comedy on *Cupid and Psyche*, it still seems to me inapposite to try and read the role of the goddess of Love in that story too closely in terms of the stock dramatic character of the stern father (167; 175; 177). Frangoulidis rides his good ideas a little too hard.

This book will be found useful by specialist scholars and postgraduate students concerned with the specific texts of Plautus, Terence and Apuleius with which it deals in detail. Its laboured prose, untranslated Latin and idiosyncratic format certify that it is unlikely to appeal to a wider readership.

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The twelve chapters of this volume derive from a conference held at the University of Pittsburgh in 1990, five developed from commentators' responses. While it is an important collection for scholars working on the physical theories of Aristotle and the Aristotelian tradition, the exclusion of Plato, the originator of the concept of self-motion, is a major deficiency in its usefulness and balance. Without argument the editors unabashedly deny him any influence apart from Aristotle (xiii, n.b. also 6 n.5; but cf. 3 n.2, 137, 176 n.6), contrary to the explicit admission of some contributors (176, 291, 293, 303). Again, there are later figures of major importance for the topic who receive no direct attention, such as Augustine (see only 294-95), and Leibniz (see only 326). David Furley's often cited 1978 paper 'Self-Movers' is here reprinted as a second introduction. It argues that, notwithstanding
the apparent denial in Ph. VIII.2 and 6, Aristotle accepts that animals move themselves: their desire and motion answers only to ends as intentional objects, i.e., as depending on their own imagination or (in the human case) conceptual and moral condition. The medieval case, at least, for the opposing point of view is well summarised by Peter King (231-38).

Possibly the most significant essay is Gill’s own (previously published 1991), with an alternative interpretation of self-motion in Aristotle as common to every living nature, not just animals. Beginning from his distinction between an active *dunamis* (power, or capacity) to affect something else, and the passive *dunamis* to be affected, together necessary for change, Gill also distinguishes between active (i.e. natural) forms, which reproduce themselves, and passive (artificial) forms, which do not (17-21). Her assimilation of these distinctions leads her to identify the external cause of motion from Ph. III.3, *Meta.* Δ.12 and Θ with the formal cause *qua* nature, as an internal agent of self-motion, inclusive of nutrition and growth (22-23). This has important consequences, but is without textual warrant (the GA refs. in n.19 concern action by the semen on the menses *qua* other material). While *Meta.* Θ.8, 1049b9-11 allows that in an extended sense nature does count as a *dunamis*, this is not in the sense of a cause of motion, precisely because it essentially acts on itself, contrary to the strict definition of an active *dunamis*. But now since Gill’s active form preserves itself (not merely replicating itself), and yet is an active *dunamis*, she infers that a self-preserver also has a passive *dunamis* to be preserved (26-27 with n.32).

Gill identifies nature with what Aristotle elsewhere calls a second potential (e.g. that of a trained expert to know, or of a creature already with eyes to see), and yet these do not involve an agent, by transmitting its form, assimilating the affected subject to itself as it already is, which is Aristotle’s definitive characterisation of the effect of a moving cause (Ph. III.2, 202a10-13). But in that case there is no basis for distinguishing within a natural being active and passive potentials for self-change. To
justify this Gill appeals to DA III.5’s distinction of active and passive intellect (23-24), but that is extremely controversial, since the active intellect is held by many to be external and its rôle is not made explicit by Aristotle. Gill’s speculative answer to Furley, then, is that self-motion is not limited to animals, but integral to Aristotle’s conception of natural activity.

In ‘Aristotle on Perception, Appetition and Self-Motion’ Cynthia Freeland claims the question of animal self-motion is properly one of the compatibility of final and efficient causes. Susan Sauvé Meyer, by contrast, defends a voluntarist position. These essays are essentially concerned with Aristotle’s position in a debate on free will and determinism, a question he admittedly invites by his discussion of moral responsibility in EN III.1, adduced by Furley. Michael Wedin’s ‘Aristotle on the Mind’s Self-Motion’ aims to defend the cognitivist interpretation of DA in his 1988 book. Opposing the view that the active intellect in DA III.5 is transcendent, Wedin applies the concept of asymmetric causal levels to interpret Aristotle as saying universals, as objects of mind, are produced, in effect, as epiphenomena. In his expanded commentary on Wedin, Christopher Shields focuses on the apparent contradiction between the claims that thinking is up to us, and that, according to Ph. VIII.4, it occurs unless impeded.

