms to be found in Maximilian's *Theuerdank* and *Weisskunig*.[6] The so-called two pre-modern revolutions can be observed at close quarters within this mass of pamphlets. Both were related to the political polarization I have just mentioned, and one also to the religious crisis. Pedro Ciruelo, a philosopher and astrologer who spent his formative years in Paris under Lefèvre, was writing from the new university of Alcalà which seems to be the source of almost all the Spanish pieces; he supported the comuneros.[7] Alexan-

[5] See Zambelli, "Fine del mondo," pp. 349–52. But cf. Pico, *Conclusiones* (Genève: Droz, 1973), p. 43: "Secundum Jamblichum 8. Qui finalem causam diluviorum incendiorumque cognoverit, haec potius kathàrseis, id est purgationes quam corruptiones vocabit". And cf. *Opera* (Basel, n. d.), vol. I, p. 75.

[6] G. Wagner, "Maximilian I und seine politische Propaganda," in *Ausstellung Maximilian I* (Innsbruck, 1969); P. Diederichs, *K. Maximilian als politischer Publizist* (Jena, 1932). There is an astrological component in Maximilian's writings as in the *Weisskunig* (zusammengestellt v. M. Treitzsauerwein von Ehrentreitz, hrsg. v. A Schulz in *Jahrbuch der Kunsthistorischen Sammlung des allerhöchsten Kaiserhauses,* Bd. VI [1888], p. 62): *Wie der jung Kunig lernet die kunst des Sternsehens.* "Mein Vater ist ein Kunig und regieret sein Volk durch seine hauptleut, canzler, rät und diener, aber den gewalt hat er in seiner hand." Immediately after Maximilian's death, Johannes Stabius drew up a complete list of the Emperor's published or projected works: see S. Steinherz, "Ein Bericht über die Werke Maximilians I", *Mitteilungen d. Institut f. Österreichische Geschichtsforschung,* 27 (1906), pp. 152–155. Maximilian was also the recipient of newer forms of propaganda; see D. Wuttke, "Sebastian Brant und Maximilian I. Eine Studie zu Brants Donnerstein-Flugblatt des Jahres 1492," in *Die Humanisten in ihrer politischen und sozialen Umwelt,* hrsg. v. O. Herding u. R. Stupperich (Bonn-Bad Godesberg, 1976), pp. 141–76. See now H.-J. Köhler, "The *Flugschriften* and their Importance in Religions Debate", *Sufra,* p. 79.

[7] In *Erasme et l'Espagne* (Paris, 1937), p. 261, n. 1, M. Bataillon indicated the documents of the 1521 trial concerning the College of San Ildefonso where Father Ciruelo and four others were comuneros. Cf. J. Perez, *La revolución de las comunidades de Castila (1520–1521)* ([1970] 4th ed., Madrid, 1981), pp. 122, n. 33, 328–9. The very up-to-date and humanistic culture of this Alcalà university professor is also reflected in the inventory drawn up in 1523 of the books in the college whrere he taught (Madrid, Archivio historico nacional, Universidades, libro 1091 F: Alcalá). In addition to Petrarch, Boccaccio, and Aeneas Silvius Piccolomini, it includes Bessarion (Defensorium Platonis), Filelfo, many works and translations by Ficino *(De caelesti vita* and *Epistolae,* Plato, Plotinus, *Libri platonicorum),* Giovanni and Gianfrancesco Pico, Ermolao Barbaro on Pliny, Erasmus's *Adagia,* several Aristotelian paraphrases by Lefèvre, and short works

der Seitz von Marbach, a doctor, participated in and defended the Wurttemberg peasant struggles in one of the most elegant and influential High Middle German pamphlets in existence; his religious views were close to the Swiss Reformation as were in 1522 those of Johannes Copp, another theologian in favour of the Peasants. Still others, such as Leonhard Reynmann in 1523 (as noted by Aby Warburg), also sided with the peasants. However, the most interesting case is Seitz, as yet little known because his *Warnung des Sundfluss* and its French translation were anonymous. This work had many german editions and some circulation in France; at the Diet of Worms it was presented to the new Emperor and to the electors, councillors, and prelates who were present in order to make them all see the importance of an immediate reform of both the Church and the agricultural forms of production.[8]

A complete reconstruction of this line is beyond both the space and ambitions of this article; I hope to do it eventually in book form. Instead, I will focus here on another anonymous text or series of texts, this time by an Italian author, Luca Gaurico, who was greatly admired in Germany by both Melanchthon and the catholic Joachim, elector of Brandenburg.[9] These prognostications begin their flood-warnings as early as

by Charles de Bouelles; studies on astrology include Raymond Lull's *Tractatus de astrologia,* the *Libro de las figuras de las estrellas del Rey don Alfonso,* late classical authors such as Firmicus or Manilius, and Pontano, whom they influenced as they were later to influence Nifo. Together with others of different periods, this inventory has been studied by J. Urriza, *La Facultad . . . de Artes . . . de Alcalá . . . 1509–1621* (Madrid, 1942).

8 Zambelli, "Fine del Mondo," pp. 336–40.

9 See A. Warburg, "Heidnisch-antike Weissagung in Wort und Bild zu Luthers Zeiten" [1920], in id., *Gesammelte Schriften* (Leipzig-Berlin, 1932), pp. 487–558. Although they realized that Gaurico was the author of the *rectificatio* of Luther's birth date (transported to 1484 in order to make it coincide with the unpropitious Scorpio conjunction), Melanchthon, Joachim Camerarius and other learned Protestants continued to think highly of him. When Gaurico travelled to Germany in 1532, Melanchthon busied himself in preparing a suitable welcome in Wittenberg: "ne prorsus feri et contemptores earum artium videremur, in quibus iste quadam cum laude versatur", letter of June 26, 1532 to Camerarius in *Werke* (CR [Halle, 1835], vol. II, cols. 600–01. See also cols. 570, 585, 587, 595 and vol. V, cols. 114, 185; vol. VI, col. 710). The letter to Camerarius alludes to Melanchthon's reading of a poem by Lorenzo Bonincontri which Gaurico edited, presenting the author as "Pontani praeceptorem." In the light of this and other passages which I will discuss elsewhere, Melanchthon seems to adhere to the line defending astrology which had been elaborated by the school of Pontano, Nifo, and Gaurico. They answered the *Disputationes adversus astrologiam iudiciariam* with an purposedly misleeding use of a distinction Pico himself had made: a distinction between Arab conjunctionist astrology (to be rejected) and pure Ptolemaic theory which, while relegating the other five planets' conjunctions to mere window-dressing because they couldn't act as causes, only took the eclipses or conjunctions of the two Luminaries into consideration. For Gaurico's reception in university circles which had remained Catholic, cfr. the rare I. Muslerus, *De titulis et dignitatibus Reipublicae litterariae. Oratio dominica atque angeli . . . Gabrielis salutatio, carmine elegiaco* a D. Doctore Luca Gaurico mathematico

1501 and 1503 and repeat them in 1507, 1512, and finally in 1522 in an Italian text published in Venice. In 1524 and 1525 the warnings are retracted, and the texts become consolatory rather than alarmistic; similar prognostications also stem from Gaurico's pupils. My conjecture, which I hope to establish here, is that all of these prognostications come from the pen of Luca Gaurico. He died a bishop, but already in the latest of the works mentioned he declared and signed himself "protonotarius apostolicus".

The sequence of these prognostications, which are in part available in manuscripts and in part in fragmentary but significant quotations, has not as yet been reconstructed despite the diligent erudition of F. Gabotto, A. Luzio, E. Percopo, and A. Silvestri.[10] Actually, none of them have been connected with the general debate on the flood. This is what I would like to do here, in order to show that, in spite or perhaps because of this series of incredible and irresponsible *canards* circulating from the

insigni dictatae. *Ita quaedam de tempore, homine, vita, morte etc.* [Pomponii Gaurici] (Leipzig, 1533), I have consulted in the Ratschulbibliothek in Zwickau/DDR. In Musler's epistle to three of his students on St. Thomas's day, 1532, he writes that he recounts the way in which L. Gaurico, "sagacissimus naturae interpres," entrusted him with poems by himself and his brother "pro amicitia quam hic nuper Lipsiae inivimus"; Musler lists six common German friends. Luca's piece was a verse paraphrase of the *Pater noster* and, even worse in German territory, the *Salve Regina.* Upon his return from Germany, Gaurico was visited in Udine on 25 September 1532 by Gregorio Amaseo. He reports on the "astrologo famosissimo qual veniva d'Alemagna de la Maestà del Imperator et Ferdinando Re de' Romani" with many promised benefices; Gaurico had also passed through Nuremberg and "a Virtimburgo, magna città sotto il Duca de Saxonia, lo se haveva trovato in una compagnia e convivio de primarii luteriani, et fra li altri se ritrovava esso Martin Lutero et Philippo Melanthon," with whom he had discussed the connivance with the Turks of which they had been accused by the Catholics and which they hotly denied. See L. and G. Amaseo, *Diari udinesi dal 1508 al 1541* (Venice, 1884), pp. 322–24; and O. Niccoli, "Il mostro di Sassonia," in *Lutero in Italia. Studi storici nel 5° Centenario della nascita* (Casale Monferrato, 1984), p. 7, which alludes briefly and without comment to the meeting. Given that Gaurico was not evangelically inclined, his visit to Wittenberg is most unusual and the problem discussed very surprising.

10 Some correspondence was edited by A. Ronchini, "L. Gaurico," *Atti e Memorie delle RR.Deputazioni di storia patria per le province modenesi e parmensi,* 7, (1873), pp. 77–83. More substantial contributions are: A. Luzio, *Pietro Aretino e la corte dei Gonzaga* (Turin, 1888), pp. 8ff. and *Un pronostico satirico di Pietro Aretino* (Bergamo, 1900), pp. 44–46; F. Gabotto, "Alcuni appunti per la cronologia della vita dell'astrologo L. Gaurico," *Archivio storico per le Province napoletane,* 17 (1892), pp. 278–98; E. Percopo, "L. Gaurico, ultimo degli astrologi," Società reale di Napoli, *Atti della R. Accademia di archeologia,* 17, n. 2 (1896), pp. 3–49; A. Silvestri, "L. Gaurico e l'astrologia a Mantova nella prima metà del Cinquecento," *L'Archiginnasio,* 34 (1939), pp. 299–315. Brief remarks can be found in such modern studies as P. Bientenholz, *Der italienische Humanismus und die Blütezeit des Buchdrucks in Basel* (Basel, 1959), p. 155; P. L. Rose, *The Italian Renaissance of Mathematics* (Geneva, 1975), pp. 50, 72. Rose maintains that Gaurico's editions of Archimedes and Pecham were influenced by Giorgio Valla's scientific activities. See too Pomponius Gauricus, *De sculptura,* ed. and trans. A. Chastel and R. Klein (Geneva, 1969), pp. 11–19.

time of Julius II, an astrologer, and one of the worst of the lot, managed to become protonotary under Clement VII and bishop under Paul III.

Giving the wrong date and without noting its importance, Percopo pointed out a *Prognosticon ab anno MDII ad Annum MDXXXV*, dedicated by Luca Gaurico to Marchese Francesco Gonzaga in two manuscripts, the Riccardiano 771 and the Vindobonensis 3520. There is another copy in the British Library MS. Additional 12121. In addition to these manuscripts and, given the date, perhaps even more significant, are two printed copies of this text. One was perhaps promoted by the author and has no typographical indications, but it was thought to have been printed by Silvan Otmar in Augsburg.[11] The other was published by the Protestant printer and playwright Pamphilus Gengenbach in 1522 in Basel.[12]

It is a collection of verse and prose, and, although it starts with 1503, it contains writings both earlier and later by a decade. In the Biblioteca Universitaria in Bologna there is a 1502 *Pronosticon* containing verses the oracular and pseudo-classical style of which permit the prophet of catastrophe a certain vagueness. However, they also make clear and threatening announcements:

> Eloquar, an sileam? Magnum mihi sydera vatem
> venturum monstrant . . .

[11] I would like to thank Dr. Irmgard Bezzel from the Bayerische Staatsbibliothek in Munich for this and other verbal and epistolary suggestions. In the course of research done in Tübingen and Munich made possible in 1981 by a DAAD grant (Deutscher Akademischer Austauschdienst) and with the help of Dr. Hans-Joachim Köhler (a specialist and editor of German *Flugschriften* written during the first thirty years of the Cinquecento), I corresponded with more than 600 libraries in West and East Germany, Austria, Switzerland, and Italy without finding a printed or manuscript copy of the prognostication Gaurico sent to Trier in 1512, and learned instead that this first edition and the Basel ed. of the *Prognosticon 1503–1530* circulated fairly widely. A specialist expressed doubts on the Mantuan originis of the first edition (often deduced from the author's colophon dated from there): D. H. Rhodes, "A Bibliography of Mantua," *La bibliofilia,* 18 (1956), p. 163. Although he quotes Rhodes, Faccioli insists on Mantua: E. Faccioli, *Mantova. Le lettere* (Mantua, 1962), vol. II, p. 414

[12] L. Gaurico Luphanensis ex regno Neapolitano *Prognosticon anni 1502, editum Patavii, VII Kal. Decembris.* Impressum Venetiis per Bernardinum Venetum de Vitalibus A.D.1501, 14 mensis Decembris, f. 105v–106v. Cf. *Prognosticon 1503–1530,* Firenze, MS. Riccardiano 771, cc.1r.–2v; London, BL, MS.Add. 12121,cc.22r–24v; ed. n.d., n.p. [S. Otmar: Augsburg], fols. Aiir-Aiiiv; ed. P. Gengenbach: Basel, 1522, fols. Aiv-Aiiv. See too MS. Wien, ÖNB 3520, cc.18v–2Or. This fragment, which also leaves off the last three verses, is all that the interesting miscellany of assorted material on the Turkish peril contains from the *Prognosticon 1503–1530.* However, it seems to take the Gonzaga dedication, which we do not have in the *Prognosticon 1503–1530,* from there. For more information on the MS see *Tabulae codicum mss. praeter graecos et orientales in Bibl. Palatina vindobonensi,* vol. III-IV (Graz, 1905), pp. 6–9. I am very grateful to Dr. Eva Irblich from the above Library for facilitating my research on this point.

> . . . certum est venturum Oriente prophetam
> Maxima cui toto fient miracula mundo,
> Cui cunctae gentes, cui totus serviet orbis,
> Qui novas leges statuet, cui cuncta refringet[13]

After this announcement (which has parallels in Lichtenberger and Arquato), we are also warned of a "flood" and other natural calamities:

> Diluvium multis magnum minitatur aquarum
> Saepe locis piccosque immixta grandine nimbos,
> Fulguraque et variis horrenda tonitrua terris[14]

The gloss reads: "Cataclysmus, Terraemotus anno 1524, Caumata anno 1516–1517 [et] 1528, Epidimia 1516, 1518, 1519." The prose pieces, on the other hand, were not written until 1512 as can be deduced from the fact that they contain a protest against the Venetian senators who were unable to impede a certain printer, greedy for sales and worthy of punishment by torture, from circulating "ineptias quasdam vanas scilicet atque falsas predictiones 1511 [et] 1512 sub falso nomine Gaurici editas."[15]

Gaurico's prognostication sought to cover a long timespan, and this is true both in other pamphlets by our author and in several of his models: Paul of Middelburg and Johannes Lichtenberger in the Germanic area, and Antonio Arquato's controversial *De eversione Europae* in Italy. Such a device augmented the impression of vagueness and approximation which, as Cantimori acutely observed, characterized the most successful examples of the genre.[16] Although Gaurico resented the Venetian attributions, his prognostications, as we have seen, contained the two fundamental motifs of the flood polemic: first, various natural calamities (according to Albertus Magnus's philosophy of the four elements a flood entailed not only water but earthquake, whirlwind, and fire); and, second, the figure of the heresiarch:

[13] MS. Ricc.771,c.1r, which also contains the verses: "Namque suo amplexu Saturnus suscipit omnes / Planetas alios, nec quisquam suscipit ipsum / Usque adeo scelerata senis natura maligni est / Et quoniam Mavors sub Cancro iunctus utrique / Saturno atque Iovi, crudeles ingerit iras / Ille ferus nimium, nimium ferus ille tyrannus / (Horrendum dictu) gladio furibundus atroci / saeviet totum summittet legibus orbem." In the *notabilia* in the margin, twice, the date 1524.

[14] MS. Ricc. 771, c. 2v.

[15] Ibid., c. 3v.

[16] D. Cantimori, *Umanesimo e religione nel Rinascimento* (Turin, 1975), p. 164; Lichtenberger, *Prognosticatio* (facsimile ed.: Manchester, 1890), fol. CIIr: "Caput XII: . . . Necesse est ut superveniet imperii cathaclismus, ut intelligatur quid dicitur quod super quem creditur omnia devastabit. Inde ego disperdam eos cum terra. In signum autem talis diluvii ac tante tribulations, . . ."

> Magnus pseudo propheta lunaris ostentabit se miseris mortalibus anno Dominice incarnationis 1530, sed biothanathus interibit, labente anno aetatis suae 33, Virginaei vero partus 1535 . . . Fiet enim (inquit [Psalmus 76]) mutatio rerum fere omnis anno Christianae salutis 1535.[17]

It is known that Lichtenberger and Arquato made analagous announcements of great changes in the two connecting spheres of religion and state organization; Arquato's was discussed by the Spaniard Gaspare Torrella in his *Iudicium universale* published in Rome in 1507,[18] which, I believe, provides a *terminus ad quem* for dating Arquato's work. Gaurico too had already used these elements in the 1507–1530 prognostication he composed for Julius II. However, after 1517 the threatening spectre of a heresiarch hanging over all of Europe became so concrete as to be unbearable. This explains the violence of the final phases of the debate in which not only did Nifo try to undermine Gaurico's theses, but also Tommaso Giannotti and Jacobo Petramellara seemed, in a confused way, to draw closer to Gaurico's positions.

His prediction already appeared in Latin and Italian in the prognostication dated "Bologna, 13 febbraio 1507," containing previsions up to 1530 and dedicated to the bellicosely reigning Pontiff Julius II. The authenticity of this leaflet seems to be attested to by the mention of the brothers Pomponio and Agrippa Gaurico.[19] The ambitious Luca was offering his services for the reform of the calendar; he tried once more with Leo X and Adrian VI, and as shown by one of his writings, with Paul III.[20] Other flood authors were to do the same: Paul of Middelburg,

17 MS. Ricc. 771, c. 2v.

18 See Thorndike, *A History of Magic and Experimental Science* (New York, 1951), vol. VI, p. 179 n. and Zambelli, "Fine del mondo," p. 320 n.

19 *Pronosticon anni 1507 usque ad annum 1530 Divo Iulio II P. M.*, Bononiae 13 febr. 1507, Aviiir-v. All three Gaurico brothers received benefices from Cardinals San Severino and Grimani. Luca made meteorological predictions for the latter (fol. Aiiiir), the result of which was "familiaritas tecum" (fol. Aviiiv). This prognostication contains much current historical data: the flight from Bologna of Gaurico's persecutor, Giovanni Bentivoglio and the victory of Julius II; the death of Cardinal Ascanio Sforza in May 1505, predicted by Gaurico together with that of Philip the Fair and the King of Spain's arrival in Italy. There is a copy of this latin booklet in the Bayerische Staatsbibliothek in Munich, call no. Astr. 529/21, and also an Italian version, *Pronostico o vero Iudicio*, Bologna adì 13 di febr. 1507, Siena, Bibl. Comunale, shelfmark M VI 37 (7).

20 See Percopo, "L. Gaurico", p. 44. The MS. Vat. Lat. 3917, cc.37r–43r contains an undated memorandum "Ad divum Paulum III P. M. Lucae Gaurici Neapolitani'. Quis modus sit observandus in Calendarii Romani correctione et vera Paschalis solemnitatis festorumque mobilium celebratione." Side by side with chronological considerations, there is a passage which is interesting in terms of religious history: "si huiuscemodi error tuae sanctitudinis iussu publicoque dictu in tuis comitiis et generali Christianorum regum sinodo non corrigatur, in tua ecclesia et republica christiana saepenumero plurima possent accidere scandala," (fol. 38v). In his *Super diebus decretoriis* (Rome, 1546), p. 121, Gaurico is one of the few to cite Nicholas of Cusa ("vir olim usquequaque doctissimus") and his suggestions for calendar reform. A printed copy of Gaurico's *Quis modus sit in posterum observandus* . . . (s.l.a.) was kept until 1957 in Naples, Bibl. Nazionale (the catalogue gives no more data under the Number: 73.G.38[3]corresponding to an astrological miscellany).

21 *Pronostico o vero iudicio*, c. Aviiv.

22 *Ibidem*.

Johannes Stöffler, the above-mentioned Pedro Ciruelo, and the Viennese George Tannstetter Collimitius. However, while in this case Gaurico seems to be looking for a courtier's position, he wrote other pages elsewhere which were less acceptable to the papal or cardinals' courts, and these pages seem to contradict the former tendency.

With the appearance of a comet in 1511 he not only announces "morti, esilii, dolori, odii, rivalità di moltissimi re, principi e nobili, discordie fra i cittadini, tirannie, stragi e sciagure nelle guerre." Actually, for such a warlike pope as Julius II similar catastrophes would not come amiss, especially since his personal forecast was good on the whole, if he took care to avoid being poisoned.[21] However, the comet would also have an adverse effect on both the Christian religion and on almost the entire territory of Europe. While he invited Julius II to march against the Turks and promised their defeat, Gaurico also issued warnings concerning the internal peace of Christian peoples:

> "Dopo diciotto anni la fede christiana harà gran faticha quando chomincerrà a dimostrarsi un falso profeta, quello lunare, el quale habbiamo decto altre volte dover nascere nel mese di settembre passato [and in the margin the volgare version reads: "Credo voglia dire di Antichristo"] . . . Ma maggiormente s'affaticherà nell'anno XXX, nel quale di quelle fraude fincte et miracoli fincti grandemente haranno forza. El quale niente di meno poco dopo harà cattivo fine e la religione christiana molto meglio sarà restaurata. Imperroché el sommo pontefice in quella età tucto el cerchio della terra col suo imperio tempera e già tucti e' mali in meglio si convertiranno".[22]

Gaurico repeats the Joachimite warnings spread by Lichtenberger and even more recently by Arquato, but he waters them down and leaves some hope that the pope who will restore peace and Christian hegemony over the entire universe may be none other than Julius II or if not Julius his normal successor; in other words, there is no suggestion of a *pastor angelicus* or of the catastrophic phases of an apocalypse and successive restoration of order. And yet, a few lines below he makes the same comet – which he had already interpreted in favor of Cardinal Grimani – bring earthquakes in 1512 and the years following and, even

worse, a universal flood similar to the one which, according to Stöffler and Pflaum, had been signalled by the famous Pisces conjunction:

> "L'autunno et el verno [1512] saranno humidi, et saranno spesso tremuoti nelle regioni cavernose et maximamente a quelle parti e regioni del mondo, le quali sono sottoposte al segno della Vergine et al segno de' Pesci et alla loro triplicità, e' quali tremuoti ancora saranno maggiori nell'anno ottavo e nono [Latin version: 1513 and 1514]. Ma nell'anno 1524 septe continui mesi dureranno venti freddissimi e freddi grandissimi et nevi grandissime, per le quali molti edifici rovineranno, tremuoti, gragnuole, fulgure, et le ingiurie et e' mali verranno dal cielo et maximamente el cataclismo, cioè il diluvio, el quale quasi tucta l'Europa coprirà. Et saranno spessi naufragi, sarà fame mai più udita, sarà nuova pestilentia a tucti gli animali, et quegli che haranno nell'hora del nascimento per ascendente la Virgine, il segno de Pesci, et lo Scorpione, el Cancro pochi di questi scamperanno al pericolo della morte".[23]

This prognostication, which was probably published in 1507, already seems to adumbrate that complex natural catastrophe which can be summed up by the phrase universal flood: it is said, precisely, that "ferme totam inundabit Europam." Indeed, the pope did not reward Gaurico's ambition by asking for his help in reforming the calendar, and before June of that crucial year of 1512 a mysterious namesake issued an even more threatening prognostication signed "Lucas Magni Regis Persarum philosophus et medicus," which was sent to the Imperial Diet of Trier. The original has not come down to us, but we can get some sense of its contents from verbatim quotations contained in the confutation published in German and Latin and written by two astrologers consulted with lively apprehension by Ludwig, Count of the Rhenish Palatinate. Although Hans Virdung von Hassfurt found the booklet "omnino nugis et fictitiis plenum, nec in astronomica disciplina fundatum," he did not fail, quoting quite long passages, to confute it article by article. This Luca has said

> "[I] that in 1512, in September, when the Sun is in Libra, all of the planets together with the Sun will meet in the point called Cauda Draconis, wondrous fact! [II] he asserts that there will be a lunar and solar [sic!] eclipse from the third to the eleventh hour before noon; it will be the color of rubicund fire; [III] that Saturn will cause a flood; [IV] that there will occur such a storm that the winds will all blow together and turn the air to darkness, and they will make a horrible sound and dismember bodies and destroy buildings ...

[23] *Ibid.*, c. a4v.

> Make provisions for finding shelter while the winds will rule and blow in the month I have mentioned, since it will be almost impossible to find a safe dwelling: prepare a small cave in the mountains and take with you the equipment necessary for thirty days. [V] There will also be many dangers and murders in different regions and a universal earthquake".[24]

In addition to calamities pertaining to water, air, and earth, the health of human beings will suffer; but, above all, great changes will take place in the fields of religion and politics:

> [VI] The Saracens will experience doubt in their souls and leave their native land in order to join the Christians, and they will become Christian in order to redeem themselves [VIII]... the eclipse signifies great *mirabilia* clear to anyone with eyes or ears, and there will be human casualties and divisions of kingdoms; in addition, since, after those winds have blown and the flood has taken place there will be few survivors, those who do live will become very rich.[25]

Virdung, professor of astrology at the University of Heidelberg, was also the author of several prophetic-Joachimite prognostications; his Tübingen colleague, Johann Stöffler was the venerable compiler of the famous 1499 ephemerides. Both attacked the prognostication which "Treverim misit Perseus ille Luca," as Petrus Werner von Themar wrote in a carmen included in Virdung's Invectiva.

Stöffler's printed opinion ("chartae in eam rem a typographis excusae") seems lost, but he sums it up for us in his *Expurgatio adversus divinationum XXIV anni suspitiones* published in Tübingen, 1 November 1523. Luca is called "magnus circulator" and charlatan-astrologer for trying to terrify the "inertem plebeculam" with warnings of tempests, earthquakes, and floods – just as we read in the passages quoted by Virdung in his detailed confutation. Already in 1512 Virdung had introduced a Biblical argument which was to constitute an important topical resource for consolatory writings on the eve of 1524: according to Genesis, when God caused a rainbow to appear at the end of the Flood,

[24] *Invectiva magistri Johannis Virdung de Hasfurt mathematici ad ... Ludovicum Comitem Palatinum Rheni, Bavariae Ducem contra somniatum Prognosticon, quod delirus ipse Lucas Magni Regis Persarum Philosophus et Medicus super anno MCXII° edidit*, in M. Goldast, *Politica imperialia* (Frankfurt M., 1614); pp. 779 ff. The translation is mine. The Latin and German originals of this invective, published in Heidelberg in 1512, are in the Freiburg im Breisgau UB and in the Ratschulbibliothek, Zwickau (DDR). Cf. M. Steinmetz, "Johann Virdung von Hassfurt", infra p. 195–214.

[25] *Ibid.*, p. 782.

