these light bodies" (*Par.* 1.99 ["com'io trascenda questi corpi lievi"]), and Beatrice gives an explanation (lines 103–42) that is overtly Aristotelian insofar as it draws on Aristotle's explanation of the motion of sublunar, elemented things as caused by the tendency of the elements each to return to its proper level (*Physics*, Book 5), the pilgrim's "proper place" being Heaven. But the Aristotelian terminology is put to the service of a conception entirely foreign to Aristotle, who denied the possibility of the separate existence of the soul, as well as its descent from or return to a spiritual realm (the crossing of the Neoplatonic ascent of the soul with Aristotle's terminology goes back to Augustine's *Confessions* 13.9; for the question of the pilgrim's body, see our Introduction, pp. 14–16). As so often in thirteenth- and fourteenth-century texts, the outward clothing of Aristotelian terminology masks the more fundamental allegiance to the Platonic/Neoplatonic tradition.

R.M.D.

12. Dante's Astrology

A. Introduction

In the Middle Ages, the terms astrology and astronomy were virtually synonymous. It was universally agreed that the sublunar world was governed by the heavenly bodies. The only aspect of human nature that was held by Christian thinkers to be exempt from the direct influence of the stars and planets was the intellect (one of the main foundations of this belief was the general acceptance of Aristotle's dictum that no physical organ was identifiable as housing the intellect). The organs of the human body, however, were fashioned in the womb under the influence of the heavens and remained under it day by day. Although the intellect itself was not thought to be bodily, many faculties closely related to it had bodily organs: memory, imagination, judgment, all determining personality, including artistic gifts (they included inventiveness, fertility of association, and other powers). It was well known that bodily ailments could interfere with the functioning of intellect and that general health, as well as body type, was vital to it (for general discussion see Durling/Martinez 1990, Introduction).

All these ideas belonged to the science of the stars, whether called astrology or astronomy. There was, however, sharp disagreement between the mainstream Christian intellectuals and the proponents of judicial or divinatory astrology with its basic assumption that everything sublunar was determined by the stars. In its extreme form (Ptolemy, the Arab astrologers, on whom see Additional Note 10), this amounted to a thoroughgoing determinism, excluding any possibility of freedom of the will. There was a considerable range of opinion on the extent of the influence of the stars, but the deterministic position was vigorously combated by the Church and its leading intellectuals. But the European professional astrologers (in the thirteenth century including such figures as Michael Scot and Guido Bonatti) were of course prominent on the social scene and prolific as writers, and their kind continued to be consulted by rulers and to have great influence well into the seventeenth century.

B. Dante's early astrological conceptions

Dante's interest in astrology is evident early in his career as a writer, emerging with particular force around the turn of the thirteenth century, particularly in the first three of the so-called *Rime petrose* [stony rhymes], in which the lover's very life is threatened by the configuration of the heavenly bodies (the night sky is dominated by Saturn and Mars, the beneficent planets being below the horizon). A precise, datable horoscope (for December 1296) is implied in the first poem and is treated as an inversion of his natal horoscope, in which the sun in Gemini is identified as the ascendant. Gemini is one of the houses of Mercury, and Dante either knew his actual horoscope or else made one up that was entirely appropriate for a learned poet. The *Petrose* represent a major step forward in Dante's development, one that anticipates the *Comedy*, for Dante treats the lover's problematic relation to the cosmos in poems whose stanza forms are themselves microcosmic imitations of the astrological cycles of nature (see Durling/Martinez 1990; for the importance in the *Comedy* of Dante's natal horoscope, see also Additional Note 14.

In the early years of the fourteenth century, the new exile began a major work, the *Convivio* [Banquet], an introduction to cosmology and philosophy for the unlearned, announced (at the beginning of Book 2) as a commentary on what were to be fourteen of his own canzoni. In this fragmentary work, not published in Dante's lifetime (what comes down to us consists of an introductory book followed by three others, each with a canzone plus elaborate commentary), there are important passages of astrological speculation.

The question of the part played by the secondary causes in the fashioning of human beings preoccupied Dante from the *Petrose* onward. He ultimately accepted the Dominicans' refutations of Averroës' central Aristotelian doctrines of the separateness of intellect and the mortality of the soul, but he rejected Aquinas's theory of the repeated miraculous discontinuities of fetal development in favor of a theory closer to Albertus Magnus's more naturalistic one (see *Purgatorio* Additional Note 11).