The last two papers on Aristotle return to the question of heavenly motion also discussed by Gill (28-34). Aryeh Kosman, in ‘Aristotle’s Prime Mover’ argues that Ph. VIII describes an unmoved mover which is a ‘soul-analogue’: this merely explicates what is assumed in DC. Meta. A is further removed, on Kosman’s view, focusing on the priority of activity to motion (139-40). In his response Lindsay Judson defends the developmental account that DC must refer to an absolutely self-generated heavenly motion, to be contrasted with the later Ph. VIII and Meta. A (157-58). The requirement for a distinct mover creates a disanalogy with the four terrestrial elements (cf. Ph. VIII.4) which is not suggested in DC I. Thus DC II.2, 285a27-31 (which calls the heaven empsychos) leads him to suggest that there soul is involved in the
orientation of motion (159-61). Gill comes to the same conclusion regarding the mature position (31-33). Yet in the absence of direction motion is merely potential, so that if an unmoved cause were to supply direction, it would also be responsible for the actuality of motion. It is simpler to assume the latter is its primary function.

Gill initially claims that Aristotle seeks in Ph. VIII to show that the explanation of motion does not require an infinite series of causes because in each case it involves a self-mover with an internal unmoved mover as ultimate cause (15). Yet this misrepresents Aristotle's strategy: such a regress ad infinitum is in principle unacceptable to him, and so there must be a first mover (cf. Pl. Phdr. 245c5-9); the question then is, of what kind, a cosmic self-moving soul, or something else? Kosman too quotes or refers to numerous passages in Ph. VIII to show that Aristotle means that the first mover forms with the first heaven a self-moving whole (141). Yet in this context Aristotle argues dialectically against the Platonic concept of self-moving cosmic soul, in order to demonstrate that even where motion does derive from a self-mover, there too is a prior unmoved mover. There is no implication that all causal trains begin from self-motion. Note the telling point Gill makes (32), that Ph. VIII.6, 259b28-31 excludes from the heavens any subject of accidental motion caused by itself (e.g., a soul carried about by its body). As Judson argues, the prime mover in Ph. VIII and Meta. Λ must be transcendent (161-63). Meta. Λ.6-7 makes clear he is a separate substance.

Judson briefly discusses the prime mover's mode of causation, in Meta. Λ.7 identified as that of an object of desire. He argues that in certain cases such final causation is consistent with being an efficient cause (164-67). Yet if Aristotle's text implies literal desire Judson seems committed to Ross's revival of the scholastic doctrine of souls for each heavenly sphere, as subjects of desire, in addition to unmoved movers. Again the soul here postulated to explain the heaven's response to its unmoved mover merely replicates the problem of how the ethereal body is moved, at the
level of its relation to that soul; but the doctrine must be false, contradicting the exclusion of incidental self-motion from among heavenly things.

Judson concludes with some problems. *Ph.* VIII.10, 267b6-9 argues that the prime mover is at the periphery of the cosmos, since there it causes the fastest motion, apparently implying that it acts by contact like a bodily moved mover (167-69). Gill infers that the movers of all subordinate heavenly spheres have local position within the moving system of spheres, and so have incidental motion (32-33). Since that cannot be the motion they themselves cause, she speculates they should be located in the sphere immediately above their own, and perhaps at the point supporting the pole of their own, in order to control inclination, direction and speed. Yet the *Ph.* VIII.10 argument must mean that the sphere’s peripheral speed is evidence of the presence there of the greatest power to *activate* motion, not to direct it. Again, the mover of a subordinate sphere would be at the boundary between the two spheres, rather than embedded in a superior sphere, and so not in motion. Nor should it then be at the pole of its moved sphere, but at the equator.