He was promising Noah that He would never again destroy so much human life. Virdung also recurred to the expedient of making a distinction between the regions which were to be subjected to fatal events; and he obviously chose very remote ones.[26] He suspected that Luca's prognostication was intended not only to terrify the lower classes but also to worry Maximilian and his Diet.[27] Therefore, he concludes by suggesting the greatest possible severity, "cum omnis mercenarius dignus sit sua mercede," that is, may he be deemed worthy of whipping by the lictors and expulsion from the Empire.[28]

This Luca, whom we will only conjecturally call Gaurico, is suspected of political usefulness to one of Maximilian's enemies. Since the date is 1512, the best possibility seems Louis II of France or his cardinals who organized the *conciliabulum* at Pisa and Milan which the Emperor had initially promised to attend; he deserted it after Julius II convoked an 18 July 1511 and inaugurated on 19 April 1512 the Fifth Lateran Council. In 1510 and 1511 Gaurico had dedicated two prognostications, now lost but still registered in the mid-eighteenth century, to Francesco Maria della Rovere, Duke of Urbino, and to Francesco Gonzaga, Marquis of Mantua.[29] Both patrons in those very months suddenly betrayed the Spanish-Papal camp, thus contributing to its bloody defeat in Ravenna. All we know with certainty is that Gaurico wrote from Mantua, where

[26] *Ibid.*, p. 780.

[27] *Ibid.*, pp. 779–80.

[28] *Ibid.*, p. 782.

[29] See J. Brunacci, "De Benedicto Tyriaco," *Raccolta di opuscoli* a cura di A. Calogerà, 43 (1750), pp. XXIX–XXX: *"Judicio del anno MDX allo ill. mo duca di Urbino composto per lo excellentissimo doctor Maistro Luca napolitano astrologo dignissimo. Pronostico del anno 1511 allo ill. mo marchese di Mantova per lo doctissimo magistro Lucha. Lucae Gaurici Neapolitani prothonotarii apostolici ac doctoris egregi axiomaticum prognosticon anni 1525 editum Venetiis mense Novembris 1524 Clemente VII P. M."* An examination of two printed editions of the 1525 prognostication in the Bibl. Marciana in Venice (Misc. 1339.20) and the Bibl. Comunale in Forlì (Piancastelli, Stampatori 174) confirms this bibliographical indication. However, I have not been able to verify them further, despite various attempts in libraries in Padua, Venice, and Mantua. For the volte-face on the part of marchese Gonzaga and the Duke of Urbino, see L. von Pastor, *Storia dei Papi* (it. transl.: Rome, 1956), IV, p. 813, n; R. Marcucci, *Francesco M. I della Rovere, I: 1490–1527* (Senigallia, 1903), p. 26, n; and a lively page from the contemporary chronicler, S. Tizio (1458–1528 [on whom see n. 36 infra] in his *Historiae senenses*, MS. Firenze Biblioteca Nazionale II, V, 140 (9), p. 284: "Cum itaque Franciscus Maria Urbini Dux et Iulii nepos in castra pontificis concederet Hispanis, non exiguae suspicionis est habitus, qua re praecognita mox retrocessit et Urbinum divertit. Rumoribus enim ferebatur defecisse illum clanculum a patruo atque illum prodidisse, secumque aureorum sexaginta milia asportasse, cunctaque soceri consilio hoc est Mantuae marchionis illum agisse idque universi existimabant, ferebanturque de Columnensibus Ducem non confidere Urbini Ducatus ratione, cum Fabritius Columnensis, qui in castris Pontificis agebat, in eo ius habere praetendebat."

he was in the service of the Gonzaga, in April 1512 that his intention was "d'andar quasi disperato" to the University in Paris.[30]

The Gaurico documents, significantly rare during this period, do not tell us whether Luca was actually harboured by the French nor do they reveal his whereabouts in the years following. Even if the trip to Paris went no further than the planning stage, the idea itself is a suggestive coincidence. Whether the interesting astrological provocation presented to the Diet of Trier was by Gaurico or not can also remain an open question. Of one thing we can be sure: from the 1501 verses and Julius II's 1507–1530 prognostication on, Gaurico had discovered a literary treatment and a scheme of psychological propaganda which he was to continue to exploit in the years to come. Most of the Italian writers were Scholastics, and he will remain unique in his use of the prophetic style: "Apollonian," "Sybilline," and extremely enigmatic. As can be seen in texts by Lichtenberger, Grünpeck, Virdung, Seitz, and Gengenbach, this style was much more typical of the Germanic tradition.[31] Although his 1522 flood prognostication is attested to with his whole name, he repeatedly denied its authenticity and said it was a lying falsification by a Venetian typographer.[32] Its contents have been un-

[30] Gabotto mentions the two letters ("Alcuni appunti," pp. 285–87), and Percopo ("L. Gaurico," p. 19) cites the one written on 3 April 1512 to Card. Ippolito d'Este from the Fondo Estense, AS in Modena. An unedited letter of 1512 is now in Mantova AS, Arch. Gonzaga 2486. "Circa la questione facta a le hore 24 et meza trovo per astrologia che Mercurio signore de lo ascendente combusto in 7ª et Iove signore de la 7ª et parte gallica [significano], che facciando li spagnoli conflicto con franzosi, spagnoli haveranno la pezore parte, tamen, per esser la Luna in signo bicorporeo et Iove con Mercurio, credo non combacteranno et ogne uno stare sopra lo vantazo; per geomantia etiam trovo el simil iudicio, benchè non se deve dare fede in tale arte divinatoria, neanche in le interrogatione, secondo la sententia di Ptolomeo principe de astronomi. Tandem la revolutione de Bologna, a la quale daria mazore fede, dimostra che Bologna se perderà con grande homicidio et ruina avante la fine del presente mese et non altro; a V.S.Ill.ma me ricomando et aviso quella che a dì 8 et 9 ne averà molto bene et forsi etiam a dì 7 del presente, et tali dì sono più infelici per bolognese che li altri, volendo dare la battaglia el campo de spagnoli contra la cità. *Gauricus servulus.*" (Date "1512" written by a later hand).

[31] I cite with reservations a *Weyssagung Sybille Tyburtine von dem ehrwürdigen hochgelerten Herren Luca Gaurico Geophonensischen Bischoffe, dieser Zeit dem fürnemmender Astrologen Italie etc. ausgelegt, für das 1557 Jar.*, n.d., n.p.. This prognostication, "geschriben den ersten Octobris anno 1556" can be found in the Heidelberg Universitätsbibliothek, call number A 75181/2, but I have been unable to find the Italian original on which Adam von Bodenstein based his edition and translation; the preface is dated Basel, 1 March 1557.

[32] See *L. Gaurici Neapolitani Prothonotarii apostolici ac doctoris egregii axiomaticum prognosticon anni 1525, editum Venetiis Mense Novembris 1524*, n.d., n.p. (cf. n.29 above), c.1r: "Clementi VII P.M... Nescio quis admodum lividulus aut avidulus fortasse calcographus (ut suas excluderet merces), sub Gaurici nomine edidisset aniles quasdam fabellas, ne dixerim prognostica."

known until recently, but, fortunately, large portions were copied out by Sigismondo Tizio, author of the *Historiae senenses* and a clergyman, politician, and passionate chronicler of astrological knowledge. He interleaved the manuscript of the *Historiae* with the originals of broadsides depicting the "Vitello-monaco"[33] and other monsters which were typical of current religious propaganda. Gaurico's point of view interested him and left him somewhat perplexed. He had read the recent prognostication "sub titulo et nomine Lucae Gaurici Parthenopaei editum," which spoke of the dreadful power of the cataclysm deriving "ex dispositione syderum" in 1524, but said it would have begun in September 1522 (as he had already frequently announced). As in 1512, the grand conjunction in Libra would have taken place in the Dragon of the Moon and not only would storms, earthquakes, and floods once more be accompanied by struggles and heresies but also by instances of conversion of infidels.

He announces a flood or a stupefying cataclysm, both the overflowing of waters and other terrible and extraordinary events, a tiresome roaring of the winds with the earth so shaken by east winds or battered by northwest ones that the condensation of vapors and raising of dust will cause the air to turn black (wondrous spectacle) and fearful and horrifying voices will arise from chaos; human bodies will fall and many buildings will be struck down in three hours. After three hours have passed, there will be another eclipse of the Sun which will last until the eleventh hour; its aspect will be toarful and bloody, and it will cause strange and disturbing events unless God in His mercy does not prevent this from happening. Immense slaughters will follow in different parts of the world, there will also be a dreadful earthquake, and a universal plague, unheard-of disputes among kingdoms and cities. Once the impetus of winds and earthquake is stilled, the cataracts of heaven will open, and there will be a particular flood, towns and villages will perish, many will die, and the survivors will become extremely rich. Quarrels and heresies will be provoked; but, nevertheless, many infidels will be converted to christianity and leave their native land. The flood itself will last thirty days; but the author of the prognostication advised those who could to put aside provisions for forty days.[34]

[33] A study of the Tizio Manuscript would be extremely interesting in terms of the history of printing and collecting of propaganda materials. Since it is unpublished, it was not included in O. Niccoli, "Il mostro di Sassonia (as note 9). My note on this Italian anti-Lutheran broadside will soon be published in *Interpres*.

[34] Translation mine from S. Tizio, *Historiae senenses,* MS. Vat. Chigianus G II 39, fols.172r ff (cf. Firenze, Bibl.Naz.MS. II,V,140 [9], pp. 245ff.), = t.ix, vol.VI, 1.iv: "Apparuit interea per hos dies pronosticum quoddam sub titulo ac nomine Lucae Gaurici parthenopaei editum super horrendo influxu cataclismi ex dispositione syderum, quorum vires, ut in illo annotatum fuerat, ad annum MDXXIVum portendebantur.

The portrayal of the various cataclysms and, especially, the unusual reference to the new wealth of the few survivors may remind us of Virdung, and the specification of a "particular" flood could have come from Nifo's 1519 distinction which he took from Albertus Magnus; it is all the more surprising here because Tizio held that all cataclysms and the plague itself were universal. However, the warning that the flood would have lasted for a long time and the advice to put aside provisions are topoi from our flood polemic which by that time was in full course. Even in Siena, Fra Tommaso da Rieti had preached in San Domenico for three years that a flood would have come "in universam Europam hoc anno" 1524. Tizio underlines the fact that the friar was more pessimistic than many astrologers who had written that neither flood nor earthquake was in the offing. But, he adds, "just as February was arriving, the Carthusian monks showed other frightened witnesses and myself - and I laughed - some predictions which had been written much

Initium vero malorum futurorum hoc mense septembris futurum praedicebat. Reperisse interea se pronosticum dicebat, una cum aliis astrologis, planetas omnes una cum Sole constitutos in Draconis [cauda] et in signo Librae [cf. Virdung as n.24ff when he cites Gaurico's art. I for 1512] eamque congregationem ex influxu Saturni, diluvium aut cathaclismum portendere stupendum, tum aquarum excrescentiam aliaque terrifica praeter solitum, ventorum strepitus importunos telluremque ita concutiendam ex flatu ventorum orientalium atque magistralium collidendam, ut propter condensatos vapores et pulveres elevatos aerem tenebrosum futurum redderent ac mirum in modum observandum, utque ex eo frigore causentur voces formidolosae et horribiles; humana insuper corpora concutienda, multaque edificia tribus horis prosternenda, inde ad horas tres alias futuram Solis eclipsim usque ad horam undecimam, cuius sane aspectus lachrimosus atque sanguineus apparebit, daturamque casus insolitos et turbulentos, nisi sua misericordia deus avertat. In diversis quoque mundi partibus occisiones secuturas ingentes, terremotum quoque futurum horribilem, pestilentiam quoque universalem regnorum ac civitatum inaudita dissidia. Cessante subinde impetu ventorum atque terremotus, exerendas celestes catharactas futurumque diluvium particulare, perituras urbes pagosque et gentes innumeras interituras, ut remanentes evadant opulentissimi [cf. Virdung, art. VI]. Rixas atque hereses suscitandas, multos tamen infidelium ad religionem se conversuros christianam, propriam derelinquentes patriam. Inundationem vero ipsam triginta diebus duraturam. Suadebat vero qui pronosticum ediderat, ut quibus inerat facultas commeatum ad quadraginta dies procuraturos. Verum enimvero quid unquam stultius hoc pronostico emanaverit non videmus, quod non a Luca Gaurico, sed a fraterculis cartusiensibus prodiit [. . .] sed tamen cum hec in vulgus spargerentur, ita conterriti sunt omnes, ut magno metu in Senensi urbe trepidarent et nonnulli cogitarent urbe migrare, ut contingere solet, cum falsae voces invalescere cepere et imprudentium credulorum mentes quatere cum literarum sint expertes, et rationes unde atque contingere solet ignorent, nec unquam a metu resilire visi sunt nisi post exactum septembris mensem; tunc enim respirantes putabant ingens discrimen evasisse subsannantes astrologiam et mathematicam contemnentes. Propterea disertissimus vir Petrus Marinus Fulginas, qui in Senensi gymnasio studiorum humanitatis annis multis cathedram publice meruit, hanc epistolam de ea re, tum versus a se editos ad nos direxit." Marini's pieces are inserted in the original in Chigi MS, cc.173v–174v. On c.175r the denial which Luca "mandavit" is mentioned from the prognostication written by "suis discipulis" Bigazzino and Oradino.

earlier and which concerned earthquakes and floods."[35] These monks were responsible for the circulation of Gaurico's 1522 prognostication in Siena. Tizio had read that it was a falsification in the prognostic of Vincenzo Oradino and Girolamo Bigazzino, two Gaurico students (and Gaurico had been in Perugia for at least several of his sparsely-documented years).[36] Gaurico himself wrote indignant verses denying everything. And Tizio, in the interests of saving astrology's good name, attributed the piece to the Carthusian monks. To be sure they were all so terrified here in Siena that their great fear kept all the Sienese in the city, and a number of them meditated flight . . .; nor did they recover from their fright until the month of September had passed. Then with a sigh of relief they held that an immense danger had been avoided; and they derided astrology and despised the astrologers.[37]

35 Cf. the text cited in n.34 and in the Appendix for the apposite passage from MS Chigi, c.243v = Florentine MS, p. 359 of the first numbering. Various *post eventum* manifestations of criticism and satire against astrologers are described by O. Niccoli, "Il diluvio del 1524 fra panico collettivo e irrisione carnevalesca," in *Scienze, credenze occulte* (as note 2), pp. 369–393.

36 Zambelli, "Fine del mondo," p. 327, n. Oradino and Bigazzino were active in Perugia and their booklet was published there. Tizio too had studied law in Perugia from 1480–1482 and probably maintained his connections there; Marini, who dedicated the verses to him in 1522, was also from Umbria. The *Historiae senenses* furnish a great deal of material for Tizio's biography, used by P. Piccolomini, *La vita e l'opera di Sigismondo Tizio* (Rome, 1903). Piccolomini describes the MSS and considers the Chigi Ms. an autograph (including various printed and ms. documents), pp.vi ff; he then (p. 133) reconstructs Tizio's studies in astrology in Siena under Cristoforo Caliciani (1419–1521) and his readings in Messallah, Albumasar, Alcabitius, Albertus Magnus, Guido Bonatti, and the later Domenico Maria Novara and Arquato, whose predictions of Innocent VIII's death in 1491 Tizio, writing in 1526, considered authentic. Piccolomini cites many examples of Tizio's belief in such aspects of natural divination as vaticinations, miracles, premonitory dreams (p. 121). According to Piccolomini, Tizio also believed in divination (see p. 122 on the incoronation of Pope Pius III, having observed in 1503 an unfavourable star, Tizio advised Andrea Piccolomini that his brother's incoronation should be delayed). Piccolomini also cites the criticism of Tizio by Muratori's collaborator, U. Benvoglienti: " Voleva far dipendere presso che ogni cosa dall'influenza delle stelle." But the attitude of Tizio and Paolo III was not exceptional: on the incoronation of pope Julius II, Machiavelli (*Legazioni e commissarie* [of 18 and 26 November 1503]; ed. S. Bertelli, Milan, 1964, II, pp. 649, 683) registred a delay of a week due to similar astrological reasons.

37 See the last part of the text cited in n.35 above and cf. the beginning of Tizio's treatment of 1524 (Chigi MS., c.232r = Florentine MS, p. 352): "Ad cumulum vero malorum accedebat opinio fere in toto orbe generalis diluviorum atque terremotorum proxime futurorum ex coniunctionibus mense Februarii in Piscibus fiendis. Tantus enim timor tamque valida formido irrepserat atque invaserat hominum mentes, ut non defuerint qui montana loca atque confugia sibi pararent, ex verbis Almanach atque Ephemeridis impressae perperam intellectis." After quoting the famous passage from Stöffler and Pflaum's 1499 *Almanach nova* (cf. n.1) which Gaurico had already quoted in 1503, Tizio continues: "Ex verbis eisdem universalis et formidolosa opinio irrepserat, ut diluvia et terremotus ingruerent. Verum enimvero his formidolosis falsisque opinionibus, Augustinus primum Suessanus philosophus, Leonardus Richius Lucensis, Paulus episcopus Forosempronensis astrologus, cum aliis decem mathematicis occurentes et eorum nihil futurum praedicantes, non valebant suis rationibus homines a metu eiusmodi liberare nec contrarium suadere, tantus homines invaserat metus. Futuras tamen inundationes hi viri praedixere in viginti annos et alia quamplura mala. . . . Diluvium tamen in universa Europa futurum praedicavit publice audiente me Thomas Reatinus theologus Senae in Santo Dominico." Despite the generous and friendly help of my colleagues G. Catoni and R. Rusconi, I haven't been able to identify nor the Carthusian monks (cf. n.34), nor this Dominican: unless he were Tommaso di Ser Antonio da Rieti, preacher of S. Maria Novella in Florence, dead in 1519 and never mentioned in connection with Siena (as far as I know). The Bolognese Petramellara also figures among Tizio's readings around 1524.

The not very distinguished poet Pietro Marini da Foligno was teaching the humanities in Siena and translating the Roman agronomer Palladio's works into Italian. He too was frightened, and his anxiety was shared "cum multis aliis." When the date had passed he wrote "subito mentis calore" some verses to ensure that never again would credence be given to "praedictionibus istorum mendacium." He did not align himself with the many who held that all astrology "non veram esse"; however, if its predictions fly too high, for the one time they hit the target, ten more are they off the mark.[38] Although Tizio himself had just attributed Gaurico's piece to the Carthusian monks, he now experienced a delayed reaction against Marini's frivolous reproof of the Venetian Doge and Senate for not curtailing such "levia pronostica." His reprimand reveals a lingering doubt: "querelas tuas excusationis verbis aliis divulgare cura."[39]

38 Chigi MS., cc.173r ff; Florentine MS., pp. 246ff. Marini's epistle is dated "VIII Idibus Septembris 1522," the day on which the catastrophe was predicted, and it is followed by the verses "In astrologos qui mendaciter tonitrua terremotus diluviumque VIII Idus Septembris futura praedixerunt." Marini was not against astrology in absolute, he simply, like Tizio, found the present predictions too alarmistic. His biography is obscure to us: there is an undated Latin letter from Federico Flavio di Foligno the chronicler written to Marini "praeceptori suo" in the Foligno Bibl. Comunale (MS. F. 169 = F 55,179; fol.60r–v); and an equally undated one from Maffeo Vallaresso, which is perhaps as old as 1456. It begins: *"Etsi nunquam te,"* and merely consists in a recommendation for his own vicar Donato Belloria who wanted to study for the doctorate (MS. Vat.Barb.Lat. 1809, c.89r). A commentary on the *Lex lecta* by Ludovicus Burghesius Senensis contains eight introductory verses by Marini (Siena, Bibl. Comunale, MS. H V 20, c.2v). All three MSS are mentioned in Kristeller's *Iter italicum*. Marini seems to have been somewhat old when he composed the writings addressed to Tizio. His only printed work is Rutilio Tauro Emiliano Palladio, *Della agricoltura,* trad. in vulgare da M. Piero Marino da Foligno, Siena, Simione di Nicolò, 1526, fol. iiv: "essendo io nato e allevato in Umbria . . ., la lingua inveterata mi ha costretto a usare quello idioma, che dai miei teneri anni mi so avvezzo."

39 Chigi MS., c.175r–v; Florentine MS., p. 250: "Sed profecto nobis si compellandi hunc Gauricum praeberetur occasio, obiiceremus: 'Luca quem te ipsum facis? Exigua quidem doctrina est precii, si admixta fuerit levitati; deciperis quidem hebes, si existimas Ducem Senatumque venetorum qui rata splendideque gubernanda repubblica occupatos, quosque reges tremunt curare exigui omnis levia, aut quid sua in Urbe imprimatur a calcographis; minimorum siquidem stultum est arbitrari habere tam generosos ac

A year and a half later, Sigismondo Tizio not only describes the three conjunctions of 1, 4, and 5 February 1524 with the precision of an astrologer (though he got the details from Oradino and Bigazzino), but also registers the fact that, amidst other disasters, "accedebat opinio fere in toto orbe generalis diluviorum atque terremotorum proxime futurorum," and there was such terror "ut non defuerint, qui montana loca atque confugia sibi pararent." He mentions Stöffler and Pflaum, "celeberrimi germanorum astrologi," and their by now classic formulation appearing in 1499. Gaurico copied it word for word in his *Prognosticon* 1503–1535, which had now been printed twice after its wide manuscript circulation around 1512. Tizio certainly knew this work, together with those of another alarmist, the Bologna university professor Jacobo Petramellara, and three consolatory astrologers, the philosopher Agostino Nifo da Sessa, the bishop Paul of Middelburg, and the elderly Leonardo Richi da Lucca.[40]

Gaurico wrote another long-term prognostication for a certain Rilla, a private sponsor. Entitled *Apollinei Spiritus Axiomaticum Prognosticon ab anno 1515 usque ad annum 1520 ex sibillina officina*, it appears in one manuscript and reveals an escalation of prophetic tone. He was not worried by the contradiction between his presumably "axiomatic" deduction (characteristic of "scientific" astrology) and the fact that it was also a "revelation" as revealed by the mouthpiece, a spirit from the world beyond. If we look carefully at this piece, it is possible to document Gaurico's political leanings in December 1515, both as regards the great powers and the Italian squires and, especially, in relation to the princes of the Church. He speaks very freely about the latter. The spirit from the beyond promises the death of many cardinals by 1520, including the vice-chancellor Giulio de' Medici ("quamquam in mundo mortuus reputari debeat, tanquam inutile corpus, tamen mox de libro viventium penitus delebitur et erit de nostris").[41] A case of even greater unpopularity and political disgrace would be that of Cardinal San Severino due to die of diarrhea between 1519–1520, "eius anima apud nostros inferos dilacerabitur et perpetuis penis torquebitur."[42] With these colorful death-

magnos viros rationem, cum putandum sit illos in tam magnis administrationibus implicitos, ignorare te in rerum natura esse, aut unquam fuisse, nec te cognoscere, aut unquam de te audivisse. Tace igitur et querelas tuas excusationesque verbis aliis divulgare cura.'"

40 Cf. the text quoted in n.37 above.

41 Florence, Bibl. Nazionale, MS. Targioni Tozzetti 169, c. 43r.

42 Ibid. The Francophile betrayal and humiliating abjuration after the failure of the Pisa-Milan *conciliabulum* were recent events in Sanseverino's life. See F. Guicciardini, *Storia d'Italia* (Bari, 1929), vol. III, p. 176: on the eve of the Battle of Ravenna "veniva medesimamente nell'esercito il cardinale San Severino, diputato legato di Bologna dal Concilio" [schismatic], "cardinale feroce e più inclinato all'armi che agli esercizi o

threats, the *Rillae vaticinium* resembles the style of the pasquinade which was flowering in those years. We have no reason to doubt its authenticity since in 1557 it was included in a "Lista dei libri che il reverendissimo Monsignor Luca Gaurico mandò" (bequeathed) to his birthplace Gauro.[43]

There is no space here to examine this prognostication in full: it was deliberately written according to the "antiquissimum illum caldaicum ac sibillinum morem,"[44] and it is interesting in that it fills some gaps in Gaurico's scant biography for the period following the flight to France, which we only know that he planned in 1512. Several observations can nevertheless be made. We have, on the one hand, his relatively respectful predictions for Leo X (there are references to the "immense fortunes he will procure for his followers," but also to his death by poison, dysentary, or plague at the end of December 1518)[45] and, on the other, the first reference I know to his future and great protector, Cardinal Alessandro Farnese. It is favorable concerning riches, voyages, and family fortunes, but ends with the usual prediction of a this time not so imminent death: "infra enim annum 1522 et 1524 eius anima a corpore dissolvetur."[46] It is hard to know whether the future Pope Paul III

persieri sacerdotali", p. 195 "insolenza di Federigo da San Severino." For the description of the abjuration ceremony at the end of 1515 see bk. XI, chap. 13, pp. 1144–1146.

43 D. H. Rhodes, "An Unknown Library in South Italy in 1557," *Transactions of the Cambridge Bibliographical Society*, 6 (1957), p. 121. The original of the *Lista*, fragmentary and with no indications of date or place of publishing is in the University Library in Cambridge.

44 MS. Targioni Tozzetti 169, c.34v: "ne quid tibi, o Rilla, fastidium pariat antiquissimum illum chaldaicum ac sibillinum morem imitabimur, similiter ut caelestes causas omittamus ipsasque res uti venturae sint praeferamus, amota qualibet animi molestia, quoniam Ptholomaei testimonia amor odiumque ne vera eveniant iudicia prohibent. Ad rem igitur accedamus et prius tibi, o Rilla, generales defluxus supra Italiam." The MS contains a number of biographical and family details regarding Rilla, and the last, long prognostication is dedicated to him, cc.47v–48r.

45 Ibid., c.40r.

46 Ibid., c.40r: "Anno 1516 divitiarum augmenta et ideo sollicitis honoribus optimam corporis valetudinem assequetur, in peregrinationibus dispendia, ex quadrupedibus pericula sentiet, frater aut affinis non recte habebit, sed aliquis suo patrocinio clarior fiet ad aedificia et agrorum culturas proclivior, sororis vel alicuius mulieris connubia procurabit, sed hostes conculcabit. Anno 1517 beneficia sine res hereditarias ecclesiasticas cumulabit, ab itineribus abstineat, acutam febrem aut ignis discrimina aut mortis iram evitet, soror vel neptis aut amicus carissimus interibit, duo ex servis biothanati iacebunt. Anno 1518 potentes habebit inimicos, iram sui regni effugiat, ne ad exilium aut carceres detrudatur, in motibus dispendia et pericula sentiet, crebas causarum conflictationes exagitabit, in capitis oculorum gutturisque dolores acerbos aut graves aliquod vite periculum incurret, nisi prudenter cautum fuerit. Anno 1519 in ecclesia et itineribus bonorum facultatum copiosa praesidia reportabit, sed filii de neptis morte merebit, si hunc acutam alterationem cum vitae periculo evaserit, medicorum prudentia, infra enim annum 1522 et 1524 eius anima a corpore dissolvetur et erit de nostris."

ever saw this page, because, due to its private and manuscript form, the prognostication probably circulated less widely than its printed fellows.

Although they enjoyed a large circulation when freshly published, even the printed prognostications must have disappeared from the book market fairly quickly – just as calendars and agendas do today once their usefulness has expired. Alexander Birkenmajer, a great expert on medieval manuscript prognostications, has made this observation,[47] and I think it is the only explanation for Gaurico's shameless insistence in repeating a prediction in 1501 and 1503, 1507, 1512, and 1522 only to deny his own authorship in 1524 without bothering to produce a point-by-point refutation. He could easily have done so, because no-one bothered to preserve the series of his prognostications, and, given his longevity, it was a long one. It is probable that not even his enemy Pietro Aretino had all these texts at his disposal when he defined Gaurico "profeta dopo il fatto" and "bufalo come gli altri erranti astronomi buoi."[48] The essential was that no-one in his faithful public ever compars his prognostications with the facts! For he did have a faithful and admiring public which was more acquiescent than the undistinguished Sienese humanist Marini and his fellow citizens who had protested when the predictions failed in September 1522. And it included Alessandro Farnese, not dead as Gaurico had written to Rilla. In the *Axiomaticum prognosticon*, published in November 1524 in Venice with a solemn dedication to Clement VII, Gaurico begins by protesting against the "lividulus aut avidulus" printer who dared print under his name "aniles quasdam fabellas," which were not only falsifications but were also, incredibly enough, dated from Naples where he had not set foot in 27

This document may be added to the ones about which R. De Maio wrote that "Luca Gaurico aveva sollecitato la vanità di Paolo III con gli oroscopi e ne aveva goduto i benefici" (*Michelangelo e la Controriforma,* Bari, 1978). We must keep in mind the general context of anxiety surrounding the four year prognostication (MS. Targioni Tozzetti 169, c.36r: "Rex potentissimus cum horribili exercitu in venetos, gallos, turchos et ecclesiasticos quoque impetum faciet, qui aliquando urbes evertet, multos populos contundet et ipsorum regulos profligabit"). Gaurico dedicated his *Ars metrica* (Roma 1541) to Paul's nephew, Cardinal and Vice-chancellor Alessandro Farnese.