The passage in *Conv.* 4.21 on the production of the human soul documents an important moment in the evolution of Dante's thought, and it reveals very clearly its Neoplatonic origins. The development of the fetus, Dante says, is governed by three factors: the generative power in the seed, derived from the father; the power of the heavens; and the power of the elements assimilated into the fetus to form its complexion. The power of the heavens "produces the living soul" from "the potentiality of the seed." "The [soul] immediately receives from the Mover of the heaven the possible intellect, which brings with it potentially all the universal forms, according as they are in its Producer, and so much the less as [the Producer] is more distant from the first Intelligence." Although not fully spelled out, the idea is clear enough that the various angelic Movers of the spheres are more and less distant from the First Intelligence (whether the Mover of the *primum mobile*, as in *Paradiso* 29, or God himself) according to whether they govern lower or higher planetary heavens. The possible intellect received from the Mover of the sphere of the Moon would be less pure than that received from the Mover of Saturn, and consequently its possessor would have more difficulty in achieving the most abstract understanding.

The roots of this passage in the Avicennan/Averroist version of the emanation of the angels and the heavens and their power over human beings are clear. It is an unusually technical variant of the popular astrological doctrine of the children of the planets (see Hauber 1916),

according to which the planet that "rules" a nativity has a preponderant influence on the native, to the extent of determining the occupation(s) to which he or she will be drawn, as well as the temperament, a principle that Dante uses as a fundamental doctrine and chief organizing principle of the entire *Comedy. Purg.* 25.37–78, Stazio's account of human embryology, avoids specifying the role of the angelic Intelligence, although the entire process is governed by "nature" (cf. the three "powers" of *Conv.* 4.21) and must be understood in connection with the other passages we have discussed, as well as *Par.* 8.97–148. How far the *Comedy* has moved from the *Convivio* is not entirely clear. (For another important *Convivio* passage, see Additional Note 13.)

C. Astrology in the Comedy: Inferno and Purgatorio

There have been very few serious discussions of Dante's astrology, and most of them deal exclusively with the Comedy. Palgen 1949 and Kay 1994 are essentially monographic in scope, focusing on passages in the *Paradiso* related to the tradition of astrological manuals deriving from Claudius Ptolemy's *Tetrabiblos*, neither raises the general question of the function of such references in relation to the fundamental cosmological poetics of the Comedy. Kay has a very useful introduction on the distinction between divinatory astrology and other forms, but in general his work suffers from a presupposition that Dante attributes to the souls encountered in the Paradiso the personalities the tradition associates with the "children" of the various planets, including faults; he seems to forget that all of them have passed through Purgatory before reaching Heaven, thus ordering their desires, and at times he contradicts Dante's explicit statements. Nevertheless both Palgen and Kay have demonstrated that Dante knew the traditional manuals well and drew on them extensively (Kay includes a useful "Biobibliography" on the astrological writers who may have been known to Dante, and he is the first to confront seriously the thorny question of Dante's astrological sources). Cornish 2000, with many penetrating observations about the astronomy of the *Paradiso*, does not confront the astrological theme as such.

A more comprehensive approach was undertaken by Georg Rabuse (1958 and a series of articles collected in Rabuse 1976a), who argued that traditional astrology, integrated into a Neoplatonic cosmology based on Macrobius's *Commentarii*, underlies the parallel structures of the three cantiche of the poem. Many of Rabuse's positions, both in detail and in general (particularly the excessive emphasis on Macrobius to the exclusion of other sources), now seem mistaken, but his grand attempt to achieve a comprehensive view (by and large ignored by "mainstream" Dante scholarship) is most suggestive and at times deeply illuminating. It deserves to be known and to stimulate further work. Particularly impressive is Rabuse's exploration of the close interrelation between the cantos in *Inferno* and *Purgatorio* corresponding to the planet Mars.

That there is a parallelism among the three cantiche of the poem has been recognized in a general way by many critics, but none before Rabuse attempted to establish its astrological basis. As Dante makes clear in *Purgatorio* 16, when he also explicitly rejects divinatory astrology, the individual must struggle to establish the freedom of the will from the body and from the influence of the heavens:

The heavens begin your motions: I do not say all of them, but, supposing I say it, a light is given you to know good and evil and free will, which, if it last out the labor of its first battles with the heavens, afterwards overcomes all things, if nourished well (lines 73–78; cf. lines 79–81).