47 See A. Birkenmajer, *Études sur l'histoire des sciences en Pologne* (Wrocław, 1972), p. 475, and Zambelli, "Fine del mondo", p. 294. A different evidence could be seen in a 16th Century famous collection: Don Fernando Colón bought several prognostications by Gaurico and other authors in Rome some years after they had been printed and wrote the price and date on his copies: cf. Sevilla - Biblioteca Colombina, *Catalogo de sus libros impresos,* ed. S. Arbolí et al. (Sevilla–Madrid, 1888–1948), VI, pp. 76–81. I have not been able to receive a microfilm in time, but at least the *Prognostico dell' anno 1518* (Rome, Giovanni Mazzocchi, n.d.) and another for 1522 (n.p.) could be relevant for the present paper.

48 Pietro Aretino, *Lettere libro I* (Paris, 1699), fol.31v: letter to P. P. Vergerio from Venice, 20 January 1534: "Né il dice il Gaurico dopo il fatto." Cf. Percopo, "L. Gaurico," p. 46 and Silvestri, "L. Gaurico," p. 310 n.

years. Under his name on the frontispiece "apostolic protonotary" was added to "doctor."[49] In 1546 he dedicated his most complex and conceptually richest work, the *Super diebus decretoriis,* to Paul III, and was finally able to add the title of bishop.[50]

When Paolo Giovio was elected bishop under Clement VII in 1528, Gaurico had aspired to the same honor; both were ridiculed in Niccolò Franco's *Priapea*:

> Fino al cazzon del Gaurico castrone
> L'aspettativa n'have e la credenza
> Benché fino a quest'ora ne sia senza,
> Né si vegga il rocchetto in guarnigione[51]

Benedetto Accolti, Cardinal of Ravenna, not only accepted a short humanistic piece from Gaurico (*De vera nobilitate*) but was also, together with others, the pleased recipient of a horoscope in 1544. Shortly afterwards on 26 September 1545 a sarcastic attack of his favorite astrologer arrived from another quarter: Paolo della Cicogna, part of Cardinal Gonzaga's retinue, sent him the *Significationi estatiche speluncali prodotte da Albumasar et confermate da me Luca Gaurico Astrologo Apostolico.*[52] Cristoforo Madruzzi the Cardinal bishop of Trento was an old protector of Gaurico's, who had been responsible for his release from the Bentivoglio's prisons in Bologna and who had brought him to Ferrara. When he heard the news, "si meravigliò e condolse destramente della promotione del Gaurico al vescovato, essendo persona indegnissima di tal grado". We learn this from the 30 December 1545 entry in

49 See n. 29 above.

50 See G. van Gulik and C. Eubel, *Hierarchia catholica* (Münster, 1923), vol.III, p. 183 mentioning the document wherein Gaurico gave up his bishopric in Civita in 1550 but kept the title and a pension of 100 scudi. In 1546, the year after his nomination, he had been given two extensions of the moment to take possession of the bishopric or not ("litteris non expeditis"). This is also clear from the frontispieces in his books, even though Percopo thought he was bishop first of Giffoni and then of Civita (that is, of Sansevero in Puglia which was a poor diocese). Giffoni was only a village near Gauro which never was a Bishop's eed. Gaurico brothers took their names from Gauro better known and more important than Giffoni. For the title of *De diebus decretoriis,* which I will examine elsewhere, see above n.20.

51 Quoted in Percopo, "L. Gaurico," p. 46.

52 The *De vera nobilitate,* n.d., n.p., is divided into four "tractatus". The interlocutor in the first is Pomponio Gaurico, and in the first and second the other brother Plinio. Humanistic pretensions can be seen in a long citation "ex Francisco Petrarca," fols. Hiiiv-Hivr and in the fourth treatise in verse. Gaurico wrote Benedetto Accolti from Rome on 5 April 1544 (Florence, AS, Carte del card. Ravenna, 7 int.8, fols.18–19) that he had dedicated this "libellus" to him and that he was waiting for a sign from Accolti in order to publish it, "ne lividus quispiam moleste ferat." He also sent him a horoscope for the year 1544. The same archive source (4, int.4, fols.329r–330v) contains Cicogna's *Significationi* under the pseudonym of Eudimo Calandra.

Massarelli's *Diario*.[53] A prelate who had known Gaurico well was scandalized. Nevertheless, Luca Gaurico – a bishop who never stayed in his diocese and who assigned himself a pension which he spent in Rome where he was buried in Aracoeli in 1558 – was the clergyman chosen to direct the astrological ceremony for the laying of the first stone in the Farnese wing of the Vatican on April 18, 1543. The Council of Trent was already under way. "He calculated the hour and the celestial figure," while an old collaborator, the bolognese astrologer Vincenzo Campanacci, "found the proper time on the astrolabe and announced it in a loud voice." Ennio da Veroli, Cardinal of Albano, put on his white robe and his tiara, took a large and polished stone emblazoned with Paul III's coat of arms, and placed it on the foundation over a spot where many gold, silver, and baser metal coins had previously been thrown to honor the pope's memory. In those early Counter Reformation years the life of Luca Gaurico bishop was once more not without its vicissitudes: the ceremony is pompously described in 1552 in Gaurico's long and scandalously amusing *Tractatus astrologicus in quo agitur de praeteritis multorum hominum accidentibus per proprias eorum genituras*,[54] which contains three horoscopes on Rome and announces the Sack of Holy City, recounted by Luca with ill-concealed satisfaction; the event could already have been read into the horoscopes predicting Romulus' foundation of Rome and her *restauratio* in 572 B. C. In the *Tractatus*, which was Gaurico's last book and the most interesting from an anecdotal point of view, he does not relinquish the title of bishop on the frontispiece. However, in 1558 it was placed on the Index of prohibited books by Paul IV.[56]

53 *Concilium Tridentinum*, ed. Societate Gorrësiana (Freiburg i. B., 1901), vol. I, p. 362. Cf. A. von Druffel, *Monumenta tridentina. Beiträge zur Geschichte des Concils von Trient* (Munich, 1885), p. 303, n; and F. H. Reusch, *Der Index* (Bonn, 1883), vol.I, p. 395. Jedin considers Madruzzo's criticism an expression of his hostility to Paul III's nepotism, proven by Gaurico's promotion: *Geschichte des Konzils von Trient* (Freiburg i. B., 1949) I, p. 625 n.103). On earlier contacts and Gaurico's dedication to Madruzzi, see Percopo, "L. Gaurico," pp. 14, 30 n.

54 *Tractatus* (Venezia, 1552), fols. 6rff.

55 Ibid., fols. 2vff.

56 See [Paul IV], *Index autorum et librorum qui ab Officio Santo Romanae et Universalis inquisitionis caveri . . . mandatur* (Roma, Blado, 1559), fol. E4v (quoted by De Maio, *Michelangelo* [1978], pp. 361, 392, and n.33). The lack of sympathy between Gaurico and the successor to the Farnese pope is documented in the latest prognostication I have been able to trace: Paris, Bibl. Arsenal, MS. 2891, t.II, int.299r–300v, *Lucae Gaurici pronosticon cuius initium 1556 finis 1557. Schema coeleste horrificum*. In one of three verse epigrams Gaurico announces "Nocte Iovis Paulus caelestia regna *reviset* [emphasis mine]." See too his *Prognosticon cuius initium erit vertente Anno humanati verbi MDLVI, finis autem anno MDLXXXVIII*, n. d., n. p., a copy of which is in Paris, Bibl. Nationale, Rés. V 1188.; and another at Naples, Bibl. Nazionale, Banco Rari 1 B 45: this one (not collated with the printed parisian copy) gives a text more complete than the ms.

Appendix

Sigismondo Tizio, *Historiae senenses*. Bibl. Apostolica Vaticana, ms. Chigiano G II 39, f. 241 v ss.; Firenze, bibl. Nazionale, ms. II.V. 140 (9), f.356 ss.

Devenimus tandem ad coniunctiones ob putativum diluvium formidabiles. Calendis igitur Februarii, eiusdem diei hora decimaquarta et dimidia alterius fuit coniunctio Iovis cum Saturno partilis et cum Marte plactica in gradu nono, minutis autem quinquaginta sex Piscium, emergente prima Arietis facie super angulum orientis. Et quia in cacodemone contigit non procul a Sole et Venere, multos in carcerem detrudendos portendit aut in fugam convertit, morituros insuper multos principes ecclesiasticos, magnum insuper Antistitem interiturum quoniam Iuppiter est a malis obsessus et ex Domino nonae in duodecima cum Saturno. Aegritudines insuper multas cum catarro et humiditate, nimiaque humorum abundantia coniunctionem ipsam portendere. Conflictus insuper navales propter dominum sedis nonae tresque alios planetas in Piscibus; depressionem quoque potentum atque nobilium minari propter Solem in Aquario et suo in detrimento cadentem. Futuros vero mercuriales atque plebeios in pretio ex Mercurio in undecima ac Luna ibidem collocata. Hos autem effectus per annos triginta duraturos.[. . .]

Die subinde Februarii quarta, hora vero duodecima, minutis autem triginta septem post meridiem altera fuit coniunctio Saturni et Martis in gradu Piscium decimo, tertio vero Scorpii decano horoscopante, qua insuper die atque hora diei vigesima secunda, minutis vero quinquagintaseptem et primo gradu Leonis ascendente fuit Luminarium coniunctio in signo Aquarii et gradu trigesimo quarto, ita ut mathematici quidam, quos inter Iacobus Petramellarius Bononiensis vir peritus fuit, dixerint: 'Solem ipsum passum eclipsim tribus punctis et Regem unum vexaturum in regno aut mortem illi significaturum'; tametsi Leonardus Richius Lucensis ex interpretatione Johannis de Monteregio et ex Almagesto Ptolomæi nullam eclipsim futuram tradiderit eo die perceptibilem, fallacia tabularum Alphonsi nuperrime impressarum in numerorum ex ratione dimissa. Verum ad coniunctionem ipsam trium superiorum ut quidam mathematici scripsere que partilis favit, cadens in quarto caeli templo, eamque significaturam terraemotus et aquarum inundationes, quibus aliqua erunt ædificia ruitura in locis paludosis praecipue et fluminibus adiacentibus; mortales vero ad reparanda ædificia et ad agrorum culturam propensiores quoniam a Iove et Venere planetae ipsi recipiuntur, ab Iove domicilio, a Venere autem exaltatione; et quoniam infortunae duae exceptae ab Iove fortunam efficiunt unam, inclinandos homines ad itinera religionis causa ex tot planetis in tertia, effectus autem huiusmodi fortius eventuros per annos octo post coniunctiones ipsas celebratas iuxta Arabum opinionem inchoaturos. Itaque anno

quingentesimo trigesimo supra millesimum Salutis, prosecuturosque anno tum posteriore atque anno trigesimo nono, quadragesimo praeterea, et quadragesimo nono et quinquagesimo supra millesimum quingentesimum. Iuxta vero moderniorum sententiam effectus ipsi incipere debent, cum stellae malevolae ad tetragonos pervenerint atque diametrales schematis radios, a duodecima scilicet die Mai ad Iulii calcem praesentis anni, tum ab Octobris duodecima ad Novembris calcem anni huius, tum ultima medietate Februarii ad Martis decimam anni quingentesimi vigesimi quinti supra millesimum, tum mense septembris anni eiusdem, quoniam temporibus istis Mars in radiis futurus est malignus. Mala vero deteriora a coniunctione significata ab Augusti medietate mensis incohatura ad Septembris finem anni noni atque vigesimi super quingentesimum atque millesimum, tum mense Aprilis et Maii cum mense Augusti atque Septembris, ultima quoque medietate Novembris cum Decembris mense posterioris anni.

Tertia post hanc superiorum trium coniunctionem aiunt partilem fuisse die quinta Februarii hora septima minutis sexdecim post meridiem in gradu Piscium undecimo, ascendente tertia Virginis facie, tametsi plerique dicant eam duorum scilicet Iovis et Martis coniunctionem fuisse: quae cum in sexta cum Sole, Venere, Luna et Capite inciderint, multas hominum minari aiunt aegritudines ex humorum ubertate nimia et ventris profluvia, interitum praeterea mulieribus tum plebeis saturninis atque martialibus, iovialibus atque venereis illaesere immunibus subituros autem pericula vitae sub facie Piscium secunda Virginis ac Geminorum Sagittariique generatos, Luminaria praecique in horoscopo habentes. Urbes vero quae signis eiusmodi subiiciuntur caeli inclementiam suscepturas ex bello, peste et fame. Igitur qui mense Februarii nati sunt observare illas annuas conversiones oportere, pericula quidem mortis fore imminentia aut aegritudines graves, carceres, bonorum honorumque iacturas illis, quibus Planetarum illa senaria coniunctio in ascendente iam contigit, atque in locis Luminarium aut sexta, septima, octava atque duodecima praesertim quibus annua conversio atque anni dominus fuerint depravati. Effectus vero huiusmodi fortius emersuros anno quingentesimo trigesimo quarto supra millesimum Salutis. Dixisse quidem mathematici, tradidere Meschallah, cum tres superiores coniuncti fuerint in una facie vel termino, illosque aspexerit Sol, destructiones sectarum, regnorum atque eorum mutationes significare maximasque res. Tum hic auctor ille subiunget: 'Et haec est coniunctio eorum maxima quae prophetiam significat, tum destructionem quorundam climatum maximasque res, præsertim si planetarum inferiores illi fuerunt auxiliatus. Tribus igitur his coniunctionibus maximam vim sibi mutuo tradentibus. Ceteri inferiores planetae plactica coniunctione praebent auxilia. Praesagiendum igitur est sectarum et climatum mutationem futuram praescriptis temporibus, in expectationem autem novarum rerum animus exigendus est, quas numquid vidit superior ætas vel etiam remotissima. Si enim Pontifex qui per illa tempora incolumis ab influxionibus evasurus est, sperare oportet concordiam inter principes christianos celebratam, victoriam de fidei hostibus reportaturos christicolas, si desides non erunt. Novationes tamen et mutationes ariolamur futuras, quales ab Alexandri magni aut Julii sive Augusti Caesaris temporibus ad haec nostra auditæ non fuere. Longius tamen quam fuerit animus evagati sumus: vero ut mortales moneremus ista descripsimus futura neglectis illis praecipue concionatoribus qui haec miranda et prima et quarta et quinta Februarii die futura nuntiabant. Meminimus namque audisse nos Thomam Reatinum theologum publice in divi aede Dominici, cuius sectator erat, futurum diluvium in universa Europa anno hoc iam est triennium praedicantem, nuntiantem et concionantem, cum tot mathematici, ut superius dixi, scriptitarint diluvium neque terraemotum futura ex coniunctionibus praedictis. Fratres insuper cartusienses vaticinia, priusquam Februarii mensis adesset, ex multo tempore conscripta nobis ridentibus ostenderunt caeterisque mirum in modum metuentibus tum terraemotum tum diluvia. Verum cum et prima et quarta et quinta dies Februarii transissent solibus ac serenitate continua refertae, eruti metu mortales respirantesque astrologiam atque illius professores damnare cepere: cum ostendere non valerent aliquem ex veris astrologis huiusmodi anilia praedixisse, nec scripta mandasse nobis mathematicos et artem defendentibus. Nec defuere qui iudicia atque prognostica derisoria et subsannatoria ederent, eaque impressa in vulgus emitterent, in astrologos ipsos atque disciplinam invecti. Sed quid vulgus sentiat minime curandum est, cum populorum voces vanae sint.

VIII

Alexandre Koyré and Lucien Lévy-Bruhl: From Collective Representations to Paradigms of Scientific Thought

The Argument

Alexandre Koyré is one of the most important historians of philosophic and scientific thought since the thirties. Research on the Scientific Revolution, on Galileo, Descartes, Newton, as well as on Paracelsus and Boehme has deeply changed under his influential method: it has been a model for Kuhn's methodology of paradigms and revolutions in the history of science. Whereas Koyré used to be considered opposed in his ideology and method to sociological approaches, he has recently been characterized by Yehuda Elkana as a sociologist of knowledge. In fact, until now one of the main sources of his method had not been identified: it is only by acknowledging the influence of Lucien Lévy-Bruhl on Koyré that it is possible to explain how the latter wrote his thesis on Boehme's mystical thought just before his *Etudes galiléennes*. Lucien Lévy-Bruhl was teaching history of philosophy at the Sorbonne, and Koyré was strongly influenced by his idea of "prelogical thinking" as a universal phenomenon and in a general way by the sociological school of Durkheim. Conceptual analysis deriving from Husserl, collective representations and *attitude mentale* (the latter invented not by Lucien Febvre but by Lévy-Bruhl), came together in Alexandre Koyré's method.

I would like to anticipate here one of the main points underlying a book I am in the midst of writing on Alexandre Koyré's development and method. In recent times two conferences have been dedicated to Koyré, one in 1986 in Paris, the other six years later at Acquasparta.[1] The coincidence must be due to the fact that we all admire Koyré's rigorous and original analyses of theoretical and scientific documents, and their contextualization in the ideologies and the religious, metaphysical, and mystical beliefs of their authors. However, universal admiration has spawned a number of widely divergent interpretations.

[1] The present paper is related to a former one on "Hermétisme, mystique, empirisme" in Koyré's studies on Boehme and other mystics (Redondi, ed., 1987). Vinti 1994, 39–64, included the Italian version of this paper of mine; a shortened version appeared in *Intersezioni* 13 (1993):395–409.

The newest thesis, advanced at the Paris conference, claimed that Koyré was a sociologist of knowledge. This definition was proposed by Yehuda Elkana, and it had two aims: first, to improve the heredity of the school of sociological historians of science (identifying itself with Robert Merton and mainly with Thomas Kuhn's methodology of paradigms and revolutions) by attributing its paternity to Koyré; second, to present his interesting review, *Science in Context*. Unlike earlier historians, Elkana wanted to create a link between Koyré and the sociology of Max Weber and Ernst Troeltsch; he even wanted to make Koyré a sociologist of knowledge of the elites. Of course Kuhn, himself had recognized his debt to Koyré;[2] but in his paper Elkana forgot to mention that Merton was using Durkheim, Lévy-Bruhl, and Mannheim already in the 1930s,[3] and therefore his methodological route could have been independent of Koyré. Here, with the help of a few documents, I would like to discuss Yehuda Elkana's intelligent and paradoxical proposal.

Koyré was not alone among his contemporaries in studying intellectual revolutions and their historical context. A parallel case — although different with respect to the experiences and influences behind Koyré — is Mannheim. His point of departure was a "phenomenological question" concerning the interpretation of the concept of *Weltanschauung*, and he proposed "the category of constellation," which

> has proved particularly fruitful for us in the one field in which we still can make use of a genuine metaphysical instinct today: in the contemplation of the history of thought. While nature has become dumb and devoid of meaning for us, we still have the feeling, in dealing with history and also with historical psychology, that we are able to grasp the essential interaction of the basic forces, and to reach the fundamental trends which mould reality, beyond the topical surface of daily events. In this respect, even the specialized scholar is a metaphysician, whether he wants to be or not — for he cannot refrain from breaking through the individual causal connections between

[2] "I continued to study the writings of Alexandre Koyré and first encountered those of Emile Meyerson, Hélène Metzger and Anneliese Maier" (Kuhn 1962, viii). "Rather than seeking the permanent contributions of an older science to our present vantage, they attempt to display the historical integrity of that science in its own time. They ask, for example, not about the relation of Galileo's views to those of modern science, but rather about the relationship between his views and those of his group, i.e., his teachers, contemporaries, and immediate successors in the sciences. Furthermore, they insist upon studying the opinions of that group and other similar ones from the viewpoint — usually very different from that of modern science — that gives those opinions the maximum internal coherence and the closest possible fit to nature. Seen through the works that result, works perhaps best exemplified in the writings of Alexandre Koyré, science does not seem altogether the same enterprise as the one discussed by writers in the older historiographic tradition. By implication, at least, these historical studies suggest the possibility of a new image of science. This essay aims to delineate that image by making explicit some of the new historiography's implications" (Kuhn 1962, 3; cf. Kuhn 1970, 67–69).

[3] Cf. Merton's articles on Durkheim (1934) and Mannheim (1941), listed in the bibliography of his works (Merton 1970a, vol. 1, xxxviii–xl). On Merton 1970a, cf. Struik 1989, Zuckermann 1989, and in fact all the articles in *Science in Context*'s speical issue, "After Merton" 1989.

> separate events and pushing all the way to the "driving forces" which make the various individual events possible.

Mannheim analyzed the contrasting development in the sociology of the two basic types of science:

> Whereas in mathematics and natural science, progress seems to be determined to a large extent by immanent factors, one question leading up to another with a purely logical necessity, with interruptions due only to difficulties not yet solved, the history of cultural sciences shows such an "immanent" progress only for limited stretches. At other times, problems not foreshadowed by anything immanent to the preceding thought processes emerge abruptly, and other problems are suddenly dropped; these latter, however, do not disappear once and for all but reappear later in modified form. We can probe the secret of this agitated wavelike rhythm of the successive intellectual currents, and discover a meaningful pattern in it, only by trying to understand the evolution of thought as a genetic life process, thus breaking up the pure intellectual immanence of the history of thought.[4]

Some factors, such as his references to Hegel (Mannheim 1964, 175) and especially to historical materialism (ibid., 183–84; see also Mannheim 1980, 221),[5] are decidedly alien to Koyré. However, we can find a few of the presuppositions inherent in Mannheim's words also in Koyré: the attention paid to Husserl (Mannheim 1964, 151, on intentional sense and on *Erlebnis*; cf. Mannheim 1922, where he also discusses Rickert and *epoché*; see also the posthumous Mannheim 1980, 149, n. 11), for example, and Scheler (Mannheim 1964, 154ff., esp. 156, where he traces many points of his analysis of "constellations" back to Scheler; Mannheim 1980, 316–17, n. 27), and to Durkheim's and Lévy-Bruhl's "bourgeois positivist" tendency in sociology (Mannheim 1964, 149; Mannheim 1980, 229, on collective representations and their cogent nature).

While Koyré was an unusually complex and methodologically important historian, he was also very sober — indeed almost silent — when it came to the point of enunciating any explicit statements about methodology. At times Koyré's reviews revealed not only his interests but also his methodological choices. However, this almost always took place in such a subtle way that is was possible for his readers to misunderstand him.

One of these misunderstandings, in my opinion, involves Koyré's position on certain aspects of the history of ideas and of ideologies. Here I will show my cards

[4] See "The Problem of a Sociology of Knowledge" (1924), in Mannheim 1964, 135, where he goes on: "Obviously this kind of metaphysics, which is the only one which suits us, differs greatly from all the other kinds of metaphysics that existed in the past — just as the category of constellation does not mean the same for us as it did, for example in astrology." My thanks to my colleague Maurizio Ghelardi for kindly pointing out this study to me, because of its relevance to problems connected with Koyré, during a seminar at the Scuola Normale Superiore, Pisa.

[5] Mannheim 1964, 150, cites not only Marx but "the leftist wing of orthodox Marxism" — i.e., Lukacs and his then unpublished "Aesthetics" (cf. Mannheim 1980, 149, n. 12).

right away. While the second aspect — if we take it in the methodologically correct sense, that is, to mean historical materialism — allows no doubt because Koyré was always foreign and even hostile to it, the first aspect allows for some ambiguity due to the polyvalence of our use of the term "history of ideas."

We know that from a very early age Koyré was aware of various formulations of those studies which are now improperly lumped together under the rubric "history of ideas." But history of ideas differs profoundly from Dilthey's historiography, from phenomenological historiography, and from Gilson's historiography. The last was one of Koyré's main points of reference in Paris. So among the various incarnations of the concept that he encountered, I would identify history of ideas only with the work of George Boas and Arthur Lovejoy. Their methodology, as is known, involves interdisciplinary complexes of ideas which are, for that precise reason, not very well defined; and both men are explicit on that point. Koyré came in direct contact with the group they founded and collaborated with them during his first years in America, but he had already reviewed their fundamental work, *Primitivism,* in 1936. It is true that Koyré's most popular book, *From the Closed World to the Infinite Universe,* was influenced by their method, but we see this above all in his use of literary documents and in a certain accessibility of style to suit the general reader (there is no sign of it in his later works). The ways in which Koyré conducts his research and proves his points in *From the Closed World* are the same as those he had already applied in his *Etudes galiléennes* (1939). Koyré's old age was extremely vital and productive, but it would have been surprising if he had waited to be over sixty before creating his own method.

It is now generally accepted that Koyré was a "phenomenological" historian of philosophical and scientific thought. But what do we mean by a phenomenological history of philosophy, and how did Koyré develop his method?[6] Actually, on the basis of recent contributions by Karl Schuhmann and Gérard Jorland, are we not likely to suspect that the twenty-year-old Koyré, having been turned down by Husserl as a doctoral candidate at Göttingen, might have been a victim of the turmoil within the phenomenological school due to the turn taken by their master in his work *Ideen*? Koyré must have realized this — but not immediately, because he stayed at Göttingen for at least another semester. Only at the eve of World War I, did he move permanently to Paris where he stopped working on mathematical theory and began on the history of "alternative" religious attitudes. There is a wide gap between the set theory or the paradoxes of "Epimenides" (or of Russell), which he had studied in Göttingen, and those themes (Paracelsus, Boehme, etc.), that most characterized his work at the Cinquième Section des Hautes Etudes.

Therefore, it is surprising that Schuhmann fails to underline the paradox with which he concludes his account of the biographical connection between Husserl

[6] Before facing this problem, I feel I must make it clear that when I say "phenomenological" I am not exclusively referring to Husserl (and even less to the type of hermeneutical historiography that has been flourishing or perhaps even going on the rampage lately in Germany and as a consequence also in Italy).

and Koyré. With no comment of any kind, he describes the enthusiasm surrounding Husserl's presentation of his *Pariser Vorträge* on Descartes in the spring of 1929 at the Sorbonne (Koyré had supervised the translation); Husserl not only mentioned Koyré together with Gilson in connection with their "belles et profondes recherches" on Descartes, but also had the opportunity to "assister à la soutenance de thèse de Koyré sur Boehme [a not very Husserlian theme] qui fut un véritable 'triomphe de son ancien élève' et le sien par conséquent" (Schuhmann 1987, 155). Would Koyré's studies on Boehme and, I might add, those soon to come on Copernicus and Galileo, have used the same method if they had simply remained phenomenological or Husserlian?

This question is only provisory, and I hope to explore it in greater detail elsewhere. For the moment I would merely like to emphasize (1) that Koyré never ceased to follow with great interest the developments in theory of the phenomenological school — and this included the anomalous case of Heidegger, whom he was the first to introduce in France, and (2) that, after a decade of interesting, pioneering, but completely amathematical research on heretics and mystics, Koyré found himself when — after his great reconciliation with Husserl — he began to study mathematics and celestial mechanics in Copernicus, Galileo and Descartes, linking these disciplines with metaphysical and mystical paradigms (the latter being a process that was unique to him).

Although he never wrote manuals or panoramic surveys, Koyré's work ranged from the pre-Socratics to Heidegger and dealt with many important themes. However, it has been noted, correctly, that he eschewed the empirical tradition — the Aristotle of the *Historia naturalis,* Bacon, Locke, and Hume — and favored the problematics of mathematics and physics from the Platonists up to Frege, Russell, and Husserl. Would it be out of place to wonder whether this preference also reveals his phenomenological origins? It has been noted that in comparison with English studies on primitive societies, the French sociological school was not very interested in empirical and technical aspects; Koyré might have adopted the same attitude as Lévy-Bruhl (but later, in his article in *Critique* [Koyré 1947], he devoted serious attention to these aspects).

One cannot help but wonder about the young Koyré's experiences in Paris, that center of culture which represented the other pole of his interests before World War I and where, having been forced to realize that he had no future in Göttingen, he had received his first *Diplôme d'Etudes* in 1913 (Redondi 1986, 3).[7] These were the years marking the appearance of Lucien Lévy-Bruhl's *Les fonctions mentales*

[7] See this book for information about Koyré's period in Paris. Here and in the contributions by Jorland and Schuhmann we get the impression that Koyré as a student commuted between Göttingen and Paris; the Koyré archives reveal, however, a continuous series of university courses notes taken at Göttingen, from the winter semester of 1909–10 to the summer semester of 1911. Koyré's attendance at Göttingen was regular for at least two years, not only at the philosophy courses but also in economics, experimental psychology, math, comparative linguistics (Sanskrit), and modern languages, which leaves no doubt as to his full-time involvement with this university, especially with the young phenomenologist Adolf Reinach (cf. Jorland 1995).

dans les sociétés inférieures (1910), Emile Durkheim's *Les formes élémentaires de la vie religieuse* (1912), and Léon Brunschvicg's *Les étapes de la philosophie mathématique* (1913). Koyré took part in the celebration for the fiftieth anniversary of Brunschvicg's book, and one might think that it would have been the only one to interest the future author of studies on Galileo and Newton. The man who, fifty years later, still was and still declared himself very much on the side of Cantor and of Pythagoras recalled that when he first read Brunschvicg's newly published book, he "felt comforted by Brunschvicg's defence of the very idea of mathematical truth against Poincaré's conventionalism and Russell's logistics" ("Commémoration..." 1963, 43–44).

But this is not all. From a formal point of view, François Picavet was Koyré's *directeur de thèse,* and Koyré was already close to finishing one of his dissertations when war broke out.[8] The first two could be said to form a diptych on proofs of the existence of God and on his attributes according to Anselm of Canterbury (Koyré 1923a) and Descartes (Koyré 1922). They also remind us of the role that Gilson, as Koyré's sponsor and "older brother," played during the philosopher's first years in Paris. The choice of Descartes' philosophy demonstrates Koyré's persistent theoretical interest in phenomenological suspension. In 1928 he wrote: "In the twentieth century we must reproduce that intellectual catharsis achieved through doubting and *epoché* in even more extreme terms than those achieved by Descartes" (Koyré 1923, ix).[9] This brings Husserl to mind.

From the early period of his doctoral dissertation on Anselm of Canterbury, Koyré's Parisian studies and teaching were already influenced to a surprising extent by Lévy-Bruhl — thought of by some today as merely an outmoded anthropologist. Actually, Lévy-Bruhl was Boutroux's successor to the chair of modern philosophy at the Sorbonne, and "his teaching has been mainly about the history of philosophy" (Schuhl 1957, 398). Lévy-Strauss criticized him for this[10] and was chiefly responsible for circulating limitative judgments on Lévy-Bruhl — opinions not shared by Jack Goody (1977, chap. 1). In point of fact, in borrowing Durkheim's notion of "collective representations" and presenting it in mature and rigorous philosophical terms, Lévy-Bruhl insisted on the themes of the "pre-logical" and the "mystical." At the end of his *Formes élémentaires de la vie religieuse,*

[8] "Les grandes lignes de notre travail étaient déjà arrêtées en 1914" (Koyré 1923, IX).

[9] "La formule qu'il [Descartes] en donne est presque mot à mot empruntée à St. Anselme. Picavet a déjà fait dans son *Esquisse* [1905] un rapprochement significatif entre Descartes et Anselme" (Koyré 1922, 6, 2). Cf. Picavet 1913, 328ff., see also chap. 17: "Descartes et les philosophies médiévales." Cf. also Koyré 1951, 24–25.

[10] "Nul ne devrait pouvoir prétendre enseigner l'anthropologie sans avoir accompli au moins une recherche importante sur le terrain" (Lévi-Strauss 1958, 407–8). Frazer himself had not realized a single research of this type. However, "Lévy-Bruhl, par exemple, n'occupa jamais de chaire d'anthropologie, ni de chaire portant un titre équivalent (il n'en existaient pas de son vivant, dans les universités françaises) main une chaire philosophique: rien n'empêchera, à l'avenir, que de purs théoriciens se voient ainsi attribuer des chaires relevant de disciplines voisines de l'anthropologie: histoire des religions, sociologie comparée, ou autres. Mais l'enseignement de l'anthropologie doit être réservé aux *témoins.*"

Durkheim had already begun to criticize the concept, but there is no doubt that it was very influential from a methodological point of view. Many scholars have emphasized the differences and various phases distinguishing the two founders of French sociology and anthropology, which culminated in Lévy-Bruhl's deeply felt and authentic self-criticism in his posthumous *Carnets* (1949). An antecedent private document revealed in a letter sent him by Durkheim in 1909 (just before Lévy-Bruhl's *Fonctions mentales* and — a fortiori — his *Formes élémentaires* were published) is worth mentioning. Durkheim discusses once more ". . . the question of your title. What I cannot tolerate is the systematic exclusion of the term "primitive." It seems to me an excessive purism which can present certain drawbacks. There is an idea there that needs to be expressed. For lack of a better term, I keep that one."

However, he does not advise Lévy-Bruhl to use it for the title of his first book on anthropology:

> In the first place, there are disadvantages in defining the type of mentality which you study in a way that is to some degree exclusively chronological. Its essential characterization is not determined by the fact that it is encountered above all in a given moment of history. A discrimination deriving from one of its internal characteristics would be preferable. In the second place, you probably do not intend to study the primitive mentality in its entirety, but merely one of its aspects. This is another reason why the term "primitive" is not very appropriate. The term "pre-logical" avoids the second objection but not completely the first because chronological order is equally prominent. But even this order is thereby imposed on a subject matter that cannot bear it. There is no mentality prior to logical mentality. Might there not be some positive term that could express your own idea concerning this mentality without having to define it in terms of a mentality called "logical"? If you cannot find a similar term, perhaps you will have to use "pre-logical mentality" insofar as it is not subject, in the same degree, to the disadvantages to which I have alluded above. (Durkheim 1970, 163–64; cf. Lévy-Bruhl 1949)

The general hypothesis of collective representations in the formulation introduced by Lévy-Bruhl and with his references to mystics were to provide Koyré with a new and fundamental line of research: one that ended in the paradigms of Kuhn and Elkana; Lévy-Bruhl's formulation was important to Koyré who — either in Göttingen or involved in the war — was unable to be in contact with Durkheim, who died in 1917.

In *Fonctions mentales,* Lévy-Bruhl expressed his work plan: "To determine the most general laws governing collective representations in inferior societies. To search with precision for the guiding principles of the primitive mentality, and how these principles are present in institutions and practices: this is the preliminary problem" (Lévy-Bruhl 1910, 2). This program has openly philosophical pretensions. As we shall see, Lévy-Bruhl defined his research on primitive peoples as

"sociological," rather than "ethnographical" or "anthropological," and kept the latter term for the Anglo-Saxon school of Tylor and Frazer, toward whom he had a polemical attitude on account of their dependence on "a psychology founded on the analysis of the individual subject." He felt closer to the French sociological school represented by Durkheim, Hubert, and Mauss. This is indisputable even though he was criticized by Mauss. It is confirmed by the fact that Lévy-Bruhl always speaks of himself not as an anthropologist but as a sociologist. One of the fundamental notions characterizing this group was collective representation. If one casually leafs through the abundance of examples in Lévy-Bruhl's pages, one could gain the impression that this definition was a diplomatically chosen synonym for "vulgarly held belief" or "superstition." However, a careful reading reveals that collective representations were not limited to inferior societies among so-called primitive peoples, although Lévy-Bruhl had decided to study only the latter. In point of fact, his choice of this terminology was more philosophically aware than that of Durkheim, who, influenced by the Kantian criticism of a long-time colleague and friend Octave Hamelin, spoke casually of space, time, genus, number, cause, substance, and personality, as though they were categories evolving from a historical process (Durkheim 1898, 293–302).[11] Lévy-Bruhl got his notion of collective representations from the group-psychology school and from the French sociological school, but he was careful to give them a more rigorous definition:

> They are shared by members of a given social group, they are transmitted from generation to generation, they impose themselves upon individuals and awaken in them sentiments of, in turn, respect, fear, adoration, etc. for their objects . . . they present themselves with characters whom one cannot understand by only considering [them] individuals as such. (Lévy-Bruhl 1910, 1)

The only example he gives, at the beginning of *Les fonctions mentales,* is that of language — "an indubitable social reality founded on a gathering-in of collective representations" (Lévy-Bruhl 1910, 1; cf. Merllié 1989, 435).[12] This is obviously as

[11] On Durkheim vs. Lévy-Bruhl, see Gurvitch 1957, 498–99, who underlines in the former "une philosophie de la connaissance mi-kantienne, mi-hegelienne qu'il empruntait à son ami, le philosophe Hamelin" (Horton 1973, 249–305). Many thanks to Steven Lukes for telling me about this interesting study, which analyzes (p. 270) progressive differences between the two professors and claims that Durkheim's vision emphasized continuity and an evolutionary process, while Lévy-Bruhl's dwelt on contrast and inversion. However, Horton's "scientific revolution" is not the historical one that took place in Renaissance science but the more metaphorical one that moved from "pre-literate, pre-industrial, pre-scientific" to modern society. Horton briefly criticizes Thomas Kuhn, but does not mention Koyré (ibid., 298–99 n.).

[12] G. Monod remembers his determination "à enseigner l'esprit de soumission aux textes, avec un immense respect de ceux-ci," in contrast with Bergson, too "Bergsonian" an interpreter of Berkeley's *Syris.* "Quelle opposition avec Lévy-Bruhl: cette dureté, cette sécheresse apparentes avec lesquelles il cherchait Descartes et Comte chez Descartes et Auguste Comte" (Monod 1957, 428). Monod was a university student from 1908 on, and he must have taken later courses on Descartes than those referred to by Gilson (1957). According to Mauss Lévy-Bruhl "enseigna" avec conscience cette discipline [la philosophie]. De cet abondant effort, aussi élégant que continu, il a très peu publié. . . . Il était devenu sociologue. Pendant près de vingt ans il se dédoubla: philosophe en chaire, philosophe à

true for primitive peoples as for civilized ones, and we will see that it obtains for any type of language. If I may anticipate my conclusions here, it is very significant that the definition is also applicable to scientific language. Is it possible to imagine anything better than this first page by the anthropologist Lévy-Bruhl to suggest to Koyré a pretext for wondering about the metascientific presuppositions conveyed by scientific language — a quest that led to the formulation of that method which, from Kuhn on, will be said to deal in "paradigms"? To give only one example: the geocentric universe can be appropriated as a case of collective representation later to be replaced not only by Copernicus' calculations and intuition concerning heliocentric theory, but by another generalized collective representation, which "imposes itself on individuals" — even those unable to go to the blackboard and explain the diagrams, calculations, and demonstrations of Copernicus, Galileo, and Newton.

Others have remembered Lévy-Bruhl as "a cool historian of philosophy, almost detached," and yet as one who sought to teach "a great respect" for and a faithful and literal reading of texts. For this reason, students noticed a great difference between his lectures and those of Bergson, his contemporary, who put a "Bergsonian" slant on the interpretation of other philosophers. It has been remarked, correctly, that Durkheim and Lévy-Bruhl represented, among the philosophical options available at that time, an alternative to Bergson (Lukes 1985, 368–72). There is no doubt, in my mind, that the young Koyré preferred Durkheim and Lévy-Bruhl to Bergson.[13] Although Lévy-Bruhl was extremely creative in those of his works that were contributing in this very period to the foundation of the discipline of anthropology, he was a professor of the history of philosophy, and in Descartes he merely wanted "to search for Descartes himself" without "giving in to narcissistic speculations"; his impact on Cartesian studies is well known (Schuhl 1957, 398). For two decades (from 1917 until his death in 1939), he was also the editor of the *Revue philosophique de la France et de l'étranger* (following Théodule Ribot) — a journal for which Koyré wrote reviews. It was Lévy-Bruhl who suggested to Gilson the topic for his two *thèses* on the influence of scholasticism on Descartes' terminology;[14] and we know from Gilson that Lévy-Bruhl gave a course on Descartes in 1905. It was probably repeated during the next decade, and Koyré may have taken it (as did Monod after 1908); in any case, he could, through Gilson, have been aware of its general lines (Gilson 1957, 433). Gilson commemorated the course and the considerable influence it exercised on the development of Cartesian studies, including his own and perhaps those of Picavet. He also insisted on the

la 'Revue philosophique,' où il succéda à Ribot comme directeur, philosophe à l'Académie des Sciences morales, mais chez lui et pour tout le monde, un des plus féconds, un des plus populaires des auteurs français de livres de sociologie" (Mauss 1939, 409).

[13] Gérard Jorland would not agree. In his monograph (1981, 61–62) he affirms that Bergson was responsible for attracting Koyré from Göttingen to Paris.

[14] To sit for his *diplôme d'études supérieures de philosophie* under the direction of Lévy-Bruhl in 1906, Gilson was already studying *Descartes et la Scolastique*. Gilson 1912–13 — a "petite thèse pour le doctorat" — is famous; cf. Edie 1959, 9:16; Miller 1967, 332–34.

new image of the scientist (a "Descartes savant"), which came to replace the metaphysical one so dear to the nineteenth century.[15] Lévy-Bruhl cultivated these interests long after the 1905 course: in some lectures given in Geneva in 1935, for example, where, among new problematics he saw emerging in his new methodology; he recommended "history of sciences (the age of their beginning). . . . history of religion and of philosophies" (Schuhl 1957, 401).

However if, following Lévy-Bruhl's reading, Descartes is shown as only succeeding in being entirely free from scholasticism in his physics (Davy 1989, 468),[16] while he was considerably conditioned by it vis-à-vis many other problems and, more to the point, as regards God's attributes and proofs of his existence,[17] might it not be said that Alexandre Koyré's interpretation of Descartes follows that of Lévy-Bruhl from beginning to end? Koyré started by dealing with the most traditional aspects of Descartes — those that had been discovered by their professor and that both he and Gilson had continued to study in their *thèses* — and ended, thanks to Husserl, with a conceptual analysis of such Cartesian ideas as inertia, which was a necessary premise of the scientific revolution.

[15] "Aussi les cours . . . de Lévy-Bruhl sur Descartes sont-ils restés célèbres et ont inspiré bien de travaux" (Koyré 1945, 313). Cf. Gilson 1957, 437: "Influence considérable . . . exercée sur le dévelopment des études cartésiennes"; "à son tour [après L. Liard] un historien aussi épris d'esprit positif qu'était L. Lévy-Bruhl, en est arrivé, en usant d'une méthode purement historique, à situer dans la pensée scientifique de Descartes le coeur même de sa doctrine. . . . Ce 'Descartes savant' ne viendrait-il s'ajouter ici, au titre du Descartes de la première moitié du XX siècle, à la liste déjà longue de ses prédécesseurs?" Cavaillé published the preparatory notes made by Lévy-Bruhl for lectures given in 1922 in Brussels and insisted on the elements of continuity in his interest in Descartes after the famous course taken by Gilson (Cavaillé 1989, 443–69). See ibid., 466–67, for points that are interesting in view of Koyré's studies on Galileo and Newton: "Distinguer le système que Descartes a construit, les hypothèses sur lesquelles il s'est fondé et sa conception philosophique de la physique. Erreurs sur les lois du choc, etc. Conception générale profonde et durable. Aveu de Leibniz. Exemples: la pesanteur (*Sixièmes Objections*). Philosophie et Mathématiques (*Réponses aux Instances*). Conception de la mécanique physique (double caractère de l'étendue). Action durable de cette philosophie même [dans] notre science." Cf. Lévy-Bruhl 1936, 191–96. The attention and importance given to "Descartes savant" produced its fruits in Koyré 1939 and in Koyré's later papers and books on Newton, which, without this experience, would not have availed themselves of this essential point of reference.

[16] Davy also notes how, in these "famous" courses Lévy-Bruhl emphasized in the "système de Descartes la façon dont la métaphysique se trouvait conditionnée par la physique." Lévy-Bruhl began, as was customary, with Descartes (Lévy-Bruhl 1899, 1) and said that he was "acquainted with the contemporary men of science" and that "philosophy and science were not separated in Descartes' view. . . . Therefore Descartes proposes to be a metaphysician: but this will be for the sake of the science itself" (ibid., 7). Since Descartes concerned himself with such sciences as physics and chemistry, which then "hardly existed," and with biology, which did not exist at all (ibid., 27), Lévy-Bruhl makes a statement on method that reminds us of Koyré half a century later: "To expound a developed science the suitable method is deduction — descent from causes to effects. But science that is developing cannot yet develop this method; and to discover unknown laws, it must employ the experimental method, must anticipate causes with effects" (ibid., 31). It should be noted that Lévy-Bruhl in this summing up for the general reader still seems at quite a distance from the "scolastico-cartesien" problematics.

[17] Gilson noted that "chez Descartes la physique seule est exempte de scolastique. On en retrouverait, en effet, des traces dans la notion cartésienne de Dieu et de ses attributs, dans la preuve de l'existence de Dieu, dans la notion de création, dans les notions de substance et d'accident, dans la théorie des esprit animaux, dans la distinction des états actifs et passifs de l'âme" (Gilson 1957, 438). Cf. ibid., 435, where Gilson quoted considerations comparing Descartes' physics of vortices with Newtonian theories on gravitation taken from Lévy-Bruhl's early lectures.

There are other themes that link Koyré with Lévy-Bruhl as a historian of science. Apart from Spinoza and his presence in German Romantic philosophy, I must at least mention the very original attention that Lévy-Bruhl dedicated to the anti-Spinozan Jacobi (Lévy-Bruhl 1894, XIX),[18] defining this chairless thinker as "a mystic, who is so and does not hide it. The natural tendency of his spirit impelled him in this direction. Furthermore, mysticism is an almost uninterrupted tradition in German philosophy. It appears early, persists, and remains" (Lévy-Bruhl 1894, 22-24). In the eighteenth century this attitude "took refuge with the *piétistes*, sworn enemies of the Lumières. Jacobi was formed in that school. Hence, it is not very important whether he came directly from the medieval German mystics or from seventeenth-century ones, from Tauler or from Jakob Boehme" (Lévy-Bruhl 1894, 240–41).[19] Also, Koyré read and worked on Boehme and other mystics during his early courses in Paris, and at first he placed them in the tradition leading to Schelling, Baader, and Jacobi.[20]

Koyré had followed Lévy-Bruhl's leanings toward anthropology with great attention from the very beginning, and he must have read the latter's first two anthropological writings — 1910 and 1922 — shortly after their publication; but it is still surprising to find traces of these writings in a respectable dissertation on Anselm. Nevertheless, they existed: "St. Anselm's unbeliever is not like a modern man. He is merely the infidel. He has the same mental attitude as the believer; he sees the world in approximately the same way. His thinking habits are pre-logical thinking habits, as Lévy-Bruhl calls them. . . . In any case, they are different from ours" (Koyré 1923a, 8).

It is conceivable that Anselm was not the most suitable target for Lévy-Bruhl's methodology of the "primitivistic," "mystical," and "pre-logical." Koyré soon applied it to more appropriate subjects who were mystics and alchemists, and meanwhile he proposed a correction — "hyper-logical," rather than "pre-logical,"

[18] Horton suggested a useful perspective on the link between the first phases of Koyré's research — when he studied Boehme and other mystics as precursors of Schelling, Hegel, and Jacobi — and Lévy-Bruhl as the author of *Philosophie de Jacobi* (1894): "Lévy-Bruhl started with a deep interest in Germanic *philosophies du sentiment*, and turned to his later rather ascetic positivism by way of reaction. This view of his personal intellectual development receives some corroboration from his general attitude to the supposed emotional 'mystical' orientation of the traditional cultures with which he deals — an attitude in which fascination vies with impatience. It receives further corroboration from an apparently little-read passage at the end of Lévy-Bruhl 1912, 451–55, in which he speaks of the continuing survival of 'pre-logical thought' in the anti-intellectual doctrines that still was strong in the modern West, and in which he gets somewhat carried away whilst describing the delight of the 'participation' between subject and object that is so often the central ideal of such doctrines. All this suggests a love-hate relationship with anti-intellectualist creeds. . . . Further, the corollary of Lévy-Bruhl's treatment of modern anti-intellectualist doctrines as survival of a full-blown 'primitive mentality' is the assumption that the categories and concepts of such doctrines can be used as instruments for translating the thought of contemporary 'primitives.' . . . Lévy-Bruhl projected a body of essentially Western ideas and values (with which he still had a lingering identification) on the traditional cultures" (Horton 1973, 296 n.).

[19] He defines Boehme as "un enthousiaste et un mystique" (ibid., 2); shows that Jacobi read Hugh of St. Victor and Bruno (ibid., 242); and points out that Jacobi and Saint-Martin both read Boehme (ibid., 242).

[20] I have written briefly about this; see Zambelli 1987, 465–66, 475–76, n. 3.

which could perhaps have obtained for the great eleventh-century dialectician, but hardly for primitive peoples; Koyré obviously felt the need to deal with an unfamiliar methodology. This line of research was new also for his professor, because until 1910 Lévy-Bruhl had been identified with his studies on Comte and on the nationalist ideal in Germany in the eighteenth and nineteenth centuries. It made such a strong impression on Koyré that he found it impossible not to apply it to his own work. At the beginning of 1923 he had discussed the "emotive" categories he was proposing in order to begin to interpret the workings of the primitive mind with, among others, Marcel Mauss and Gilson.[21] In the presence of the Société française de philosophie, he justified his use of the term "pre-logical," chosen because it had fewer drawbacks than "antilogical" or "alogical" ("La mentalité primitive" 1923, 18, 22).[22] Echoes of this debate appear in Koyré's preface.

The political positions of Koyré and Lévy-Bruhl would seem quite divergent: Lévy-Bruhl was extremely close to Jaurès (Lévy-Bruhl 1916),[23] whereas Koyré was opposed to all Marxist theory or practice. However, the two had in common the fact of belonging to the assimilated and international Jewish middle class, and both collaborated on a pamphlet that evoked again l'*Affaire Dreyfus;* Lévy-Bruhl, related to Dreyfus, had also defended him (Lévy-Bruhl 1930). During his long stay in Paris between the world wars, Koyré, thanks to weekly meetings at the home of Emile Meyerson, was constantly in touch with Lévy-Bruhl; and in 1929 he took part in the second meeting of the Société française de philosophie dedicated to the philosopher, this time to his *Âme primitive.* Present were many field workers, both anthropologists like Frank Boas and missionaries. From the point of view of Alexandre Koyré the most interesting observation made there came from Léon Brunschvicg, who praised Lévy-Bruhl for clarifying the distinction between "classical analysis and romantic synthesis, so clearly connected — in the cases of Boehme and Schwedenborg — with the confusion of the primitive mind" (*L'âme primitive* 1929).[24] I know of nothing published by Lévy-Bruhl on these two

[21] "Or il me semble résulter avec évidence du livre de M. Lévy-Bruhl qu'il existe un mode de pensée mystique, dont l'idée de participation est caractéristique, et qui nous apparaît comme spécifiquement irréductible à la pensée logique fondée sur le principe de participation. . . . Ce que cette épithète [prélogique] désigne . . . est un simple aspect du mystique. Encore faut-il pouvoir le définir; or le prélogique ne nous est défini que négativement, comme une certaine indifférence à la contradiction. Autant l'analyse du contenu positif du mystique (participation) est instructive, autant cette pure négation l'est peu, et si M. Lévy-Bruhl tient si fort à la marquer, même par un terme que lui même critique, c'est peut-être que 'prélogique' marque la place d'un jugement de valeur qui ne se développe pas; le mystique est jugé par son extraneité à la logique dont se nourrit actuellement la pensée humaine" (Gilson 1923, 46–48).

[22] Lévy-Bruhl admitted that he had used *prélogique* "faute de meilleur" [terme] and certainly not in order to downgrade the primitive mentality "to a stage in time prior to the appearance of logical thought or, still worse," to call it "anti-logical" or "a-logical."

[23] Before being published in this small volume, these reflections had appeared, immediately after the assassination of the socialist and pacifist leader, in both the *Annuaire de l'Ecole Normale Supérieure,* and *Humanité,* to the foundation of which Lévy-Bruhl had contributed financially.

[24] Brunschvicg had, from the very beginning, been one of the first examples of the influence of Lévy-Bruhl's *Fonctions mentales;* he was indebted to him both for materials and for the basic thesis in

authors, and one is led to think of information from his lectures or of the at-that-point imminent contribution to be made by Koyré in his *thèse d'état.* Brunschvicg's mysterious allusion leaves room for hypotheses concerning private discussions they might all have participated in during their informal weekly meetings.

For the purposes of this paper, it is useful to recall several people who were friends and mediators between the two. Apart from Meyerson and Brunschvicg, there was Hélène Metzger-Bruhl, Lévy-Bruhl's niece and assistant.[25] She attended Koyré's courses and prepared for a *diplôme* at the Ecole des Hautes Etudes under his supervision. Since she was already an established scientist, epistemologist, and historian, she acted as *trait d'union* between him and the positivist historians of science of the Archeion group and the Centre de Synthèse, which she had helped to found. Metzger was very up to date on the proposals regarding method being made by the most interesting historians of science (Duhem, Sarton, Brunschvicg) and by the Vienna circle, with whom she disagreed no less than Koyré (Metzger 1935, 421–23; see this and other writings by Metzger now reprinted in Metzger 1987; cf. too *Etudes sur H. Metzger* 1988. She formulated a methodology for the study of Paracelsus and other scientist-mystics in terms that were more explicit than Koyré was to be. Metzger is worth quoting because she seems in tune with Koyré's teaching in the 1920s and 1930s and with his great *thèse* on Boehme, but also because she explicitly mentions Lévy-Bruhl:

> Following a long and unexpected detour, [the author] in studying primitive peoples has shed light on a constant effect in our thought processes that had previously eluded the most perspicacious of psychologists. According to the presentiment of scientists and mystical philosophers, who actually — it must be admitted — have never succeeded in expressing themselves clearly, logic would be an instrument not of thought but of verification. And it is precisely because the need for verification is very weak in primitive man and he does not mask the spontaneous movement of his spirit that Lévy-Bruhl was able to observe in its full force the "law of participation," which logical reflection can barely tolerate (Metzger 1930, 20; see also Metzger 1938; this terminology seems to be an innovation that she introduced).

Wondering how, when faced with a new phenomenon "spontaneous thought

the first part of *Les étapes:* "M. Lévy-Bruhl a fortement insisté sur la signification du prélogique, qui n'est nullement l'antilogique ou l'alogique" (Brunschvicg 1912, 22); "Des représentations qui ont pour théâtre des consciences individuelles, le sociologue extrait celles qu'il retrouve les mêmes dans toutes les consciences, et qui, par suite, dépassent chacune d'elles en particulier. Ces représentations collectives constituent des systèmes qui pour un état donné de la civilisation définissent une part de la matière sociale. Par example, à l'intérieur d'une même société, une unité spontanée s'établit entre les opérations arithmétiques et les vertus mystiques des nombres, entre les répartitions de l'espace et la division des groupes sociaux" (ibid., 574–75). See also ibid., 464 and passim.