These lines clearly imply that giving way to one's temperament as shaped and influenced by the stars and planets can lead to sin and vice. In the *Inferno*, then, we may expect to find the negative reflection of planetary influences, and Rabuse was certainly correct in seeing in the circle of violence (Cantos 12 to 17) the malefic influence of Mars (cf. the explicit reference in 13.143–50). Hell is by definition Babel, or confusion, however, and such matters should not be expected to be simple: there seem to be at least two overlapping systems; it is clear that the trimmers in Canto 3 represent a degree of instability that must be associated with the moon, and that at the other extreme, the treacherous correspond to the planet Saturn, archpatron of traitors, dominant in winter and producing freezings and floodings (as Satan also refers to the mythological Saturn devouring his children). But Saturn, with the moon and Venus, is also a chief influence producing an inclination to lust, particularly associated with air and wind (tumescence was thought to be the result of air pressure—the idea goes back to Aristotle's famous Problem 13), and Saturn is unavoidably present in Canto 5. It is clear from Paradiso 10 that the heretics (Inferno 10–11) correspond to the sun, whose influence they specifically resisted (cf. Inf. 10.100–105, with Durling 1981b). It may be that the Noble Castle in Inferno 4 reflects a positive influence of the planet Mercury, a chief influence in all arts and sciences, but it is also clear that the Malebolge (Cantos 18-30) correspond to the negative influence of Mercury, patron of thieves and deceivers. There is clearly a break between the cantos of incontinence, where the negative influence of the four elements and four humors in the human body is central, and the circles of deliberate malice; nevertheless the sequence of sins represents a gradual descent into the elements of water and earth (Cantos 6-9), associated with Saturn; the sullen and the angry, in whom fire anticipates its role in lower Hell, seem to represent subforms of the negative influence of Mars.

There is thus a wealth of suggestion to be pursued in further investigation. One must beware of rigid formulae; however, that Dante thought the influence of the planets was discernible in the damned is strongly implied by Marco Lombardo, and, although their wills must have freely chosen to follow the negative side of planetary influence, Dante has clearly worked the theme out in some detail.

While the *Purgatorio* features the seven deadly vices on the seven terraces of its mountain, clearly related, in reverse order, to the cantos of incontinence in the *Inferno*, Purgatory is the realm where the work takes place of correcting whatever negative effects the heavenly bodies have had on the soul. Now out of the body, the penitents are no longer directly influenced by the stars, but the influence of Mars on their temperaments as part of what must be corrected is clearly involved on the terraces of envy and anger, and on the terrace of anger Dante has Marco Lombardo refute the idea of astrological determinism, being himself a Mars-influenced nature directing his anger against the errors of the superstitious. The cold of earth, moon, and

Saturn is explicitly a factor in the three vices avarice, gluttony, and lust in 19.1–6 and the subsequent dream. When we reach Eden and Matelda explains that the pagan myth of the Golden Age (when Saturn, in his good form, ruled on earth—*Purg.* 28. 139–44) was a dream of Eden, we are making the transition to the realm of the last cantica, where the influence of the planets on the souls we meet, with the exception of Piccarda and Costanza, will have been entirely beneficial.

The treatment of astrology in the *Paradiso* is discussed in Additional Note 14, for reasons that will become clear.

R.M.D.

13. The Heavens and the Sciences: Convivio 2

Convivio 2.12–14 draws an extended analogy between the nine celestial spheres and the seven liberal arts, in the traditional order: first the trivium—moon: grammar, Mercury: dialectic, Venus: rhetoric; then the quadrivium—sun: arithmetic, Mars: music, Jupiter: geometry, Saturn: astronomy; and then the other sciences—fixed stars: physics/metaphysics, primum mobile: ethics, and Empyrean: theology. All these Dante calls "sciences," and in each case he finds two points of comparison between the sphere and the corresponding science. In the case of the moon and grammar, for instance, Dante associates the moon spots with the arbitrary (thus ultimately opaque) conventionality of words, and the moon's cycle of phases with unceasing linguistic change, and for each of the heavens he lists what seem to most modern readers to be arbitrary similarities. It is a puzzling, tantalizing passage, most often considered a mere sudden, caprice of Dante's wit, and most scholars do not believe it has any relevance to the Paradiso (with the possibly unique exception of Mazzotta 1993). But the passage has much to teach us. And, at least in the case of the moon, connections with the Paradiso fairly leap out at one: with the apparent arbitrariness of personal fate (the color of Esau's and Jacob's hair: see 32.61–72, the fact of Piccarda's weakness), with the question of changeability, and so forth.

What exactly is the basis of the analogy? Why does Dante think there is an analogy between the heavens and the sciences at all? I quote the beginning of his discussion:

I say that by heaven I understand science ... because of three similarities that the heavens have with the sciences, especially because of the order and number in which they manifestly agree.... The first similarity is that both revolve around something that is unmoving. For each of the moving heavens turns about its center, which is not moved by that turning; just so, each science moves about its subject, and the subject does not move, since no science demonstrates its own subject but rather presupposes it. The second likeness is that both illuminate. for each heaven illuminates visible things, just as each science illuminates intelligible things. And the third similarity is the inducing of perfection in things properly disposed. As to the first perfection, that of substantial generation, all the philosophers agree that the heavens induce it.... ⁵ In a similar way, the sciences are the cause that induces the second perfection in us, for once we have acquired them as habit we can contemplate truth, according to the Philosopher, when, in the sixth book of the Ethics, he says that truth is the good of the intellect. Because of these