[25] Thanks to Hélène Metzger, for having prepared analytical indexes of his books, are printed in Lévy-Bruhl 1927, 1931 and 1938.

finds its bearings,"[26] Metzger goes on to say:

> The reading of innumerable ancient, modern or contemporary scientific works seems to confirm the fact that when our mind is at work, it cares much more to go ahead and continually discover new points of view about reality rather than putting some order into our vision of the world. Some scientific writings, from the Renaissance period for example, whether from the pen of Paracelsus or from those of physicians and alchemists, may amaze or stun by their rich development of superstitions, affirmations, ideas, which, taken one by one, are plausible, but taken as a whole collapse even before they are set up. How could the authors of these works [which were] "agreeable to the imagination, unbearable to reason," as elegantly expressed by Fontanelle, have enunciated doctrines which they certainly found bewitching but which we today find disconcerting in their logical inconsistency? Surely it is because their thought felt no obligation to abstain from contradiction. It grew vigorously, and simultaneously it committed itself to different paths, without turning back to look at its own results. Thus it went on in its triumphal march with no care for unity and no self-analysis, so self-satisfied was it. Might one not say . . . that their mentality was pre-logical and mystical? (Metzger 1930, 21).

I believe one might say also that the ambitious methodology of Lévy-Bruhl's niece offers a key (though perhaps not the only possible one) to a better understanding of Koyré's *Boehme* and its conclusion:

> Boehme was unable to create a "system": he was lacking in both the necessary dialectical equipment and in the ability to think abstractly. He neither put order in his thoughts nor was he able to extract the ultimate consequences. . . . Certainly his philosophical romance is very obscure, confused, and coming apart at the seams. . . . Furthermore, we don't know whether, in the final analysis, the obscurity of his thought, the lack of cohesion in his works have not worked in his favor rather than against him. Because it is by no means the clear teachings that have achieved most in the history of human thought;

[26] "Si la pensée spontanée est bien telle que nous venons de la décrire, pourquoi son image fidèle nous-a-t-elle semblé si étrange? . . . Pourquoi M. Lévy-Bruhl en peignant la pensée des sauvages a-t-il pu croire qu'elle ne rassemblait que très peu à celle des civilisés? A ces questions nous répondons d'abord que la pensée spontanée n'est pas le seul élément de notre mentalité. Cette pensée est bien souvent étouffée ou refoulée (si l'on ose emprunter à Freud des termes étonnament justes) par la critique logique qui a normalement pour tâche de la discipliner et de la guider. Cette critique logique . . . rend à la science des grands, d'inestimables services. . . . Nous croyons pourtant qu'elle serait à elle seule insuffisante pour créer la philosophie et la science; que l'intelligence humaine a toujours trouvé dans l'impulsion fournie par la pensée spontanée, que M. Lévy-Bruhl appelle à tort mentalité primitive, l'inspiration première de ses plus belles découvertes, de ses plus admirables inventions" (Metzger 1930, 21). In the course of her studies on the "évolution de la doctrine chimique" in Newtonian Age, Metzger had observed that, in contrast with logical thought, which can "souvent être étudié formellement et indépendamment de son contenu . . . la pensée spontanée qui ne craint pas les participations telles que M. Lévy-Bruhl les a décrites, ne peut être scindée en deux; du moins la forme parait absurde, si on la sépare du fond."

> and the influence of a metaphysical thought is often explained and measured according to the number of "interpretations" it elicits. (Koyré 1929, 504; cf. the same thesis in Koyré 1947, 419)

Although Lévy-Bruhl's ideas were at variance with those of Durkheim or Mauss,[27] Durkheim alluded to Lévy-Bruhl's writings on ethnology as products of his group as soon as they appeared, and as a matter of fact they were published in *L'Année sociologique*. It has been said that the slant of Koyré's *Recherches philosophiques* derived from this periodical's mémoires and especially its reviews (Redondi 1986, 33).[28] Taking a panoramic view of the whole French school of sociology, Koyré considered Lévy-Bruhl to be a heretic on the board of *L'Année sociologique* — in other words, vis-à-vis Mauss and Durkheim (Koyré 1935, 260; Koyré 1932, 173–74).[29] Koyré never lost an opportunity to give great credit to Durkheim, at times perhaps in a misleading way, as when he compared him to Hegel or even to Averroes:

> What Durkheim calls "collective representations" are a reality, a reality as hard, as resistant, and as "real" — if not more so — as that of matter and bodies. It is, in the discovery — or rediscovery, since what Durkheim calls "collective representations" is none other than what Hegel calls "objective spirit" — of that *sui generis* level of reality — social reality — a reality both "interior" and "exterior" to us — it is in this discovery that Durkheim's sociology reveals its greatest philosophical merit. (Koyré 1935, 264).[30]

[27] "Ce que je prefère dans tous ces livres — auxquels j'ai souvent et franchement résisté — c'est de la belle et claire érudition; les faits choisis, toujours instructifs, même quand ils sont plutôt des exemples amusants, curieux; ce sont les traductions excellentes" (Mauss 1939, 410). When writing in *L'Année sociologique*, Mauss had seemed to have a higher regard for Lévy-Bruhl.

[28] Of course Koyré had no platform similar to the *Annales*. However, his *Recherches philosophiques*, in its six years of life, had a resonance among philosophers and sociologists that was not greatly inferior to the one achieved by that famous journal, whose orbit was then supposed to be limited to the corporation of historians, as opposed to the state of affairs now obtaining in the (*nouvelles*) *Annales* (its present contributors partake so much more of the mass media than did not only Marc Bloch but even Lucien Febvre).

[29] Koyré 1935, 260; Koyré 1932, 173–74; Koyré 1945, 292–93: "Tout dogme produit des hérésies; toute école des penseurs, qui en sortent. L'école de Durkheim n'en a produit à vrai dire qu'un seul, mais de taille! Lucien Lévy-Bruhl. Dans *La Morale théorique et la science des moeurs* Lévy-Bruhl se montre disciple fidèle de Durkheim et pousse les conséquences du sociologisme durkheimien jusqu'au bout. En revanche, dans une série de travaux consacrés à l'étude de la mentalité primitive — 'prélogique,' pour employer le terme qu'il a créé — il s'éloigne de plus en plus de la méthode de la description intérieure. Aussi ses livres constituent-ils une merveilleuse analyse de cette mentalité 'prélogique' (malgré les critiques qu'on a adressées à Lévy-Bruhl à ce sujet, je crois, pour ma part, que ce terme est admirablement approprié à son usage), et de l'ontologie magique dans laquelle baigne et dont, très péniblement, parvient — parfois — à se dégager la pensée 'logique' et l'ontologie rationnelle. L'importance de ces études sera claire si l'on songe que (à l'encontre de ce que, trop optimiste, pensait Lévy-Bruhl lui-même) la pensée logique est chose rare — et difficile — est qu'à beaucoup d'égards, nous sommes tous, tels que nous sommes, des primitifs prélogiques."

[30] See also Koyré 1944 (now in Koyré 1966), where Koyré wonders why we are averse to discussing seriously the theses of Avicenna and Averroes on the unity of human intellect: "si nous acceptons, ou du moins discutons, les thèses durkheimiennes sur la conscience collective, à la fois immanente et transcendante à l'individu" (Koyré 1966, 14).

Within this context, Lévy-Bruhl, who had supported "an almost absolute moral relativism" (Koyré 1935, 263), in his *La morale et la science des moeurs* drew on another of Durkheim's main discoveries, the "sacred" nature of the collective life. However, "the study of the 'primitive mentality' allowed Lévy-Bruhl to isolate and describe an essential mental structure, which is qualitatively different from that existing in a 'civilized' person, a structure which, although not completely extraneous to our societies, does not exist there in that pure state which alone permits an exhaustive analysis" (ibid., 261).[31]

When Koyré reviewed the German translation of *La mentalité primitive* in 1930, he considered that "one of the most important results of pioneering researches by Lévy-Bruhl [*einer der bedeutendsten Ergebnisse der bahnbrechenden Forschungen*]" consisted in having made it clear, almost as though he had been a phenomenologist, that "the world [*die "Welt"*] in which primitives live is, in respect to the environment of civilized people, a different world. It has a completely different structure, is submitted to laws — both material and categorial — other than those from the mechanical, materialistic world of Europe" (Koyré 1930, 2295).

In the same review, so resonant with echoes of phenomenological language — perhaps because it was in German — Koyré reexamined some of the fundamental questions that had been elicited by Lévy-Bruhl's theses:

> It may seem contradictory that a human being is at the same time a bird (or a leopard); and yet this is a factual, not a logical contradiction. Lévy-Bruhl's analyses show in the most convincing way that this is not the sense in which primitive peoples are contradictory. However, it does not seem that Lévy-Bruhl conceives of laws of logic in this absolutely empty type of formal generalization, for example, when he ascribes approximately the same meaning to them as to the rational-ontological laws of Aristotelian logic; for example, the principle of contradiction as the impossibility that something is itself and something else at the same time. In this case, his thesis is true in another sense; in this it is not only a factual contradiction but a logical one as well, that something is at the same time here and there, that a man is identical to a bird. Thus we would make a logical-formal law out of a *principium individuationis rei hic et nunc,* which, in my opinion, would give us the disadvantage of hiding the layers of the formal edifice of human thought — which is still identical in civilized and primitive societies. This could result in losing sight of this unity. I believe that the latter is not a real objection and that Lévy-Bruhl would be fully willing to recognize this purely formal unity, since such a unity would in no way detract from the fundamental diversity of the thought structures and the correlative worlds and reality categories —

[31] Cf. Koyré 1923, 450, where he berates the author for not quoting or knowing "les travaux de Durkheim, ni en général ceux de l'école sociologique française," when the very element of the *numinous* as defined by Otto "correspond assez exactement à celui de 'sacré,' tel qu'il a été defini par E. Durkheim."

> the highlighting of which is the greatest merit of Lévy-Bruhl's pioneering researches. But it therefore becomes more understandable, since it is a question of concrete-material and not purely formal differences — that, especially where we are talking about thought on technical matters, primitive thought has broadly the same bases as ours. [It becomes comprehensible] also that both types of thought can coexist in the same human being. When one reads Lévy-Bruhl's exposition, one cannot help but think that he does not need to create such distances, that we could have come upon primitive thought much closer at hand, in our direct vicinity, that, more or less, we all reason in this way. To which Lévy-Bruhl could answer that he too knows this perfectly well, and this is why he has studied the wild tribes of Australia and Africa, where the structure of the "primitive" spirit is in such a pure state that methodical research is facilitated. And to the objection that we all think in this way, he, for whom such a statement is a criticism of the human spirit, could perhaps reply: "Certainly, we all think this way, when we do not think."[32] Since from Descartes on it is clear in France what thought really is and what is a mere surrogate; [in cases] where "rationality" has become an insult, the primitive form of thought could, on the other hand, be considered the most "profound." (Ibid., 2299–300)

Koyré praised Lévy-Bruhl for having "decided not to explain, either psychologically or 'sociologically,' limiting himself to a purely descriptive phenomenological analysis" (ibid., 2295). However, because of his terminology, he is susceptible to misunderstanding. As early as *Fonctions mentales,*

> he spoke of the "pre-logical" thought of populations living in a state of nature, as he now speaks of "pre-conceptions" [*Vor-begriffen*]. However, the meaning here is not a difference in time but one of essence [*essentialer*]. And a value judgment is expressed; since, for Lévy-Bruhl, it is obviously not mythical (or "mystical") thought which is real thought but that which is logical, conceptual; just as it is not magical reality but scientific-rational reality that for him is "reality." (Ibid.)

This analysis is particularly interesting if we keep in mind that Koyré based his thesis and his other studies on Boehme on the analysis and the phenomenological

[32] Aussi les cours . . . de Lévy-Bruhl sur Descartes sont-ils restés célèbres et ont inspiré bien de travaux (Koyré 1945, 313). This objection was addressed to Lévy-Bruhl by G. Belot during the first debate at the Société française de philosophie ("La mentalité primitive" 1923, 31). I am very grateful to Mrs. Françoise Belaval to have allowed me to read a few letters sent by Lévy-Bruhl to Koyré when he was absent from Paris: a letter dated 15 December 1930 and sent to Montpellier, where with Lévy-Bruhl's help Koyré had just got his first chair, is meant to thank him for this review-article, which the reviewer has already submitted to the author before publication. "Mon cher ami, merci pour votre article, que j'ai relu avec un très grand plaisir, Je ne crois pas en avoir eu de meilleur, et si le public allemand, après cela, ne s'intéresse pas à ces travaux sur la mentalité primitive, c'est à désespérer de lui. Vos reflexions sur l'usage un peu lâche que j'ai fait du mot de contradiction me semblent justes et j'en tiendrai compte à l'occasion."

description of the semiconceptual language that, according to him, characterized this great and influential mystic.[33]

At this point the contaminatio between the phenomenological method, which Koyré drew upon while he was at Göttingen, and a sociological-anthropological point of view, which was being formulated in the midst of lively debates in Paris, had already taken place. It was to prove quite fruitful. Lévy-Bruhl's method and his definitions of "primitive" and of the mystical mentality,[34] were probably instrumental in determining Koyré's very original and unexpected choice to write a *thèse d'état* on Jakob Boehme (unexpected, that is, if one recalls his interest in logic and mathematics while at Göttingen) and to give courses on Schwenckfeld, Sebastian Frank, Weigel, Paracelsus, and Comenius. "These men, [going] beyond the broken rhythm of medieval thought, rediscover and nurture the eternal treasure-hoard of primitive superstitions, as was transmitted to them in their times." My hypothesis is that Koyré's choosing to study them is due to Lévy-Bruhl. This fact is recognized by Lucien Febvre in the preface he wrote to the reprint of the first of these studies. Febvre was Koyré's contemporary and can be considered both a good practitioner and a brilliant follower in his use of the revolution in methodology that — despite and perhaps even because of many objections — Lévy-Bruhl's thoughts about the primitive had represented (Febvre 1955, VI; see also the entire context on Lévy-Bruhl). It is certain that he inspired the method enunciated by Koyré in one of the most brilliant of these studies — the one on Paracelsus in 1933. In order to understand Paracelsus,

> we must adopt certain methods, certain categories of reasoning or at least certain metaphysical principles that, for people of a prior epoch, were as valid and sure bases of reasoning and research as the principles of mathematical physics and the data of astronomy are today. We should therefore admit the principle of the equivalence of the part to the whole, a principle whose

[33] "La grande difficulté de la doctrine de Boehme consiste en fait dans son caractère non conceptuel ou plus exactement semi-conceptuel. A dire vrai, ce n'est pas une 'doctrine,' c'est une vision du monde, que Boehme expose à l'aide de symboles-idéogrammes, symboles qui ont toute l'évidence de la réalité sensible, mais, en même temps, toute son obscurité" (Koyré 1947, 418).

[34] During the discussions following the publication of *Fonctions mentales* and *La mentalité primitive,* Lévy-Bruhl declared that this "category" or dimension is always present at every intermediate level, along with a rational mentality. It is well known that his posthumous *Carnets* (Lévy-Bruhl 1949) contains a number of profound reconsiderations concerning his own fundamental categories (primitive, prelogical, law of participation, etc.), which he could have discussed with the people whom he saw regularly, like Koyré. There are useful summaries of the objections made not only by sociologists and anthropologists (in addition to Durkheim, Mauss, Malinowski, Evans-Pritchard, and Franz Boas, also present at the Paris debate of 1929) but also by philosophers (such as Bergson, Gilson, and Meyerson), and of Lévy-Bruhl's replies, in Magnin 1937, coll. 2196–206. See also Cazeneuve 1963, 35ff; Cazaneuve 1972, 264.

[35] Such a method may be seen also on the page (cf. Koyré 1955b, 272), where he pinpoints in Kepler's animism a recurrence of magical conceptions and the idea of attraction and action-at-a-distance (not accepted by Galileo and Borelli) — "une notion très difficilement acceptable pour la raison." Unless it is used in a purely metaphorical sense, it "recouvre toujours une conception magique de la réalité" (Koyré 1950, 197).

> importance for primitive thought was established by Lévy-Bruhl, and for metaphysical thought by Hegel. (Koyré 1955a, 46 and note)[36]

Second, it is also to this context that we owe the appearance, as early as 1923, of the methodological category of *attitude mentale* (Koyré 1923, 8).[35] The invention of this category has been attributed (wrongly in my opinion) to Lucien Febvre (Redondi 1983, 309–32; R. Romano; Pomian; see contra, Burke 1978, 147–64; Burke 1992, 86; Raulff 1987, 50–68; Gismondi 1985);[37] other scholars refer to Durkheim and Lévy-Bruhl. It was suggested to Koyré by a Lévy-Bruhl reread in the light of Husserl.

Another case could be cited here, parallel to Koyré's and yet distinct from it: Heidegger reviewing Cassirer. One of the points discussed by Heidegger and Cassirer was myth. When Heidegger reviewed Cassirer's *Mythisches Denken* — the second volume of *The Philosophy of Symbolic Forms* — in 1928, he connected it with the categories of his own philosophy that had been set forth in *Sein und Zeit* (existence, ontic/ontological, being-thrown, *Mitsichbringen,* etc.) and criticized Cassirer's neo-Kantian conception, which forbade attaining the center of the problem:[38] "Sofern nun aber das mythische Dasein sich selbst überhaupt bekannt ist, wird es dabei wiederum auch nicht aus einer rein dinglich aufgefassten Welt her gedeutet" (Heidegger 1928, 1004). The review followed in minute detail the second section of *Mythisches Denken,* where Cassirer shows the influence of mythical thinking on conceptions of space, time, and number: "Die Zahlen und Zahlverhältnisse sind im mythischen Dasein aus dem Grundcharakter alles dessen, was irgendwie ist, aus der Mächtigkeit her verstanden" (ibid., 1003). "That is, from the *mana,* the only ethnological category admitted here — as opposed to those from animism and totemism" (ibid., 1005ff.).[39] It is made to correspond to "being

[36] Cf. Koyré 1929, XVI: Boehme "ne veut pas enseigner," mais seulement provoquer et suggérer des actes et des attitudes mentales nécessaires à l'éclosion dans l'âme de la lumière de la vérité." See also Koyré 1932, 490: "Possibilités, attitudes et structure de l'âme plutôt que de l'esprit"; "structure mentale de l'époque." For *attitude mentale* and Lévy-Bruhl, see remarks and passages quoted in my introduction to Koyré 1967, 22. I do not agree with the periodization proposed by Jorland 1981, 23, according to whom Koyré's structuralist experience in the United States is essential. According to Redondi, he used *attitude mentale* in a generic way until the 1940s, and then *structure mentale* after coming into contact with Jakobson and Lévi-Strauss.

[37] It is strange that Koyré is not even mentioned in the interesting history of the idea of mentalities traced by Lloyd 1991, 6, where he also treats "in philosophy of science the Frenchmen Brunschvicg, Reymond and Rey." My thanks to Alessandro Pagnini for telling me about this recent book.

[38] "Die Orientierung an der neukantischen Bewusstseinsproblematik ist so wenig förderlich dass sie gerade das Fussfassen im Problemzentrum verhindert. Das zeigt schon die Anlage des Werkes" (Heidegger 1928, 1008).

[39] "In der ursprünglichen Benommenheit durch das manahaft Wirkliche vollzieht das mythische Dasein die Artikulation der Dimensionen, in denen sich Dasein als solches immer schon bewegt: die Auslegung und 'Bestimmung' von Raum, Zeit und Zahl. Die spezifisch mythische Modalisierung auch dieser 'Vorstellungen' charakterisiert der Verfasser in ständiger Abhebung gegen die begriffliche auslegung, die diese Phänomene in der neuzeitlichen mathematisch-physikalischen Erkenntnis erfahren haben. . . . Noch ursprünglicher als der Raum ist die Zeit für das mythische Dasein konstitutiv. Bei der Kennzeichnung dieser Zusammenhänge legt Cassirer den vulgären Zeitbegriff zugrunde und versteht unter dem 'zeitlichen' Charakter des Mythos das 'in-der-Zeit-sein' z. B. der Götter. Die 'Heiligkeit' des mythisch Wirklichen ist durch seine Herkunft bestimmt. Die Vergangenheit als solche

surprised by Being's sudden assaults."[40]

Prior to the 1986 Paris conference it was always taken for granted that one of Koyré's fundamental theses was the rejection of a sociology of the sciences (Redondi 1987, 3). No one denied that his method was contextual; but as his own student John Murdoch made quite clear, Koyré had himself proclaimed (1966, 12) that the history of science was closely linked to the history of "idées *transcientifiques*, philosophiques, métaphysiques, religieuses". Murdoch puts it in a different way in his conclusion: "Context was immeasurably important for Koyré, but it was always fundamentally intellectual context." In fact,

> he was basically opposed to interpreting early modern science as a kind of *ancilla praxis* and he was inclined to downplay the significance of social contexts. Though he did not so gloss these remarks, one might claim that social factors might be of use in explaining why the rise of science was then possible; they would not be helpful in explaining why it did arise in fact; indeed, no factor would be helpful in that guise. Not even his prized conceptual analysis, for that uncovers, as he put it, an *itinerarium mentis in veritatem*. Yet to describe this . . . is not to raise questions as to the social factors that may have made the following of that *itinerarium* come about. Yes, one might ask why it was followed or why it could be followed, but only after its description had been adequately grasped, which is to say only after Koyré's conceptual analysis was over and done with. Such analysis was prior and primary in Koyré's eyes. (Murdoch 1987, 77)

And Murdoch agrees with this priority (cf. Koyré 1965, 12).[41] This is the refined formulation given by the Harvard historian of science at the 1986 conference. On the same occasion, a strong challenge was also launched by another historian of science, Yehuda Elkana, who is less close to Koyré personally and more interested in having his own contextualism propped up by an authoritative methodology. To the best of my knowledge, neither in Paris, nor afterward (with the exception of

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erweist sich als das echte und letzte Warum alle Seienden. In der Periodik der Jahreszeiten, in der Rhythmik der Lebensphasen und Altersstufen bekundet sich die Mächtigkeit der Zeit" (Heidegger 1928, 1002–3). Together with Cassirer 1923–29, see also Cassirer 1925, 99ff. I am very grateful to Sandro Barbera for indicating this text to me at the Pisa seminar mentioned in note 4, above.

[40] Heidegger 1928, 1002–3, where also read: "Das 'Grundgefühl des Heiligen' und die mit ihm gegebene 'urteilung' zeichnen sowohl die Gesamtauffassung des Raumes vor, als auch die Art der einzelnen Grenzsetzungen innerhalb seiner. Die ursprüngliche Gliederung des Raumes, in der er überhaupt allererst enthüllt, unterscheidet zwei 'Bezirke': einen 'heiligen,' ausgezeichneten, entsprechend umhegten, geschützen und einen 'gemeinen,' jederzeit jedermann zugänglichen. Der Raum ist aber nie zuvor 'an sich' gegeben, um dann erst mythisch 'gedeutet' zu werden, sondern das mythische Dasein entdeckt 'den' Raum allererst in der genannten Weise. Dabei wird die mythische Raumorientierung überall geleitet durch den Gegensatz von Tag und Nacht, der sich seinerseits primär mythisch bekundet, d. h. in der spezifisch manahaften Mächtigkeit alles Dasein in seinen Bann zwingt. Sofern die dergestalt enthüllte Räumlichkeit überhaupt den möglichen Aufenthalt des Daseins mitbestimmt, kann der Raum und seine je faktische Gliederung zu einem Schema der mannigfaltigsten Daseinsbezüge werden (vgl. z. B. die verwickelte Klasseneinteilung des totemistischen Anschauungskreises). Das mythische Dasein verschafft sich so eine gleichförmige, liecht beherrschbare Gesamtorientierung."

[41] By expressing himself in this way he wanted to exclude the history of scientific institutions.

Amsterdamski 1987–88) did this paper stimulate the debate (both deserved and intended) that Elkana was trying to provoke when he deplored the fact that "Koyré is seen as internalist in current historiography" (Elkana 1987, 116). Some of the paradoxes noted by Elkana are noteworthy: "Koyré is more than just context-oriented in his intellectual quest. He is a morally concerned and socially motivated political philosopher with a strong elitist bias" (ibid., 128; cf. 199).

I think that rather than dwelling on his political preferences, it would be more useful to examine Koyré's method as a historian in contact with the sociological debate of his times by invoking not élites (following Pareto's line?) but collective representations, which, precisely because of that coercive element underlined by Durkheim, create a context. Here is Elkana's concluding paradox: "What Koyré calls world feelings constitute the intellectual mentality of an age, which is not to be understood in terms of cognitive psychology but only in terms of change in the collective thought patterns of the intellectuals. In fact it is a sociology of knowledge of the high culture" (ibid., 121). Although some connection between Koyré and the human sciences, in their infancy during his lifetime, cannot be excluded when discussing Koyré's "world feelings," Elkana should have mentioned the *Lebenswelt* of the phenomenologists and the methodologies developed by Lévy-Bruhl and all the French sociological school of the first decades of the twentieth century. Conceptual analysis deriving from Husserl, collective representations, and *attitude mentale* (the latter invented not by Lucien Febvre but by Lévy-Bruhl) came together in Alexandre Koyré's method in an extremely fruitful way.

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IX

FROM MENOCCHIO TO PIERO DELLA FRANCESCA: THE WORK OF CARLO GINZBURG*

The academic world received Carlo Ginzburg's short book *The Cheese and the worms: The world of a miller in the sixteenth century*[1] with considerable interest. The title was derived from the metaphor used by a previously unknown Italian heretic, Menocchio, to describe the process of spontaneous generation.[2] The book has many merits. It represents the most mature achievement to date of a historian whose relatively short career has been coherent, fascinating and recently rewarded by well-earned success. No reader will regret spending some time on this book, written with much enviable literary *verve* (to use Ginzburg's own characterization of the writing of Lucien Febvre).

In 1984, introducing a book written by N. Z. Davis[3] when she was collaborating on a script for a historical film, Ginzburg revealed his intellectual affinity with his mother, Natalia Ginzburg, a successful novelist and biographer of Alessandro Manzoni. 'In past decades', claimed Ginzburg, 'historians have said a lot about the rhythms of history, but little or nothing about the rhythms of historical narrative' (p. 139). Several novelists, from Defoe and Fielding to Joyce, from Stendhal to Tolstoy and from Balzac to Manzoni (p. 140), have 'challenged historians' on this issue. Having once read their novels,

> it is impossible not to see there the prefiguration of the more salient characteristics of historical research of past decades, ranging from polemics against the limitations of history recounted exclusively in terms of political and military achievements, to the claims of a history of

* I am greatful to Mrs H. Boardman Flores for translating this paper. (Cf. my previous articles: 'Uno, due, tre, mille Menocchio'?, *Archivio storico Italiano*, 1979, pp. 51–90; 'Topi o topoi?', in *Cultura popolare e cultura dotta nel Seicento* (Milan, 1983), pp. 137–43). I would also like to thank my friends Mrs Agatha Parke Hughes, Ms Susan Reynolds, Dr Anthony Pagden, Professor Peter Gay, Professor Anthony Mohlo and Professor Quentin R. D. Skinner for reading the text.

[1] *Il formaggio e i vermi. Il cosmo di un mugnaio del 500* (Turin, 1976); English translation J. and Ann Tedeschi (Baltimore, 1980). Page numbers from this translation and from *Night Battles* (cf. n. 4 below) are given in parentheses in the text. I have taken some small liberties with these excellent translations in order to be closer to the Italian original on a very few philosophical issues.

[2] Spontaneous generation has not been much studied (probably because it is an idea which seems clearly affected by 'vulgar materialism'); in addition to medieval researches by Duhem, Garin and Gregory, see especially on the Renaissance B. Nardi, *Studi su Pomponazzi* (Florence, 1968), pp. 305–19, and F. Papi, *Antropologia e civiltà nel pensiero di Giordano Bruno* (Florence, 1968), pp. 3–10, 91 ff., 221 ff.

[3] 'Prove e possibilità', in N. Zemon Davis, *Il ritorno di Martin Guerre* (Turin, 1984), pp. 131–54.

mentalities of individuals and social groups, and even (as in Manzoni) to the theorization of micro-history and the systematic use of new documentary sources. (p. 143)

Our sensitivity as readers has been changed, thanks to Rostovzev and Bloch – but also thanks to Proust and Musil. It is not just the category of historical narrative that has undergone a transformation, but narrative altogether. The relationship between the narrator and reality appears more uncertain, more 'problematic'. (p. 149)

It is therefore, in a 'problematic' – or rather agnostic and aesthetic – sense that the following remark of Ginzburg's must be read:

Until recently, most historians saw a clear incompatibility between the emphasis on the scientific nature of historiography – considered similar, tendentially, to the social sciences – and the acknowledgement of its literary dimension. Nowadays, however, this acknowledgement is extended more and more often to works of anthropology and sociology, without thereby implying a negative judgement of the texts. (p. 143)

Quite apart from his marked – perhaps even excessive – methodological innovations, a wide use of new themes and techniques, and a considered taste for paradox, Carlo Ginzburg has shown – from his very first book *The Night Battles*[4] – that he is endowed with all the skills of a writer as well as of a historian. He applies these skills with increasing ease and confidence, and also makes clever and fashionable use of the dialect from the depositions of his Friulian heretic; indeed, one of the successes of *The Cheese and the Worms* is the author's ability not only to characterize Menocchio's language stylistically (p. 56, a speech which is 'thick... redolent with metaphors from everyday life', and different from the 'writing' of one of his depositions, cf. p. 90), but also to reconstruct the miller's 'unilateral and arbitrary' interpretation of the very 'heterogeneous' books and texts he either bought or borrowed.[5] Ginzburg has described this interpretative framework very convincingly, and in it he sees a unique phenomenon which he believes is characteristic, if not of Menocchio himself, at least of his class. 'One cannot escape the culture of one's class and the culture of one's time', he has written in a sentence missing from the English translation. 'As with language, culture offers to the individual a horizon of latent possibilities – a flexible and invisible cage in which he can exercise his own conditional liberty. With rare clarity and understanding, Menocchio articulated the language that history put at his disposal' (pp. xx–xxi).

The statement that it is impossible to escape from 'the culture of one's own time' is persuasive enough, but does the same compelling norm apply to 'the culture of one's class'? I have no sympathy for theories of classlessness (whether in histories of 'collective mentalities' or in politics), but I cannot see culture in terms of fixed groups of the late Roman Empire! Indeed, I am quite certain that not only

[4] *I Benandanti. Ricerche sulla stregoneria e sui culti agrari tra Cinquecento e Seicento*, (Turin, 1966), 3rd Italian edn. 1972 with a *Post-scriptum*; *The Night Battles*, translated J. and Ann Tedeschi (London, 1983). Cf. the very interesting review by Anthony Pagden in the *London Review of Books*, (15 February 1984), pp. 6–8. An example of the paradoxes which are characteristic of Ginzburg is to be found in his 'Folklore, magia, religione', in *Storia d'Italia*, Vol I, *I caratteri originali* (Turin, 1972), p. 663: 'The bands of the "lazzari" in the following of Cardinal Ruffo formed the last great religious movement of Italian History': cf. G. Martina's review, *Rivista di storia della Chiesa in Italia*, XXX (1976), 150–3, who accused Ginzburg of 'proceeding dogmatically'.

[5] Cf. John Elliott's review of *The Cheese and the Worms*, in *the New York Review of Books*, (26 June 1980): 'can this man [Menocchio buying books in Venice, etc.] really be considered representative of that sixteenth-century peasant society to which Ginzburg wishes to relate him?'

Menocchio, but any other individual, 'articulated the language that history put at his disposal' from his own perspective, not simply from that of the text he is studying. Besides, in order to find in Menocchio 'a series of convergent elements, which, in a similar group of sources that are contemporary or slightly later, appear lost or are barely mentioned', it seems necessary to carry out research that would make it possible, first, to be sure that such elements and their combination were excluded from the culture of the ruling classes, and secondly to find at least some trace of these elements in popular documents from earlier periods. Only these 'soundings' would be capable of confirming 'the existence of traits reducible to a common peasant culture' (p.xxi). In Ginzburg's book, however, there is no mention of earlier periods, while – as I shall try to show – the relationship with contemporary high culture is not thoroughly explored.

For Ginzburg, 'The gulf between the texts read by Menocchio and the way in which he understood them and reported them to the inquisitors indicates that his ideas cannot be reduced or traced back to any particular book' (p.xxii). But this could be said of anyone who is not simply a passive speaker or the insignificant imitator of a text. The conglomeration of Menocchio's ideas is reconstructed carefully by Ginzburg, with quotations from some of his depositions and from the lively exchanges between himself and his inquisitors on the more audacious points of his beliefs. Menocchio denied the Trinity, the divinity of Christ, the virginity of Mary, creation *ex nihilo*, and the authority of the pope and the Church, and replaced them by a complex cosmogony in which God himself was generated out of chaos, along with the Holy Spirit (similar to the *anima mundi*), Christ, the angels – God's 'labourers' in the material work of the *ornatus mundi* – and finally man himself. He also clearly believed that the role of organized religions was not divinely inspired and guaranteed, but merely practical-pedagogical, and often abused by priests to 'swindle' the poor. Menocchio's popular condemnation of the economic oppression which the Church – much more than the civil power – exercised over the peasants is also given due weight by Ginzburg. To this end he provides a broad outline of the relations of production and the social situation in Friuli during the sixteenth century (pp. 13–15); he also outlines the social role of millers between the Middle Ages and the Renaissance (pp. 96–7, 119–20). I stress these pages because they indicate an enrichment of Ginzburg's historical and methodological interests. In the reconstruction of the interesting series of events in the earlier *Night Battles*, which he considered the last manifestation of a remote agrarian cult, he made no attempt to place within the framework of contemporary, local relations of production, the vicissitudes of this 'agrarian cult' (and its progressive assimilation to witchcraft as it was codified and insinuated into popular consciousness by the inquisitors).[6]

Ginzburg's research has been clearly inspired by a problem in the history of mentalities: in a *Post-script* to the 1972 Italian edition of *I Benandanti* (unfortunately

[6] Ginzburg follows the Murray–Mayer–Runeberg interpretation of witchcraft. This has been brilliantly criticized with regard to his *Night Battles* in Norman Cohn, *Europe's inner demons: An inquiry inspired by the great witch hunt* (London, 1975), pp. 223–4: 'What Ginzburg found in his sixteenth century archives was in fact a local variant of what, for centuries before, had been the stock experience of the followers of Diana, Herodias or Holda. It has nothing to do with the 'old religion' of fertility postulated by M. Murray and her followers. What it illustrates is – once more – the fact that not only the waking thoughts but the trance experiences of individuals can be deeply conditioned by the generally accepted beliefs of the society in which they live.' Ginzburg has recently tried to answer Cohn's arguements in his 'Présomptions sur le sabbat', *Annales ESC*, XXXIX (1984), 341–54.

omitted from the English translation, *The Night Battles*), he declared that his interest had been 'clarified by reading Gramsci's notes on folklore and the history of subordinate classes, De Martino's works, and also Bloch's studies of medieval mentality' (p. xi). Although Ginzburg himself points out the psychologizing limitations (De Man instead of Marx) of Bloch's notion of class relations, determined by subjective consciousness rather than by the real relations of production,[7] in the case of both Gramsci and De Martino his attitude is more complex. I shall come back to this point later, but for the moment I would like to stress that these four pages about Menocchio's society modify (or promise to) the picture of Ginzburg as an historian who – unlike the previous generation of scholars in Italy and many of his contemporaries – appeared to be indifferent to the widespread methodological interest in historical materialism. In these pages, strictly aimed at the interpretation of Menocchio's tirade against the pope as God's 'agent', the attention given to the relations of production seems to have been largely developed from the methodology used in *Past and Present* (Ginzburg is more in tune with micro-history of N. Z. Davis's essays than with the broad new panoramas provided by Keith Thomas). This is understandable when it is remembered that in Italy Gramsci's influence has been felt almost exclusively in the study of contemporary history. In his 1972 *Post-script* to *I Benandanti*, Ginzburg described part of the method which he intended to develop in the case of Menocchio's 'popular culture'. According to Ginzburg,

> by insisting on the *common*, *homogeneous* elements of the mentality of a certain period, one is inevitably forced to neglect the divergences and contrasts between the mentalities of the various classes and social groups, and to submerge them all into an undifferentiated, classless 'collective mentality'. In this way the homogeneity (which, however, always remains partial) of the culture of a given society may be seen as the point of departure, rather than arrival, of an intimately coercive and, as such, *violent* process. The history of the *benandanti* is exemplary from this point of view.

That is, if I understand him correctly, exemplary because it provides the 'clue' to a situation which is universal, even though often obscured: the homogeneity of the culture of a given society may only be the result, according to Ginzburg, of an act of repression, whether it be the insinuation of inquisitors during interrogation, or the indoctrination of popular culture by a higher culture. The relationship between these two 'cultures' presents the fundamental methodological problem embodied by Menocchio. Ginzburg, as we shall see, resolves it by denying any relation between the two, apart from that of 'surprising coincidence' or as a pretext.[8] The central thesis of *The Cheese and the Worms* is to be found precisely in this denial; that is, in maintaining that the myth of spontaneous generation arose *in vacuo* from popular culture.

In his earlier contribution 'Folklore, magia, religione', to the volume on the *Caratteri originali* in the Einaudi, *Storia d'Italia* Ginzburg had already enthusiastically identified himself with Mikhail Bakhtin's methodological model for the interpretation of medieval and Renaissance popular culture in the works of François Rabelais. Ginzburg was among the first to implement this inspired model. Bakhtin's influence emerges through the general thesis of a 'continuity of religious life, a viscous, almost vegetable sense of continuity, capable of absorbing within itself the fractures and lacerations which none the less existed',[9] or the reconsideration of the phenomenon of witchcraft: in the fifteenth century 'one can distinguish a kind of religious differentiation. The level of superstitions, beliefs, magical practices which, for centuries, had been preserved in silence thanks to the paradoxical stability of oral tradition, now emerged in many places like an underground magma surfacing through a fissure in the earth' (pp. 627–8; cf. 649–50). As well as 'carnival literature', moreover, in Bakhtin's works a universal category was isolated, a 'metaphysic' of the carnival, which had already been invoked, for example, by Emmanuel Le Roy Ladurie in order to give a historical meaning to the bloody 'inversion of roles' which characterized the Carnival at Romans.[10] At times, Ginzburg shares Bakhtin's fascination for the Sabbath, and defines it as an 'alternative religious myth of peasant folklore' (which is more original and perhaps more convincing than Murray's picture of a fertility rite conducted secretly but continually from archaic times to the seventeenth century), or for the rites of the Cockaigne and the carnival reversal of order ('Folklore, magia, religione', pp. 649–50). I would say, however, that what Ginzburg bases specifically on Bakhtin – and takes one step further – is the idea of the absolute continuity and autonomy of peasant culture.

When asked at a conference about the possibility of enriching and varying his sources, given that 'in *The Cheese and the Worms* the source for peasant culture is always single', Ginzburg indicated that in those 'archives of repression', the inaccessible archives of the inquisition, 'one, two, three, a thousand Menocchios' could be found (quoting a slogan from the student movement).

> We are talking of a peasant culture which was predominantly oral, even though we are becoming increasingly aware that the level of illiteracy was not as high as historians have long believed. All the same, peasant culture remained essentially oral. Even the framework which Menocchio imposed on the texts he read was an oral one. What emerges from the example of Menocchio is that, in the case of this culture, the oral counts for more than the written, even if it is written culture which helps to make explicit, so to speak, the characteristic features of the oral[?]...I would like to spend some time on the rather strange, even shocking (intellectually speaking, I mean) feature which I think has emerged from the case of Menocchio, namely that certain elements of his cosmogony *had no equivalent* in *written culture*, but, rather, showed suprising analogies with *remote*, and *archaic* mythologies...[11]

[7] Ginzburg, 'A proposito della reccolta dei saggi storici di Marc Bloch', *Studi medievali*, 3rd ser. VI (1965), 347–9; and in his preface to the Italian translation of M. Bloch, *I re taumaturghi* (Turin, 1973), p. xvii.

[8] In *The Night Battles*, p. 45, Ginzburg had already witten that these traditions and myths are characterized by having 'absolutely no connexion with the educated world', but are not 'metahistorical religious archetypes' (p. 89). There is a clear continuity between the problem of *The Night Battles* and that of *The Cheese and the Worms*, (p. 156), where reference is made to the first book with a promise to develop better the theme of 'shamanism'.

[9] 'Folklore, magia, religione', p. 603, and M. Bakhtin, *L'Oeuvre de F. Rabelais et la culture populaire au Moyen Age et à la Renaissance* [1965], French translation (Paris, 1970).

[10] E. Le Roy Ladurie, *Les Paysans de Languedoc* (Paris, 1966) I, 395–9; idem, *Le Carneval de Romans* (Paris, 1979); on this author as well as on Ginzburg cf. L. Stone, 'The revival of narrative: reflection on a new old history', *Past and Present*, LXXXV (1979), 3–24, who gives *The Cheese and the Worms* a definition probably not agreeable to its author; he thinks that Ginzburg tried to describe the intellectual and psychological agitation caused by the filtering downward of the Reformation's ideas. Cf. E. J Hobsbawm, 'The revival of Narrative: some comments', *Past and Present*, LXXXVI (1980), 3–8.

[11] *Richerche di storia sociale e religiosa*. VI, n.s. XI (1977), 167–8, 175–6 and cf. p. 91 (my italics). Ginzburg claimed to be interested in 'reconstructing the transmission of phenomena over long periods in extremely broad areas'. On p. 126 he insists upon a theme which does not seem to me to define the subject of his book in a realistic way. 'Between the culture of the popular classes and that of the dominant classes, complex relationships have grown up in various

Although in 'Folklore, magia, religione' Ginzburg warned that 'the importance of the dichotomy between official and popular religion' (p. 608) must not be exaggerated – as an example he admitted the existence of another religious sub-culture, the 'merchant' religion of men like Datini, Rucellai and Colombini (pp. 626, 630) – he no longer seems inclined to make such distinctions within any culture which cannot be considered popular. On the contrary, he seems unwilling to admit any exchanges, for fear of once again falling into the old trap of seeing acculturation as always travelling in one direction, from higher to lower.

In fact, starting with the preface to *The Cheese and the Worms*, which provides a *status quaestionis* of the study of 'popular culture', Ginzburg, after criticizing the opposing views of Mandrou, Bollème and Foucault, suggests that

> Bakhtin's hypothesis of a reciprocal influence between the lower class and dominant cultures is much more fruitful. But to specify the methods and the periods of this influence... means running into the problem caused by a documentation, which, in the case of popular culture, is... almost always indirect. To what extent are the possible elements of the dominant culture found in popular culture the result of a more or less deliberate acculturation, or of a more or less spontaneous convergence, rather than of an unconscious distortion of the source, inclined obviously to lead what is unknown back to the known and familiar? (p. xix)

How Ginzburg is going to solve this interesting problem is clear to the reader from this page. He recalls his study of the *benandanti*, where 'a deeply rooted stratum of basically autonomous popular beliefs began to emerge by way of discrepancies between the questions of the judges and the replies of the accused' (ibid.). The case of Menocchio seems to be more complex, but not different, as the author's preface makes clear: 'the fact that many of Menocchio's utterances cannot be reduced to familiar themes permits us to perceive a previously untapped level of popular beliefs, of obscure peasant mythologies', which will be identified precisely in the cosmogony which states that out of chaos, by means of fermentation, the spiritual and animal 'worms' are produced. As we shall see, this is the Archimedean point on which both Menocchio's particular view of the world and Ginzburg's methodological procedure pivot. Even from these preliminary observations Ginzburg can be seen to be orientated already towards a thesis not dissimilar from the one in *The Night Battles*:

> these obscure popular elements are grafted on to an extremely clear and logical complex of ideas, from religious radicalism to a naturalism tending toward the scientific, to utopian aspirations of social reform. The astonishing convergence between the ideas of an unknown miller of the Friuli and those of the more refined and informed intellectual groups of his day forcefully raises the question of cultural diffusion formulated by Bakhtin, (pp. xix–xx).

Only here does Ginzburg let slip the admission that there are 'more advanced sectors' in high culture: from the book as a whole one gains the impression that this high culture is represented as a single block of tradition and repression, 'fortresses of written culture', which employ only offensive and lethal weapons and allow no internal conflict and battles. Perhaps the miller's ideas do 'derive from an oral tradition', in some way a secret one, but I find it improbable and in any case unproven that it is 'very ancient'. Furthermore, the comparison with the ideas of

historical periods; these are not uni-directional, but circular, as Jacques Le Goff has shown, and I have tried to show in my book'. But as Elliott pointed out in his review (see n. 5 above), there is a contradiction between the principle suggested in the preface to the book ('a circular relationship composed of reciprocal influences') and the numerous references to 'an autonomous current of peasant radicalism'.

contemporary scholars cannot be confined to a particular direction (such as that which a student of Nicodemism might prefer). Some reference is made to the ideas of catholic reform (Erasmian or Machiavellian) or to protestant reform (in its radical aspects), but never to philosophical thought, like that of such non-conformists as Pomponazzi and Bruno. For not all those who took part in shaping high culture, even in its institutional setting, were destined by birth to do so, nor did they do so necessarily from conformism or by betraying their own class interests or their heritage of popular culture. The case of Giordano Bruno ends the book, only because the dates of his torture and Menocchio's coincide, but surely this should have made Ginzburg wonder: where does Bruno belong? Was it as an exponent of popular culture that he wrote *De la causa principio e uno* and the Latin poems? And if the perennial exile, 'academician of no academy', can be assimilated into the culture of the ruling classes, which culture is it to be? That of the Italian Counter-Reformation? The 'politique' culture of Henry III? Elizabethan culture?

'In my opinion', says Menocchio (pp. 5–6)

> 'all was chaos, that is, earth, air, water, and fire were mixed together; and out of that bulk a mass formed – just as cheese is made out of milk – and worms appeared in it, and these were the angels. The most holy majesty decreed that these should be God and the angels, and among that number of angels, there was also God, he too having been created out of that mass at the same time, and he was made lord, with four captains, Lucifer, Michael, Gabriel, and Raphael'.

After the banishment of the proud Lucifer 'with all his host', 'this God later created Adam and Eve and people in great number to take the places of the angels who had been expelled'. Under interrogation, Menocchio confessed to having read something on this theme in the *Fioretto della Bibbia*, although 'the other things I have said about this chaos I made up in my own head' (p. 52). In the *Fioretto*, in fact, the theory of cosmogony out of chaos is not developed so specifically and, in particular, God is not generated from chaos along with nature. Instead, 'in the beginning God made a great substance, which had neither form nor style' (the Aristotelian definition of chaos), 'and he made so much that he could take and do what he wanted with it, and he divided it and apportioned it so that he made man out of it composed of four elements' (p. 52). Menocchio's select, but significant library (which Ginzburg analyses in some of the most successful paragraphs in his book) includes the erigenian Honorius Augustodunensis as well as Ovid, both in a secondary version: it should not be forgotten, however, that since the thirteenth century the *Metamorphoses* had been widely distributed in the vernacular. So why should the possibility that Menocchio had read Ovid's poems or heard them recited in the evenings be excluded? Menocchio's myth, according to Ginzburg, corresponds only to the Vedas (p. 58). It does not seem to me at all 'impossible not to think of a direct transmission – an oral transmission, from generation to generation', of 'an echo, perhaps an unconscious one, of that ancient Indian cosmogony' (p. 58). In the development of this cosmogony (due to spontaneous generation, which produces worms),[12] according to Ginzburg, we can therefore 'see emerging, as if out

[12] In his brilliant review, Elliott (see n. 5 above) has drawn attention to a reference by the anthropologist S. Ott to a Pyrenean village, where the villagers 'understand and explain the process of human conception by reference to cheese-making'. As he points out, Menocchio was a good deal closer to the Pyrenees than he was to the Himalayas. Aristotle's *De generatione animalium* (739b21–7) is mentioned by Ott; this passage is the source of 'une image aristotélicienne inlassablement répétée', that is, the idea of sperm 'jouant un rôle coagulant

of a crevice in the earth, a deep-rooted cultural stratum so unusual as to appear almost incomprehensible' (pp. 58–9). There is an 'astonishing coincidence' between Menocchio and the shepherds of the Altai (the only people before him – or before Aristotle and his various commentators, including Pomponazzi – to refer to fermentation or coagulation, though they combined it with another metaphor of sea spume), which, Ginsburg asserts, cannot be coincidental, nor can it be explained in terms of Jungian collective consciousness. Since this is 'unacceptable' to Ginzburg, he proposes an explanation, no less *a priori*: another *deus ex machina*. 'It can't be excluded that it [the coincidence] may constitute one of the proofs, even though fragmentary and partly obliterated, of the existence of a millenarian cosmological tradition that, beyond the difference of languages, combined myth with science' (p. 58). It is this lack of all but the most remote precedents for the cheese metaphor which Ginzburg uses as the Archimedean point on which to base the hypothesis that – independently of recognized affinity with the themes and theses of contemporary high culture – Menocchio provides the clue to the authentic trends which in other popular heretics, such as Pighino or Scolio, might appear to have been mediated through scholarly material.

Since what is being proposed is not stylistic research into the origin of a metaphor, it now seems necessary to distinguish between the two levels of culture. We all know that a good metaphor is very often the vehicle of, and the guarantee for, the diffusion of a complex theory; but we also know there are often ramifications to a long-established traditional idea. For the fermentation to produce living animals, beside cheese there must at least also be placed Virgil's reference to the putrefying carcasses of cows which generate bees. Although promising to write a study on the reception of Diodorus Siculus' cosmogony as it appears in the opening paragraphs of the *Bibliotheca historica*, Ginzburg seems none the less to have excluded the relationship between this text and the case of Menocchio. In Diodorus 'there is no mention of cheese, even if there is a reference to the generation of living beings from putrefaction' (p. 153). It is a pity that Ginzburg should have postponed this research on Diodorus, because in the Renaissance Diodorus' text was referred to, for example by Giordano Bruno, not only repetitively, but also in ways which were original and fertile.

The theme of spontaneous generation lends itself to analysis as an exemplary case precisely because it conveys the interaction of scientific, philosophical and religious thought. (1) From the point of view of the biological sciences, generation *sponte seu casu* of the lower species from putrefying matter was a topos still uncontested even later than the period studied here. It was accepted unconditionally by eminent scientists such as Mattioli, Rondelet and Fabrici d'Acquapendente, as well as by Harvey and Gassendi. (2) From the philosophical point of view, the extension of such a concept – a conglomerate derived from suggestions by Hippocrates, Aristotle and other early naturalists, combined with the neoplatonic and stoic notion of the vital spirit – was variously modified by a wide range of thinkers. Extrapolating from the case of the lower animal species, some thinkers argued that at the origin of the

identique à celui de la présure sur le lait'; cf. D. Jacquart and C. Thomasset, 'Albert le Grand et les problèmes de la sexualité', *History and Philosophy of the Life Sciences*, III (1981), 77. This topos is also commented on in a lesson on spontaneous generation held by Pomponazzi between 1503 and 1509 at Padua (Napoli, Nat., Libr., MS VIII. D. 80, fo. 71v): 'Natura caseus potest coagulari ex coagulo eius et etiam aliis floribus et pinguedine muris; tamen ista agentia sunt diversa secundum speciem, licet producunt eundem effectum ut in pluribus'.

world (or of its *renovatio* after the cataclysms due to the cycles of the Great Year), the earth, in a state of putrefaction and fermentation, formed bubbles, cavities and excrescences which spewed out various forms of life: in these – as in a genuine uterine cavity – the higher animals and man himself were formed. (3) From the religious point of view, this notion was propounded, more or less explicitly, as an alternative to that of the creation. If, as first Lucretius and later Giordano Bruno claimed, the origin of life on earth occurs as a result of a chance process, this does not imply the intelligent, intentional and omnipotent intervention of God. On the contrary, the process can be repeated and renewed cyclically after the cataclysms of fire or water, of air and earth caused by the great conjunctions of the planets.

This theme appeared in Aristotelian commentaries from the thirteenth century, or even from the time of Avicenna.[13] The myth goes back to antiquity. It was known to philosophers, doctors, historians and poets, and was so widespread that even Ficino and other Platonists made mention of it. Indeed, as the fundamental role of Avicenna and the very title traditionally given to his *De diluviis* both suggest, it is a theme which cannot be considered as either exclusively Aristotelian, or purely Platonic – although Platonic and Hermetic texts certainly contributed greatly to its diffusion. Besides the *Timaeus* (30a, 38e), the *Statesman* (269a ff, 270a–b), with its myth of the Age of Saturn and the Eternal Return, contains several suggestive allusions. The latter text was connected with the astrological Great Year, which determined a 'retrogression' and, in sublunary beings, a total inversion. Plato admitted a process of compensations. If the old returned to childhood and died, it was also the case 'quod ex mortuis sed terra conditis illi iterum tum restituti reviviscentesque quidem sequuntur rationem illam caeli sive saeculi, generatione in contrarium revoluta, ac terrigenas hac ratione necessario editos'. Ficino's translation, which I have used here, circulated widely, as we know, and with it an 'argumentum'[14] which, though brief on this theme, refers to its treatment in the *Theologia platonica* as well as in the *De vita*. In *Pimander*, another of Ficino's translations, which at his suggestion was shortly afterwards translated into the vernacular by his friend Tommaso Benci, there is mention of a similar myth, in which not only animal and human life but also the angels were generated from the primordial chaos; the angels who were so important to the hermetic concept of nature, and are found again in the thought of the miller Menocchio.

The first 'Logos' depicts the origin of the Seven Governors, the angelic Demiurges from whom every form and organization of life have originated, thus: 'The generation of these... was done in this way. There was the female [earth] and the water which were able to join together; he took ripeness from the fire and the spirit from the heavens, and nature joined the bodies to form the species of man'.[15]

Besides the persistence of the cyclic theme, there is here a thesis which was later considered very serious and which few would dare to repeat: from chaos there

[13] In his paraphrase of the *Meteorologica* Avicenna had added a *codicillum de diluviis*, which was thought to be a supplement to Plato's *Timaeus*. He also discussed the subject in the *De animalibus*, which was translated by Michael Scot and criticized by Averroes (*Metaphysica* II, c. 15, and *Physica* VIII, c. 46). Through Averroes the question became topical in scholastical Aristotelian commentaries (Nardi (cf. n. 2 above) mentioned Albert Aquinas, Duns Scotus, Pietro d'Abano and Burlaeus).

[14] *Platonis opera* (Venice, 1571), p. 120.

[15] *Il Pimandro di Mercurio Trismegistro*, italian translation T. Benci (Florence, 1548), footnotes; cf. *Corpus hermeticum*, ed. Nock and Festugière (Paris, 1945), I 12 ff. Menocchio himself said that 'Earth is mother'. Cf. Diodorus Siculus, *Delle antique historie* (Florence, 1526), p. 8, where Earth is – as in the topos – mother as well as receptacle of life, matrix.

originated not only biological, animal, purely sensory or, so to speak, material life, but that of the spiritual beings themselves. From chaos comes both the Seven Demiurges and human souls. This point raised problems in the Christian tradition after Guillaume de Conches provided an elaboration of it. Without necessarily going that far back, it can simply be noted that the appeal of this cosmogony was such that Ficino, Francesco Cattani da Diacceto and Francesco Verino the Second, though intending to adhere to the strictest orthodoxy, could not resist it. In their time, moreover, the theme was adopted by the less orthodox Aristotelians, who used it to support their disbelief in the creation of the world, in the soul and in Christ himself. Finally the theme is found in the Libertines and Cesalpino, who claimed that 'ex principiis Aristotelis omnia animalia etiam hominem, oriri posse ex putri materia'; but he was careful not to fall prey to obvious heresy concerning the origins of the soul.

One of these men, who, though now largely forgotten, was in his time capable of arousing much controversy, was Tiberius Russilianus. He printed a *quaestio*, inspired by Pomponazzi, which discussed the origin of life from chaos, in the context of the cyclical catastrophes of the Platonic Great Year, which

> mundi confusione... animalia quaecumque diruunt; verum postmodum terra mollis solis ardore densior facta in pelliculas ventriculis similes rupisse, a quibus secundum mixtionum variationem varia prodiere animalia, leviora quidem in nobiliores ventriculos prorupit, ex quibus animalia perfecta emersere, ex ventriculis perfectioribus homines genitos esse autumant.[16]

Tiberius dedicated many pages – all condemned by the inquisitor Gerolamo Armellini – to spontaneous generation, claiming that his sources were Lucretius and Diodorus. He too believed that men were not created by God, but were born of earth in fermentation, and he used the term *terrigenae*, a word already found in Ficino and in common usage. When a theme is so widespread that it leads to the coining of a special word, there is surely no need to find a direct, purely oral, descent from India. As G. Cocchiara, a serious student of folklore, once warned, one should beware of always trying to 'discover origins in India'.[17]

In the case of Menocchio's cosmogonic fermentation, the place of origin was much closer, somewhere between Padua and Venice. Menocchio frequently visited this region, and although Ginzburg was unable to find dates or reasons for his visits to Venice, we know that he obtained books there. On the theme of mortality or, if we prefer, the sleep of the soul, Ginzburg admits a relationship: 'From professors at the University of Padua to a miller in the Friuli: this chain of influences and contacts is indeed peculiar, although historically plausible' (p. 73). It seems to me that in this case Menocchio demonstrated an originality and freedom of choice not significantly different from those of some independent and respectable scholars: he appropriated from the Paduan and Venetian circles not only their theory of the soul, but also their conception of the physical world, developed along Pomponazzian lines. Pomponazzi, however, had already come to terms with some of the ideas of the Florentine Platonists. Naturalism therefore is well rooted in both Menocchio and Pomponazzi, and their theories on the role of religion are no less related. Giorgio Spini had already spoken of the libertine 'imposture of all religions' to define both

[16] Tiberii Russiliani Sextis Calabri, *Apologeticus* (Parma, 1519), fo. 20r. On this rare text cf. my *Une réincarnation de Jean Pic à l'époque de Pomponazzi*, Abhandlungen der Mainzer Akademie der Wissenschaften, 10 (Mainz, 1977).

[17] *Il paese di Cuccagna* (Turin, 1956), p. 4.

Menocchio's blasphemies and theories.[18] Once more, without suggesting a direct derivation, I believe that Menocchio may have been able to find the Averroistic doctrine not in a libertine formulation, but by some indirect means close to the source, Nifo's commentary on the *Destructio destructionum*, published in Padua in 1497 and reprinted many times thereafter.[19] When Menocchio admitted 'that every person considers his faith to be right, and we do not know which is the right one', and went on to say: 'because my grandfather, my father, and my people have been Christians, I want to remain a Christian, and believe that this is the right one' (pp. 49–50), he went beyond the medieval idea of tolerance as he had met it in Boccaccio's tale of the three rings (I, 3), but remained on this side of the libertine denial of religion. When he insists: 'if I were a Turk, I wouldn't want to become a Christian, but I am a Christian, and I don't want to become a Turk at all' (p. 98), he is very close to the words of Averroes' *Destructio*. His interpretation of Christ's humanity is much nearer to this model than to the Anabaptists'; he claims that Christ was 'a man like us, born of man and woman like us... After God had appointed him to be a prophet and had given him great wisdom and sent the Holy Spirit to him, I believe he performed miracles' (p. 75). Averroes, and following him Pomponazzi, in the *De incantationibus* invested prophets with an essential role in religion, namely that of maintaining consensus and order among bestial people, whom the arguments of philosophers could never tame. This role was fulfilled by the sermons and miracles which moved the masses. To this end, according to Menocchio, 'priests and monks who have studied made the Gospels pretending that it came from the Holy Spirit' (p. 104). Machiavelli, too, was inspired by the Averroistic conception of the social role of religion, and his ideas may have come to Menocchio through an evangelical text by Crispoldi or in some analogous way (p. 40). It seems to me, however, that Machiavelli's influence may have reached the Friulian miller through a more indirect route than that of the Paduan Averroists whom he inspired. To suppose that a strain of Machiavelli had seeped down from Giberti's circle takes the spirit out of Menocchio's ferocious retorts.

Ginzburg's approach to the methodological problems raised by the study of popular culture changed in 1973. In that year, he published an article on a capital sentence passed at Bologna, a generation following Menocchio's, against an apothecary who also believed in the theory of spontaneous generation and in the political role of religion. Ginzburg's change of approach, however, is not made clear to the reader. In that article, Ginzburg proposes a definition of popular culture and of the 'considerations formulated' in *The Cheese and the Worms*.[20] Though in some ways preferable to the book, his 'considerations' do not seem to reflect very clearly what is said there. For instance, in the article he says that the 'relationship between the culture of the subordinate classes and the culture of the dominant classes... [is] a complex relationship, based on reciprocal exchanges, as well as on repression from one direction only' (p. 311). While remaining firm in 'reminding us of the untenability of every reductionist view of the culture of the subordinate classes' (p. 319), Ginzburg posited instead 'a circular movement from below to above' as

[18] 'Noterelle libertine', *Rivista storica italiana*, LXXXVIII (1976), 792–802.

[19] I have discussed this in 'I problemi metodologici del necromante A. Nifo', *Medioevo*, I (1975), 137 f. It is worth noting that Menocchio always refers to religions as 'laws' in the same way as Averroes does, and believes their value to be relative.

[20] C. Ginzburg and M. Ferrari, 'La colombara ha aperto gli occhi', *Quaderni Storici*, XXXVIII (1978), 631–9. Page references in the text are to the larger version printed in *Alfabetismo e cultura scritta* (Perugia, 1978).

well as a circular movement 'from above to below' (p. 318). It is certainly a *lapsus calami* that he considers the 'uniqueness' of the charlatan Costantino Saccardino in making a 'non-passive use of his sources' (p. 316). Ginzburg, however, convinced of the originality of the framework through which Menocchio read his books, seems here to imply that all popular authors (or 'intermediaries between the culture of the popular classes and middle–high culture', as charlatans indeed were) are normally passive readers.

Pomponazzi, Nifo, Russiliano, Cremonini and Cesalpino, however, were all professors, belonging to a category which Ginzburg considers with loathing, refusing to admit that lectures, disputations and discussions *in circulis* were – as I believe they were – one particular strand of oral tradition. He has therefore tried to reconstruct oral tradition by drawing on quite different and often deceptive material. An unpublished lecture or a clandestine leaflet, despite its rarity, has the considerable advantage over oral tradition of being documented. The discrepancies existing between such material and the published works of university professors suggest that their teaching was characteristically freer and more immediately consistent with the problems of their day. But this may be due especially to their audience, comprising not only future university professors, but also friars, physicians and others who would later return to their provincial surroundings to popularize, perhaps by distorting or simplifying slightly, what they had heard at Bologna or Padua.

Here I shall mention just one document, which did not come from a university, but (were it not for the totally different methodology that according to Ginzburg distinguishes the 'micro-historians' from those he still simply calls 'historians of thought') which might be suggested as possible reading material for one Saccardino, the author of a book of secrets. This is the Italian translation of the *Natural Magic* in twenty volumes, published in Naples in 1611 by Giambattista della Porta, using the name Giovanni de Rosa. The whole work, and in particular Chapter I of Book II on spontaneous generation, could have been read in good Italian between 1611 and 1621 by Saccardino. It would also have been profitable reading for Ginzburg, since it would have given him a clue to the understanding, even among 'the fortresses of written culture', of the long history and wide extent of this naturalistic idea which he believes to be exclusively popular. Della Porta was an honest supporter of these topical ideas. He, too, starts from the simplest case – absolutely uncontested until the advent of the microscope and Francesco Redi – namely the so-called lower species, which included mice, frogs, toads, worms and even snakes. Returning to *The Cheese and the Worms*, Menocchio's case seems to be a very representative one, precisely because he cannot be reduced to the 'average peasant' of the sixteenth century (pp. xix, 33). Menocchio didn't parrot the opinions or ideas of others (p. 50). But nor did the traditional intellectuals. Menocchio prided himself on being 'philosopher, astrologer and prophet' (p. 117). We do not know how he practised astrology, but his claim to be a 'prophet' is clear in the light of the Averroist emphasis on the teaching of the masses through the force of imagination. Reduced to poverty after his first conviction, the miller had 'kept a school for children to learn the abacus and reading and writing' (p. 103) but, above all, he always took upon himself the role of 'teacher of doctrine and behaviour' (p. 5) in the village, hoping to make converts (p. 80) and thereby adapting his ideas for the other peasants, since a 'growing separation in Italy between the city and the country' had long been evident (p. 20).

If we admit that such a refined Erasmian as Rabelais, familiar with every scholastic device, made a significant choice when he used the heritage of folklore

as a base for establishing the modern novel, might it not be snobbism to deny that the miller Menocchio could have made a reverse borrowing?

Ginzburg has written that he drew his historical inspiration from Gramsci; it seems strange to have to remind him of a fundamental passage in *Letteratura e vita nazionale* (cf. *Quaderni*, pp. 679–80). Yet shortly before condemning both the hastily drawn conclusion of R. Mandrou on the 'culture *imposed on* the popular classes' and on the 'victorious process of acculturation' achieved through *colportage*, and also the works of G. Bollème on 'popular creativity' (pp. xv–xvi), Ginzburg in his methodological preface gives a reference to a book by Lombardi Satriani. This author, following Santoli, took up the standards established by Gramsci for popular literature and made them his own. With regard to popular songs and the three categories into which E. Rubieri divided them, Gramsci observed that all must come under the category of 'those writings neither by the people nor for the people, but adopted by the people because they conform to their way of thinking and feeling'. What distinguishes the popular form in 'the framework of a nation and its culture, is neither the artistic fact nor its historical origin, but a way of perceiving the world and life in contrast to that of official society... the people itself is not a homogeneous collectivity of culture, but contains numerous cultural stratifications variously combined'.[21]

As Ginzburg acutely observes, Menocchio 'was not claiming special revelations or illumination. It was to his own intelligence that he gave the chief credit' (p. 28). At the end of the sixteenth century we are a long way from the juncture of folkloric tradition with clerical culture investigated so rigorously by Le Goff for the Merovingian and Carolingian periods. Perhaps among the shepherds of Eboli and the peasants of the Friuli there could be 'the tenacious persistence of a peasant religion intolerant of dogma and ritual, tied to the cycles of nature, and fundamentally pre-Christian' (p. 112). It seems to me, however, that the core of Menocchio's *ideas* has a lively and critical, but undeniable, connexion with some of the advanced trends in contemporary high culture, even those of the Florentine academy and the school of Padua. He was not unaware of them; he had an instinctive knowledge of the conflicts and inbreeding which occurred in the works of those intellectuals. It was not only by a 'surprising coincidence' that he reiterated their fundamental *ideas*: 'he simply translated them into images that corresponded to his experiences, to his aspirations, to his fantasies' (p. 112). Why, then, deny that he really was a 'philosopher, astrologer and prophet'?

In a recent interview with a journalist from the far left, Ginzburg declared that he now felt quite detached from his former studies on sixteenth-century heresies: not only from his edition of the deposition of don Pietro Manelfi, who denounced his fellow heretics to the inquisition (for 'future historians the *pentiti* [Italian terrorists who have 'repented'] of today will be a godsend. It is well known that historians feed on corpses'),[22] but also from the *Giochi di Pazienza*[23] and the more ambitious

[21] V. Santoli, 'Tre osservazioni su Gramsci e il folklore' in his *I canti popolari italiani* (Florence, 1968), and L. M. Lombardi Satriani, *Antropologia culture e analisi della cultura subalterna* (Rimini, 1976), pp. 24–5. Cf. in *Ricerche di storia sociale e religiosa* (quoted n. 10) the observations made on this problem by K. Thomas (p. 141), J.-C. Schmitt p. 11) and J. Revel (p. 75).

[22] 'Poche storie. Un'intervista fiume di A. Sofri con C. Ginzburg', *Lotta continua*, 17 February 1982; cf. the German translation in the collection of essays on method and the history of art, Ginzburg, *Spurensicherungen* (Berlin, 1983) and his article 'Vom finstern Mittelalter bis zum Blackout von New York – und zurück', *Freibeuter*, XVIII (1983), 25–34.

[23] Though closely connected with the questions of the studies discussed here, these works by Ginzburg (*I costituti di don Pietro Manelfi* (Florence and Chicago, 1970); *Giochi di Pazienza. Un seminario sul 'Beneficio di Cristo'*, in collaboration with A. Prosperi, (Turin, 1975)) are less influenced by the populistic theme.

Nicodemismo. This last work, which its author might today consider too traditional, nevertheless constitutes an undeniable contribution to the field or, according to Werner Kaegi, 'a small masterpiece which introduces a new dimension to our picture of the sixteenth century.'[24] Instead of the chronological definition suggested by his teacher Delio Cantimori, Ginzburg backdates Nicodemism by some decades and moves it from Counter-Reformation Italy to the earliest centres of protestantism, such as Strasbourg. This remarkable study, however, more than his other writings on the Reformation reveals Ginzburg's populistic attitudes: it was perhaps his committed views rather than haste which led him to halt the backward march of Nicodemism in 1525, where its beginnings coincide with the War of the Peasants and their defeat. Without leaving the circle of the historical characters whom he studied, he should easily have noted, with the help of Kalkoff's classic study, that Wolfgang Köpfel (the humanist Capito, Secretary to the Elector Albert of Brandenburg, archbishop of Mainz, and contractor for the famous indulgences) had already elaborated and practised a form of Nicodemism before – and totally unrelated to – the defeat of the peasants. Köpfel set out his politics in his letters to Luther of 4 September 1518 and 20 and 21 December 1521, with the maxim: 'obliquo ductu magnae res secure conficiuntur'.[25] In another letter in which he predicted that Luther would be successful as long as he could defend himself from the pope's supporters and the mendicant friars, he showed his concern for his own equivocal and by then almost untenable position: 'Deinceps vereor qui possim latere... In arenam igitur producor, qualimbet invitus'.[26]

At different times, and perhaps unintentionally, Ginzburg reiterates the same methodolgical points: 'High and low',[27] in which the Patristic and Erasmian

[24] *Il Nicodemismo* (Turin, 1970); cf. W. Kaegi's review in *Schweizerische Zt. f. Geschichte*, XX (1970), 697.

[25] P. Kalkoff, *W. Capito im Dienste Erzbischof Albrecht von Mainz (1519–1523)* (Berlin, 1970), pp. 2 ff.: 'Nur ein so hervorragendes diplomatisches Talent wie Capito konnte in dieser exponierten Stellung jahrelang eine auf Schonung und Förderung der in ihren Anfängen noch leicht zu unterdrückten evangelischen Bewegung bedachte Politik durchführen'. Ginzburg is unaware of this study by Kalkoff, and dates the start of Köpfel's Nicodemism from the letter – certainly more clear and important, but dated as late as 1540: See *Il Nicodemismo*, pp. 139 ff., 207–13.

[26] This letter from Mainz, 16 February 1521, is published by E. Böcking, *Hutteni Operum Supplementum*, II, 2 (Leipzig, 1864), 804–5. For the later letter published by Ginzburg as an appendix, cf. P. Fraenkel, 'Bucer's memorandum of 1541 and a 'Lettera nicodemitica' of Capito', *Bibliothèque d'Humanisme et Renaissance*, XXXVI (1974), 575–87. A. Biondi, 'La giustificazione della simulazione nel Cinquecento', in *Eresia e riforma nell'Italia del Cinquecento* (Florence and Chicago, 1974), pp. 5–68, has criticized Ginzburg's work from other, serious points of view and using other documents. Cf. also C. M. N. Eire, 'Calvin and Nicodemism: a reappraisal', *Sixteenth-Century Journal*, X (1979), 45–69, which I cannot entirely subscribe to.

[27] 'High and low: the theme of forbidden knowledge in the XVIth and XVIIth century', *Past and Present*, LXXIII (1976). Ginzburg's researches on sixteenth-century heresy and his studies following in Bakhtin's footsteps, meet in this essay, which develops the idea of 'tidy, polar categories': 'These categories, of course, have a cultural or symbolic meaning, as well as a biological one. Anthropologists have begun to elucidate the variable meaning of some of them... But none of these categories is so universal as the opposition between high and low' (p. 31). Although Ginzburg claimed here to have taken his modes from Erwin Panofsky, there is more than a trace of Bakhtin's insistence on the high and low in Rabelais. Cf. V. V. Ivanov, *Significato delle idee di Bachtin*, in *M. Bachtin* (Bari, 1977), p. 97: 'one of the main characteristics of M. M. Bakhtin's book on the culture of the carnival, which provide an uncontested structure

hermeneutics of the 'Noli altum sapere' (Rom. 11.20) and some Renaissance emblems were examined, anticipates his position on both oppressed popular culture and the history of art, touching on philosophical issues such as polarity and analogy.[28] More ambitious and more famous is 'Clues', which was reprinted many times in Italy and abroad.[29] According to Ginzburg's interviewer, it was read by 'everyone, thieves and policemen, schoolchildren and parents, rationalists and irrationalists'. Ginzburg claims to have 'felt pressure from all sides, explicit or not, to turn myself into an ideologist of the paradigm of the clue! This I did not like'. It was as an alternative to this that Ginzburg turned to the history of art, which he had not had the opportunity to study as a student, any more – if we may say so – than he had been able to study philosophy. The brilliant and paradoxical essay, 'Clues', starts from a relationship between Freud and Sherlock Holmes of the kind found in the novel *The seven percent solution*, in order to propose a methodology of research, or 'micro history', totally founded upon 'clues' (*privileged* clues, guaranteed to be significant to an alert, *intuitive* mind). The essay aroused bewilderment and criticism, and among historians of the older generation, F. Diaz[30] and R. Romano[31] objected to it. Ginzburg was also criticized by two collaborators on his own journal *Quaderni storici*, who took up an observation made by M. Vegetti: 'it still remains to be shown that we can hear the voice of liberation through the metonymic rationality of the chase analysed by Ginzburg, whereas the voice of the master expresses itself without contradictions in terms of the anatomical paradigm '.[32] In conclusion, they state that 'this conceptual *perspective*, even in the best of cases, leaves power out of consideration; in an intermediate case it acknowledges its existence, and in the worst case it evokes it as a spirit of evil. But it always avoids it'.[33] These observations were linked to contemporary Italian political debates, which makes them difficult for any non-Italian political reader to follow, but the context is crucial for the understanding of Ginzburg's cultural and political choices and those of his readers (whether enthusiasts or critics). Vittorio Saltini, a former colleague of Ginzburg at the Scuola Normale in Pisa, directed a more technical and objective criticism against 'Clues'. He wrote:

> He parades an almost snobbish familiarity with arcane topics [graphology, finger printing], while calmly ignoring all the philosophical theories which, for more than a century, have been

of the book's fundamental issues, is the fact that it is based on the analysis of some basic binary contrasts, in particular the high–low, considered simultaneously on several planes – social, hierarchical, spatial, material, etc'.

[28] Cf. M. Pogatschnig, 'Costruzioni nella storia. Sul metodo di Carlo Ginzburg', *Aut Aut*, CLXXXI (1981), 3 ff., who comments both on the Italian version of 'High and Low' (cf. n. 27) published in the same journal (pp. 3 ff.), and on the debate held in Milan in the spring of 1980 on 'Clues' (cf. n. 29): 'Paradigma indiziario e conoscenza storica. Dibattito su 'Spie' di C. Ginzburg', *Quaderni di storia*, XII (1980). See also C. Ginzburg and C. Poni, 'Il nome e il come: scambio ineguale e mercato storiografico', *Quaderni storici*, XL (1979), 188: 'definire la microstoria e la storia in generale *scienza del vissuto*'.

[29] *History Workshop*, XI (1980), 5–29. The original Italian shorter version 'Spie. Radici di un paradigma indiziario', appeared in *Rivista di storia contemporanea*, (1978), pp. 1–14, and was printed in the longer form in A. Gargani (ed.), *Crisi della ragione* (Turin, 1979).

[30] *L'Espresso*, 10 February 1980.

[31] *Alfabeta*, II, no. 11; also A. Negri, 'Riflessioni in margine a Ginzburg', *Alfabeta*, no. 11.

[32] 'La ragione e la spia', *Quaderni di storia*, VI (1980), 17.

[33] 'Ancora sul senso comune di E. Grendi. Microstoria e indizi senza esclusioni e senza illusioni', *Quaderni storici*, XLV (1980), 1121 f.

concerned with the problem he describes, namely the gap between the knowledge of general laws and that of individual historical cases! He is unaware that his distinction between the 'Galilean paradigm' and the 'paradigm of the clue' somewhat resembles an ingenious version of the distinction made by Windelband, the nineteenth-century exponent of the 'new criticisms', between 'nomothetic' and 'idiographic' science (and even Windelband had linked the latter to intuition). He is also unaware of the way that Rickert successfully modified Windelband's idea. He is not even aware that in Italy, too, these themes have been discussed for many years and that the young Croce, for example, attributed the historical knowledge of the individual to intuition, although he soon, wisely, changed his mind. And Ginzburg ignores... the fundamental issue... overcoming the obstacles of intuitionism, in which he is still floundering, the great contributions of Max Weber [and later] of Popper.[34]

Given that among Gizburg's many positive qualities self-criticism does not rank high, there is no way of knowing whether it was observations such as these which dissuaded him from continuing his study of historical methodology: or if the 'pressure' he claims to have felt around him was positive; or whether some other cause diverted him. It is, however true that for some years now his interests have lain in a field that requires a more specialized and more competent critic than the writer of this article. Apart from two early articles, a methodological review entitled 'Da A. Warburg a E. H. Gombrich'[35] and a note on the meaning, rather than the graphics, of some emblems by the school of Vasari and by Matthaeus Merian,[36] he made his first contribution to art history with a paper on 'Tiziano, Ovidio e i codici della figurazione erotica del Cinquecento', read at a conference in 1976.[37] In 1979, in collaboration with his friend E. Castelnuovo, he published an interesting essay in the Einaudi *Storia dell'Arte*. Lastly, in 1981, his book *Indagini su Piero. Il battesimo, il ciclo di Arezzo, la flagellazione di Urbino* created a 'putiferio'[38] among art historians. Some scholars of considerable authority approved of the essay and one provided an introduction to translations;[39] others were highly critical of it. Federico Zeri, one of the two editors of the *Storia dell'Arte* to which Ginzburg had contributed, claimed that his interpretation of Piero della Francesca's *Flagellation*

sinks into abuse. It is here that the complete inadequacy of the author's critical and historical understanding is most evident. Apart from certain errors (Sixtus V did not demolish the Lateran Patriarchio, as one reads on p. 70, to make room for the new Basilica of St. John, which was untouched by him), how can one believe that the four marble columns of the 'mensura Christi' are those which today are in the Lateran cloister? [Those reproduced are] perhaps even later than the time when Piero was in Rome! It is equally unjustifiable to suggest

[34] *L'Espresso* 6 July 1980. See also G. Vattimo, 'L'ombra del neorazionalismo', *Aut Aut*, CLXXV–VI (1980), 175–6. (This fascicule contains other comments on Ginzburg by Vegetti, Rovatti, Comolli and Muraro). Vattimo reproaches Ginzburg for lacking that 'analysis of the rationality of comprehension, of that *Verstehen* which has been – at least since the beginning of the twentieth century – one of the terms of reference of any debate on rationality;... Ginzburg's approach seems more open, but only because it is more indefinite. The fact that the problem is not dealt with in more depth and that the allusion to intuition – so carefully introduced – remains just an allusion, makes it difficult to speak of the 'paradigm of clues' as a true paradigm... in Ginzburg the limitation of a perspective which ignores hermeneutics is more evident... Freud himself is given an exclusively Hegelian reading... I must confess that, though suggestive, Ginzburg's essay seems to be a piece in which the 'Parisian' way is too limiting' (pp. 23–4).

[35] *Studi medievali*, 3rd ser. VII (1966), 1015–65.

[36] 'In margine al motto Veritas filia temporis', *Rivista storica italiana*, LXXVIII (1965), 969–73.

[37] *Paragone Arte*, XXIX (1978), 339, pp. 3–24.

[38] See the note by R. Zorzi in *Comunità* (1981), p. xvi.

[39] M. Warnke, 'Vorwort' to Ginzburg, *Erkundungen über Piero* (Berlin, 1981). But he suggests that Ginzburg might have paid more attention to the 'Cognitive style' which Baxandall had analysed in Piero (p. 13).

that the buildings on the right of the *Flagellation* make allusion to the Lateran: with that type of roof and wooden corbels?[40]

Hans Belting has been equally hard on the last section of the book, though he, like Zeri, acknowledges that the research on the patron Giovanni Bacci and his environment was 'not only positive, but most illuminating'. While the data gathered on the patron of these irenic works of Piero and on the irenic ideology which inspired them after the Council for the Union of Christian Churches is valuable, the strong iconological interpretation of an artist whom Berenson described as being 'in einer Weise hermetisch' met with serious reservations among the experts. Belting not only questioned the identification of the Lateran, the Scala Santa and the Porta di Pilato, but also rejected the identification of the three figures in the foreground. While admitting that one of the three could be Bacci, he holds that the figure who is talking cannot be Bessarion, both because of his age and because he is not dressed as a cardinal, and that the youth cannot be the heir of Federico da Montefeltro, Buonoconte, who died aged sixteen, because the artistic conventions of the fifteenth century did not allow a dead man to be represented as alive and in conversation with people who were still alive. Having approved among other merits Ginzburg's attempt to verify his iconographical interpretation on the basis of archival documents, Belting consoles himself with the conclusion that 'historians too find it difficult to resolve these pictorial enigmas and to initiate us into their inner meanings'.[41]

It must be acknowledged that Ginzburg's historical career has continued to develop in new directions. Though his last book evoked so much criticism, it has none the less identified new documents and new problems to be solved, as in the widely acknowledged case of the 'irenic' patron Bacci. But even though his field of research changes, he does not seem to forgo the delight in paradoxes with leftist-snobbish leanings: he dares to complain that 'today Piero's *Flagellation* is to be seen (rather, hardly to be seen at all) only through a thick greenish bullet-proof glass' (p. 60, n. 1). When Ginzburg was writing, this painting had just been recovered after an astonishing theft – more probably commissioned by a multi-millionaire art collector rather than inspired by social ideologies. Seeing the painting and the historian put in the same painful position as the terrorist girl and her sister in Stammheim prison, as depicted in Margarete von Trotta's movie *Bleierne Zeit*, one cannot avoid the feeling that this kind of paradox goes a bit too far.

[40] 'Dieci in Battesimo, quattro in Flagellazione', *L'Europeo*, 22 June 1981. Cf. Cesare De Seta, 'Manifesto per storici', *Il Mattino*, 6 August 1982.

[41] He states in his review in *Zeitschrift für Kunstgeschichte*, XLV (1982), 327: 'Man kann Ginzburg nicht einmal vorwerfen, dass er nicht gleich im ersten Anlauf uberzeugen kann. Das wäre auch für die Zunft der Kunsthistoriker allzu blamabel geworden. So läuft den Ginzburgs Studie einerseits auf eine erfolgreiche Rodung des kunsthistorischen Thesenwaldes und andereseits auf eine eigene Anpflanzung hinaus, an der wiederum manche Zweige beschnitten werden müssen. In ersten Falle kann man ihm nur applaudieren, wenn er strenge Masstäbe anlegt und eine 'Hygiene' der Ikonologie verlangt, die in den Händen von Nicht-Historiken ausser Rand und Band geraten ist. Im anderen Fall macht der Leser die angenehme Erfahrung, dass es auch Historiker schwer haben, die historischen Bilderrätsel aufzulösen und uns zu Eingeweihten zu machen. Die nicht-verbalen Strukturen solcher Bilder sind auf eine Art und Weise kodiert, für die keine durchgängigen Regeln gelten können. Man muss zugeben, dass in diesem Medium Piero Schwierigkeiten ganz eigener Art bietet, und gerade das sollte einmal zum Gegenstand einer Untersuchung gemacht werden. Die historische Position dieser hermetischen Bildsprache in der Geschichte der künstlerischen Syntax des Quattrocento wäre dann das Thema'.

X

FROM THE *QUAESTIONES* TO THE *ESSAIS*: ON THE AUTONOMY AND METHODS OF THE HISTORY OF PHILOSOPHY*

1. HISTORIOGRAPHY OF RENAISSANCE THOUGHT AND NON-CLASSICAL SOURCES.

History of philosophy and history of science have methods quite different from those of economic and social history and also – the distinction means much to me – of *histoire des mentalités*. Where do we find history of philosophy in the three volumes of essays published in 1974 by Jacques Le Goff and Pierre Nora with the aim of defining "the new problems, objects, and approaches" of the *nouvelle histoire*? Do not misunderstand me: if history of philosophy is absent from these pages, the fault may lie with historians of philosophy, and I have no intention here of lodging a complaint.

It is good to remember how historians of the Renaissance worked in the nineteenth Century. While Burckhardt, in any case, had advanced along the path leading to a *histoire des mentalités*, his contribution was slight – here and everywhere else – to the history of philosophical thought. The creator of *Kulturgeschichte*, unlike his contemporary Hegel, did not see philosophical thought as a moving force in history.[1] But also the few pages which Hegel devoted to "Renaissance and Reformation" are sketchy. So they appear in the way they were arranged by Karl-Ludwig Michelet in 1833–36, and they are even more so in the very recent critical text.[2] Giordano Bruno (whom before Hegel the erudite historians of atheism, as well as Schelling and Jacobi, had interpreted as a precursor of Spinoza) was the only Renaissance thinker to interest and intrigue Hegel, but he honestly confessed that he had difficulties in mastering Bruno's "Nolan" (personal and vernacular) language.

In my opinion two other names should be brought into any discussion of nineteenth-century interpretations of the history of philosophy in the Renaissance. First, along the interpretative line which might be termed Hegelian, Bertrando Spaventa. I imagine that he is now forgotten, but I think he is much more worthy of note than Moritz Carrière or, for the Italian area, than Fiorentino.[3] Spaventa unearths in Nicholas of

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Cusa, Pico, and Ficino moments of Hegelian "philosophy of the spirit", which Hegel himself had not traced back so far in time as the fifteenth century, and he was probably the first to pinpoint "dignitas hominis" in Pico and the latter's dynamic idea of the microcosm. He continued with monographs on Bruno and Campanella and distilled the dialectical moments of an extremely abstract speculative philosophy which could be defined "professional philosophy".[4] And yet his hero was Giordano Bruno, "accademico di nessuna accademia" (a "member of no academy"). Without Spaventa we would not have had Fiorentino's documentary contributions, nor would we have had Gentile's *Il pensiero italiano del Rinascimento*.

Something analogous must also be said about Wilhelm Dilthey. He not only inspired such great historians as Hans Baron and a number of specialists in the history of the Reformation and of ideas of tolerance, but he was also rediscovered and used as a model by an anthropologist like Victor Turner.[5] Therefore, he must be remembered, and not only in connection with the origins of the philosophy of hermeneutics.

However, there is an "object" in our field: philosophical thought, which can not be changed and which must be studied in compliance with demanding and formal rules. This does not mean that no need is felt today for new "problems and approaches" – anthropological, sociological, and sociolinguistic ones – nor that various attempts are not being made in those directions, although unfortunately such departures will never be sufficient in themselves to allow one to complete a piece of research in our field. For the Ancient Age, anthropological techniques and the new decoding of myth are acquired procedures at this point. On the other hand, the work, most of it on a Jungian line, which has been done on the Renaissance seems neither conclusive nor convincing.

However, it has not proved impossible to find some "new objects" of study for historians of philosophy: besides topical method developed by Valla and Ramus, critical and philological conscience before and after Erasmus, let me use as example the theories of astrology and various magical practices. While it has been observed that several decades ago witchcraft and sorcery had got thematically in the foreground of social and religious history itself,[6] it is also true that the theme of their theories and foundations is strongly present today as well in the debate on the history of Renaissance philosophy. Which schools of thought differed concerning the two kinds of magic, spiritual and natural? Which schools of thought defined themselves in the debate on the basic tenets of

astrology? What philosophical sources were particularly dear to the Renaissance theoreticians of magic? Some scholars go so far as to ask which currents of Hellenistic thought concerning magic have a right to be considered philosophical. Can the theory of celestial influence, recently studied by John North and particularly well by Edward Grant, be held to be a theoretical premise of Natural magic because of its astral-elementary classifications of every single being in the sublunary world? Or is divination, like alchemy and theurgy or spiritual magic, merely a game or a somatisation, the end-product of an evocative word or of the imagination? What did philosophers think about witches, and why did philosophical discussions concerning these intensify during the period of their persecution and within the historical context of the crisis brought about by the Reformation? The last point has been studied by Keith Thomas, who makes excellent use of Evans-Pritchard and other social anthropologists.

I have been studying for a certain number of years the problems of magic and witchcraft,[7] but precisely for that reason I prefer not to deal exclusively with them now. Moreover, it is not in the area of magic that the 1990s student of history of philosophy or history of ideas differs most significantly from Michelet or Burckhardt. Let us consider *La Sorcière* and the second to the last chapter of *The Civilization of the Renaissance in Italy*: both discuss a number of what they called "superstitions" without asking what theories Renaissance thinkers formulated about them. Burckhardt, for example, uses Cornelius Agrippa, a German rather than an Italian, as his yardstick. Although he cites *De occulta philosophia*, he does not discuss the theories contained in its first chapters, and he uses instead the shorter and different review contained in *De vanitate*, a text which he did not mention, but also possessed in his private library. This is because he was only interested in describing social customs, and the existence of a "philosophy of magic and astrology" never occurred to him. We can read about this now in a chapter of the recent *Cambridge History of Renaissance Philosophy*; however, it seems a shame that it opens emphasizing both Agrippa and Burckhardt without mentioning such striking characteristics.[8]

How much light has been newly thrown on a number of issues by studies concerning astrology and magic? If we take another look at the sources of certain fifteenth – and sixteenth – century philosophical discussions – on free will and astral determinism, on the absolute freedom of the single contingent event, which upon its realization becomes

necessary, on constellations and especially on the conjunctions which determine "great changes" and cycles in the universal history of societies, states, and religions – we realize that almost all the Renaissance authors use al Kindi, Avicenna, and Albumasar and that these three are quoted with as much respect as Ptolemy and Aristotle. The same is true for magic. In their discussions of imagination (or *phantasia*) in terms of its psychosomatic and transitive action based on what Fazlur Rahman called a "psychological law of symbolization", Renaissance philosophers commented on a number of texts of Aristotle's *De anima* using not only Avicenna, but al Kindi and al Farabi, in addition to the *Picatrix* and books of recipes or prayers transmitted in Greek from the Hellenized East or in oriental languages from lands under Islamic rule. The Middle Ages and the Toledo school of translators had not passed in vain. However, I am listing these exotic names not in order to seem erudite, but because there is no agreement in recognizing both their presence and their importance in the Renaissance, the "period of the rebirth of classical culture". Burckhardt had discarded this definition by showing the organic nature of the civilization of the Renaissance in Italy and by placing its roots in the life of that society. Today we are ready to recognize its more composite nature, not merely classical, "Western", Euro-centric. Of course no one can deny that the recovery of classical texts, the mastering of the Greek language, and the creation of textual criticism were fundamental elements of Renaissance culture. But one of the most subtle philologians and grammarians, Johannes Reuchlin, together with Pico, brought a heretofore unknown patrimony into the Latin world: the Kabbalah. Reuchlin not only compiled the first Hebrew grammar but, in the name of cultural pluralism, he defended the Kabbalah and the Talmud, when they were threatened by one of the Dominican-sponsored bookburnings. Many humanists supported him, and the polemic which ensued produced the famous *Epistolae obscurorum virorum* which was one of the first philosophical pamphlets, or at least one of the first intellectual arguments using satire and maccheronic language as weapons to reach a large public. Why did the humanists take action? To save not a Greek but a Jewish library.

Even Byzantine thought contained elements which were not exclusively Greek. Ficino's translation of a treatise by Psellus (or more likely by a pseudo-Psellus), for example, transmitted the current popular demonology, as did Gemisthus Pletho the religion of Mithras. But I want to end this part of my discussion by bringing in an author who

was entirely philosophical and had little to do with the occult sciences: Averroes. His treatise against al Ghazali, the *Destructio destructionum*, saw theology as a non-cognitive, but pedagogical faculty and gave priests, ceremonies, and sermons the political role of ensuring the consensus of believers. This text, already heterodox in the Muslim context and translated into Latin in 1328, was not very well known until Agostino Nifo put it back into circulation with his 1497 printed commentary. Whereupon it had considerable influence on theories concerning religion and the state, from Machiavelli and Pomponazzi to the period of *libertinage érudit* and the discussions on the so-called "frauds of religions".

2. THE PRINTING PRESS AS AN AGENT OF CHANGE IN PHILOSOPHICAL LANGUAGE.

How can the Renaissance, deprived of these non-Western elements, still be seen as a whole? Let us leave the heritage of the East and the Middle Ages for now. In any case, that discussion would not be complete without bringing in the awareness of the New World and philosophical speculation concerning its inhabitants. It must also be added that my research interests do not coincide with the period of much-debated civic humanism, but cover, instead, the historical epoch about which discussion continues as to whether it can be called "the age of the printers". Marshall Mc Luhan's and Elizabeth Eisenstein's thesis of "the printing press as an agent of change" seems to me acquired knowledge at this point, even though I subscribe to many of Anthony Grafton's criticisms of the latter. I would like to discuss a point raised by Grafton: the question of the "process of publication" of printed or manuscript writings during the age when the two techniques coexisted – actually at its beginning, since manuscript publication "reserved for the few" continued until at least the eighteenth century. Grafton probably has good reasons for asking whether it was true that "the process of publication itself changed so radically as Eisenstein holds, especially from the author's point of view". He thereby admits implicitly that from the readers' point of view more might have changed, but does not take the matter further, probably because such a problem does not enter into his methodology. One of the many and great contributions unanimously recognized as coming from P.O. Kristeller and his school is the attention paid to the material support or framework of a philosophical writing. In this connection Grafton

reminds us that Kristeller "showed long ago that publication followed the same course for a fifteenth-century author whether the book in question was to be copied or printed".[9] Kristeller is also invoked by both Eisenstein and the authors of the *Cambridge History of Medieval Philosophy* in their chapters on "Manuscripts", "Printing and Censorship", "The Availability of Ancient Texts", and "The Rise of Philosophical Textbooks".[10] However, only Eisenstein poses the problem of the readers or users of these messages.

Of course it is unacceptable to see in printing an "agent of change" for what concerns the content of philosophical ideas. I, too, obviously find such vulgar historical materialism repugnant. But I must confess that, in studying the history of philosophy, I discover that my interest extends beyond its doctrinal content. While this does not seem to me to be resorting to *histoire des mentalités* – I like, instead, to keep anchored to a specific (but not exactly "professional") definition of philosophy – I nevertheless still find its impact on society important: the way in which the forms of circulation vary and the answers it sometimes gives to the problems of the community and the common man. Such a conviction has a number of reasons. I will not mention every reading, which influenced me, but just two of them. In any case, the first scholar I want to mention in this connection is a non Marxist philosopher, Chaïm Perelman, who studied argumentation in order to analyse "the adaptation of the speaker to the audience" and demonstrate how the nature of the audience has a reaction-effect on the author and the nature of the discourse.[11] More pertinent, perhaps, is research based on Marshall McLuhan's findings, and, better still, Jack Goody's.[12] Why not try and study the consequences of extended literacy in the history of philosophy as well? What one might expect to find after adapting Eisenstein's hypothesis involves the circulation and interaction of philosophical ideas rather than that mysterious process consisting in the original conception of a new philosophical doctrine. But who can truly isolate and fix that instant? If the audience also has a reaction-effect on the author philosopher, on his possibility of communicating, and on the different messages which he wishes or is able to convey, then new questions are also forcing themselves upon the attention of the historian of philosophy.

Some examples. Why did Scholastic philosophy and its *quaestio* begin to fade from the age of Gutenberg on?[13] Why, when both religious and, precisely, philosophical theses could finally be printed and used

for propaganda purposes, do we find the most rigid and systematic forms of censorship, and finish up with the Index of prohibited books? Why is it that the specific possibility of attaining different levels (from publication in print to clandestine circulation), is a process which led to the birth of the essay?

Kristeller himself has noted that this literary genre was born in the Renaissance. In my opinion the moment of crossover from the Middle Ages to the Renaissance, or "from the age of scribes to the age of printers", lies in the difference between a *quaestio* (be it by Aquinas or Buridan, Petrus Abanus or Pomponazzi) and an *essai* (especially if it is by Michel de Montaigne).[14] This is not meant to reduce an entire philosophical periodization to the perspective of one format, or even stylistic aspect. It is obvious that there are other fundamental differences beyond those of literary genre. But even a genre can be revealing. There are, of course, particularly in the pre-Scholastic age, texts which could be loosely termed essays: John of Salisbury's *Policraticus*, for example. Then we have Petrarch's *Secretum* and his *De sui ipsius et aliorum ignorantia*. But Petrarch's name reminds us that he and Dante and Boccaccio would never have used vernacular prose to write about lofty subjects.

The same was true in the Germanic area for Nicholas of Cusa, Gutenberg's contemporary. Here is something else to watch for then: the slow and geographically varied use of the vernacular in treating such a high subject as philosophy. (In this tendency Italy proved to be precocious). Leonardo Olschki did the groundwork in 1919–1922 for a history of scientific literature in the modern languages, but, seventy years later, his outline is still waiting to be filled in and brought up to date according to new working methods.[15]

The following could be some additions to Olschki. One concerns Simone Porzio, a mid-sixteenth-century professor who, after cautiously keeping his Pomponazzi-inspired writings in the bottom of a drawer for years and years, decided to publish them all together at the same time, both in his elegant Latin and in the still more elegant Tuscan versions of G.B. Gelli. However, the anonymous translation of the treatise *De mente humana*, concerning the ticklist question of the immortality of the individual soul, was prepared but stayed in manuscript form. It is clear that at some point in the publication process, considerations intervened concerning censorship and being reported to the Inquisition. A calculatedly bold treatise could be published in Latin because it was

thought to be intended for a more restricted and cultivated, almost specialist audience, but the same was not true of vernacular writings. They belonged to the field open to ladies and shoemakers (such was the profession of G.B. Gelli, Porzio's translator).[16]

However, it is Pomponazzi himself from the ranks of the philosophy teachers who provides an opportunity for a classification and typology of philosophical writings which is particularly interesting and full of developments. I will not treat here the rôle which he tried to assume, or which Speroni attributed to him, language he used for his lectures. A discussion of maccheronic language would be valuable since it was used so often in philosophical polemics:[17] Hutten and the *Epistolae obscurorum virorum* I mentioned earlier, a few of Erasmus's *Colloquia*, and Agrippa's pseudonymous *Dialogus de vanitate scientiarum et ruina christiane religionis*, up to Rabelais and far beyond. However, let us stay with Pomponazzi. He did not have the stylistic and linguistic competence of a humanist and confessed this openly insofar as the Greek classics were concerned; it was not necessary to do so for his style. However, he was an up-to-date thinker and his philosophical views had evolved considerably, to the point where from 1513 on he stood on advanced radical positions. That is, he expounded a theory of the intellect influenced by Alexander of Aphrodisias and his politico-religious ideas were derived from Averroes' *Destructio*. Harmony with the Inquisitors was difficult under these circumstances. And yet he dared **A** to publish and publicly defend in printed debates his famous *Tractatus de immortalitate animae*, and it is the only one of his works to be written in a readable Latin. Pomponazzi does not abandon the procedures typical of *quaestiones*, but he exploits their best aspect in distinguishing all of the different hypotheses on the nature and parts of the soul. The work stands apart from many of his other works for its accurate syntax, and he probably had some help in writing and revising it. In this case, we can assume that he and his friends wanted the *Tractatus* to reach a wider than university audience and to be read by fastidious Latinists. He obtained this result as we know, to the point of involving the refined Gaspare Contarini as an anonymous "Contradictor"; on the opposite side of the baricades, he unleashed furious sermons against himself in the *campielli* of Venice.

Nevertheless, for many years Pomponazzi had permitted himself blasphemous maccheronic jokes in his university lectures **B**, which were much heavier and more theologically compromising. In that setting, however, he enjoyed the so called *patavina libertas*. The courses which were "reported" by his students and copied out in manuscript form, probably with his consent, were a model for many teachers of Aristotle for decades. Here is a second type of circulation intended for a specialized public and probably circulating clandestinely.

C Pomponazzi's published works, or at least the *Quaestiones* prior to the *Tractatus* consitute a third case: there the usual problems of the Aristotelian schools are examined without maccheronic language and anti-clerical jokes: they are for the eyes of colleagues only.

D However, two books constitute an exception: the *De incantationibus* and the *De fato* written in 1520 were purposely left unpublished because of their excessively daring doctrinal content. (Did an analogous caution inspire Machiavelli keeping the *Prince* unprinted for almost twenty years until his own death?). However Pomponazzi referred in these works to his former ones, thus avowing his authorship and letting them be circulated among friends. When they were published much later in Reformation territory, the editor Guglielmo Gratarol had to have them completely rewritten in a more correct Latin. A comparison between this case and the first one mentioned shows, on the one hand, the difficulties of a Scholastic teacher in coming to terms with a new literary style, and, on the other, the changing resources and levels of publicity to which he recurred in order to make his ideas known. **C** The *Quaestiones* were certainly the least effective, both at the time and today. The other three cases worked notably well: **B** manuscript copies of the *reportationes* (notes from courses) circulated throughout the sixteenth century and afterwards; **D** clandestine copies of the two 1520 treatises made it possible for them to circulate widely, and also before their printing (1556; 1567) a number of readers also knew them in manuscript form; and finally **A** the cleverly orchestrated polemic about the *Tractatus de immortalitate* is an almost unique case of the use of printing in order to concentrate attention on a philosophical thesis which had just been condemned by the Fifth Lateran Council. This polemic will fade from memory, together with the attacks on the author and his apologies, but the Alexandrist thesis, for the modern reader, still remains linked with the name of Pomponazzi.[18]

3. LATIN AND VERNACULAR, ELITIST AND POPULAR, CLANDESTINE OR PUBLISHED PHILOSOPHY IN THE RENAISSANCE

He was not the only good navigator. Setting a course between readers and Inquisitors was initially easier for Humanists and Platonists who used a less technical language in order to introduce inexperienced readers to philosophy. Several chose the vernacular: Ficino wrote several of his works in Italian or else had them translated by friends; L.B. Alberti wrote in Italian *De la Famiglia*; Pico his *Comento alla canzona d'amore*; Leone Ebreo the *Dialoghi d'amore*; Campanella *La Citta del sole*. However, it must be recognized that the vernacular writing was not the only one to reach a large audience. It has been shown again recently that Erasmus, the humanist *par excellence*, by means of a "selective" and "radicalizing" reading by school teachers, who were often heretics, reached a large popular audience not only in Spain but also in Italy. Here we are talking of indirect circulation and word of mouth, whereby "Erasmus the grammarian guilty of placing the Holy Spirit under the rod of Donatus" in his edition of the New Testament, and Humanism in general actually seem to some historians to be "the communicative dimension of the Reformation".[19] However Erasmus also had a direct impact, and his splendid, unpedantic Latin served as a model for the written presentation of an argument. Thomas More, Vives and Cornelius Agrippa followed his example. Without sacrificing discipline and coherence of philosophical reasoning, they chose to write in a low register, cultivating a style which would be comprehensible to the common reader and also creating a type of polemical writing which was both allusive and ironic. Think of Erasmus's *Enchiridion militis christiani*, of his *Ratio seu methodus* and last but not least of his *Colloquia* (designed as an exercise book for students of spoken Latin), but so felicitous both in terms of plot and religious or philosophical polemic. They are said to be among the most important models for Rabelais, for the *Viaje de Turquia* by Doctor Laguna, a high-level scientist and intellectual,[20] and for the *Apologie de Raymond Sebond* and all of Montaigne's *Essais*. By the time the latter were written, a type of philosophy had been created which was both colloquial and militant – insofar as one could be militant during the Counter Reformation.

Why were the Index and the Inquisitors always so hard on Erasmus and his heirs? As a writer his conduct had been responsible, and he had shown good sense in judging what and how to print. Another case confirms and perhaps explains this censure: that is the fact that Giordano Bruno, a decidedly superior speculative philosopher with a popular style, began his "heretical" meditations reading, precisely, writings and editions by Erasmus. For fear of being discovered, he hid the compromising material in the latrines when escaping from his Naples convent.[21]

In conclusion I would like to mention two very great figures in both science and philosophy: Copernicus and Galileo. Galileo's magisterial prose is a milestone in the history of the Italian language. Hoping to deceive the censors, he had purposely chosen the dialogue form for the *Massimi Sistemi*, but to no avail. Is it not possible that the very clarity of his vernacular exposition contributed to worsening his position? Copernicus was writing in less severe times, and he is a case of even more extreme caution. Having decided not to publish the *De revolutionibus orbium caelestium*, he did not let it circulate at all in manuscript form, even to such a qualified reader as Cardinal Nicholas Schönberg who had offered to pay for having it copied. He only released a very few copies of the *Commentariolus*, an outline written in 1514. If it had not been for the persuasive efforts of Bishop Tiedemann Giese and of a Wittenberg professor Georg Joachim Rheticus, the Copernican system would still lie within the pages of a manuscript in the small town of Frombork and might even have been lost altogether. Copernicus finally decided to authorize Rheticus's *Narratio prima*, a sort of preprint, and it was submitted for safety's sake to Melanchthon beforehand and only allowed to circulate after it had been approved. In the end the author consented to the publication of his masterpiece. The place of publication is typical of the times: While Rheticus's edition of Copernicus' technical work *De lateribus et angulis triangulorum* was published without problems at Wittenberg, Nuremberg, a less official center of Lutheran culture, and a friend as printer (Petreius) were chosen for the *De revolutionibus*. In any case, it was the "conventionalist" preface written by another protestant, the theologian Osiander, which, by acting as an antidote, ensured the treatise's publication.[22] As Bruno later deplored, the Copernican system was only published because it was passed off as a fable.

Philosophy and science are commonly supposed to be élitist forms of knowledge. However, they are not élitist by nature, and it may occasionally happen that they become involuntarily involved at levels which have nothing élitist about them. In some instances, as in the case of

the esoteric "Pythagoric" penchant sometimes exhibited by Copernicus, censorship and the Inquisition encouraged a circulation limited to a few elect souls as well as obscure or secret expressions of thought. The Sixteenth Century (mainly the Counter-Reformation) was, after all, the period which gave birth to the emblem. Even if in emblems the image seems to prevail over the text, it is really the latter which gives the key of its (nicodemitic?) meaning. Word gives the message, image helps to remember it.

But even in the face of adverse circumstances, philosophy obeys an ideal of communication which is clear and distinct and therefore accessible to any healthy mind. Descartes said this although he too was certainly cautious. The clarity and distinctness[23] being sought after in the age of printing is no longer that of the syllogisms and of *quaestiones*. An author's choice of forms which are more and less accessible to his readers depends on a number of extremely complicated factors in this period: and the different cultural levels at which his messages are received and bear fruit certainly do not depend only upon the author. Could Giovanni Pico ever have predicted that his *Conclusiones*, which he wanted on display in all the universities and which he would had wanted discussed in Rome, would have had a relatively late circulation (in the same way as his clandestinely printed *Apologia*)? Or that the rather ponderous *Disputationes adversus astrologiam divinatricem* would have been so widely discussed, not only in the universities, but in the numerous popular prognostications unleashed by the fear of the end of the world in 1524?

The sociological study of reading – increased literacy in the age of printing, cost, demand, and organizational structures for reading, etc. – can help fill in the picture of the history of philosophy. It also gives new meaning to data about manuscripts, printing and censorship, the availability of the classics, and manual-writing. But such an approach will be particularly useful if, as we examine a thinker's text, we ask ourselves: was he engaged in his time or did he prefer not to get involved in its battles? How strongly did he react to contemporary religious, political, or social problems or were they extraneous to him? How hard did he try to reach his public or to what extent was he prevented from doing so? History of philosophy is now a part of history, no longer a part of philosophy, nor its completion. Of course the importance of the historical context and the clash with fundamental philosophical ideas vary

from case to case. Perhaps this is why today one sees difficulties everywhere in writing general histories of philosophy, even for a limited period such as the Renaissance.

We see that historians have acquired a critical distance which enables them no longer to identify themselves with the Renaissance, as Burckhardt's followers used to do, and this turn of mind developed gradually after World War I.[24]

Are historians of philosophy today about to acquire another type of critical distance? I mean that they are probably becoming aware that history of philosophy need no longer be identified with philosophy, nor philosophy with its history, as Hegel, Spaventa, Gentile and their followers used to maintain. If this way of doing the history of philosophy is finished, as many have written before now, why not try to give some modest, documentary and chronologically limited contributions to an *histoire à part entière*?

NOTES

* I read a first draft this paper in a panel-discussion with Nathalie Zemon Davis, Anthony Molho and other scholars opening the 50th Meeting of the Renaissance Society of America in Boston 1989; Guido Oldrini, Alessandro Pizzorno and Ronald G. Witt very kindly read and commented on it; Ann Vivarelli translated my paper: I am very warmly grateful to all of them.

[1] Cfr. W.K. Ferguson, 1948, chapters VII and VIII. M. Ghelardi, 1991; this author kindly informed me about the copy of Agrippa's *De vanitate* owned by Burckhardt.

[2] G.W.F. Hegel, 1986, pp. 49–51, 232, 238–239.

[3] Cfr. P.O. Kristeller, 1979, pp. 154–155.

[4] *Ibid.*, 154.

[5] Cfr. V. Turner, 1982 (see Introduction).

[6] E.W. Monter, 1969, p. 205.

[7] P. Zambelli, 1991.

[8] B. Copenhaver, 1988, *Astrology and Magic*, in Ch. B. Schmitt and Q. Skinner (eds.), 1988, pp. 264–267; cf. P. Zambelli, 1992b.

[9] A. Grafton, 1980, p. 280–281. Grafton refers to P. O. Kristeller, 1937. See also Kristeller, 1956, pp. 473–493.

[10] Ch. B. Schmitt and Q. Skinner (eds.), 1988, see the chapters by J.F. D'Amico, Grendler, Grafton, Ch. S. Burnett.

[11] Ch. Perelman et L. Obrechts-Tyteca, 1958; cfr. also Toulmin.

[12] I am mainly referring to Goody (1962–63): the new developments of Goody (1977),

(1986: see preface) and (1987) do not modify the issues which interest me in the first, seminal essay.

[13] I am not persuaded by the thesis enounced by Paul Grendler, *Printing and Censorship*, in: Ch. B. Schmitt and Q. Skinner (eds.), 1988, 38 that "the massive printing of mediaeval philosophy during the first fifty years of printing ensured its survival and continuity": scholastic books were still needed for university teaching and this is a sufficient explanation for being printed, not a reason for cultural survival.

[14] T. Cave, 1979; Beaujour, 1980; A. Tournon, 1983; N.Z. Davis, 1985.

[15] Olschki, 1919–1922; Ferguson, 1962, p. 306 f.; Rice, 1970, pp. 8–10; Pörksen, 1983 and 1986.

[16] A. de Gaetano, 1976; P. Zambelli, 1980, pp. 6, 30–31.

[17] L. Lazzerini, 1988, pp. 83–88.

[18] B. Nardi, 1965; P. Zambelli, 1992.

[19] S. Seidel Menchi, 1987, pp. 124 and 55.

[20] M. Bataillon, 1950, p. 682; M. Bataillon, 1958.

[21] Ciliberto, 1990, pp. 10–11.

[22] E. Rosen, 1971, pp. 281–288; N. Copernicus, 1975, pp. 28–31; R.S. Westman, 1975; J.J. Rheticus, 1982.

[23] R. Descartes, 1966, p. 41 (Discours de la Méthode, Cinquième Partie): "ne recevoir aucune chose pour vraie, qui ne me semblait plus claire et plus certaine que n'avaient fait auparavant les démonstrations des géometres".

[24] G. Ritter, 1923, pp. 396–397; W.K. Ferguson, 1948; P.O. Kristeller, 1979, p. 153.

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