The simplest solution to Judson’s problem is that the unmoved mover acts by its immediate presence in the same way that objects of animal desire are presented directly to the *pneuma* in the heart (*MA* 10), in that case by the mediation of soul because the objects are physically absent. The unmoved mover is immaterial, so its presence requires no such mediation, while the material nature of the *aither* is sufficiently analogous to *pneuma* to respond directly to that presence (*GA* II.3, 736b35-737a1). The only soul required is the kinetic responsiveness of the quasi-pneumatic *aither*, as similarly the mobility of *pneuma* in semen constitutes a conveyance of potential soul before conception (*GA* II.3, 737a17-22, IV.3, 767b19-21). The sphere has an incompletible potential to be the divine life of its mover, and so forms an image of it in eternal rotation. Its life is just its motion.
Judson’s second problem (169-71) concerns the argument in Ph. VIII.10, in fin. (cf. Meta. Α.7, 1073a5-11) that the unmoved mover has no magnitude, on the grounds that if it had finite magnitude it could not sustain an infinite *dunamis* to cause motion. Judson argues that this is inapplicable to final causation since that is not the transmission of a mover’s own activity, as in the case of a moved mover. This amounts to saying that the unmoved mover does not act as an efficient cause in any significant sense, contrary to his own argument at 164-67. He equivocates (171 n.56) between being ἀπονοον (tireless) and being ‘non-energetic’: but as Kosman rightly emphasises (150), the former does not imply passive quietude. Moreover, contra Judson, an energetic unmoved mover would not ‘expend its energy on the sphere’ (171). Both moved and unmoved movers act in virtue of their own prior activity. While the prior activity of a moved mover involves motion, in both cases the *dunamis* to cause motion is proportional to the mover’s activity *qua* activity. But then an unlimited activity could not be housed in a finite magnitude (since this would imply body, and some limitation of activity by passive *dunamis*).

Gill (33 n.55) apparently misunderstands Sarah Waterlow (1982) 249-57, who claims that celestial rotation is, according to Aristotle’s definition of motion in Ph. III.1, a complete activity, not a motion, so that Aristotle is wrong to infer the need for an unmoved mover, for which his only motive is theological (and so otiose). Waterlow here criticises Aristotle, diagnosing his error, not finding a criterion of motion to justify him, as Gill assumes. Gill claims that both complete and incomplete activities involve a mover, either internal or external, which seems both confused and tendentious; the former because change includes all motions for Aristotle (Ph. V.1-2, cf. III.1, 200b33-201a9), which complete activities, like seeing or contemplating are not (Meta. Θ.6, 1048b18-35), and the latter because her claim presupposes her distinction between active and passive *dunameis* for complete activities (see above).
Gill also gives the prime mover an organisational rôle in the cosmos at large (34). *Meta.* Λ.9, 1074b32-35 rather shows he is completely unconcerned with the cosmos, whose organisation is an automatic consequence of nature’s internal teleology. *Meta.* Λ.10 calls the prime mover a leader only because he is the organisation’s οὗ ἔνεκα (‘that for the sake of which’). In Aristotle’s distinction between τὸ οὗ ἔνεκα τινὸς and τινί (see esp. *Meta.* Λ.7, 1072b3-4, and Gill’s refs. 34 n.58) the latter must specify a final cause as a benefit, not a beneficiary. The prime mover is a source of activity and relative completion for the cosmos (thus τινί), whereas the other sense, the terminus of a process (τινὸς), is here inapplicable.

The second part of this book begins with David Hahm’s essay on ‘Self-Motion in Stoic Philosophy’. He uses later reports to recover a Stoic theory in which self-motion is common to each body ‘through itself’ (192-96); plants also move ‘out of themselves’, and animals additionally ‘from themselves’ (cf. 208). Faced with recalcitrant sources, Hahm fails to reach a consistent and persuasive account. Their examples are suspiciously paradoxical and unilluminating (197-200) and the categorisation, particularly of generic motion ‘through itself’ self-contradictory: this is applied to a body either i) experiencing motion or ii) causing it in another (205 n.59; cf. n.60 and 191-94); there either is (204) or is not (209) any internal efficient cause; in any case there must be an external cause. Hahm discusses the question (209 n.67), but without acknowledging its centrality to his topic.

There is a large historical gap until King’s long and technical chapter ‘Duns Scotus on the Reality of Self-Change’. Calvin Normore responds with an account of ‘Ockham, Self-Motion, and the Will’. The received Aristotelianism was faced with the conception of the will as an immediately autonomous spiritual and moral essence required for the doctrine of salvation. The medieval idea that it is self-moving is traced to Plato’s definition of soul, and the influence of Augustine (291-94), the absence of chapters on whom is here felt.
The volume is rounded out with an essay of great historical interest. J.E. McGuire, in ‘Natural Motion and its Causes: Newton on the Vis Insita of Bodies’, traces the tradition accrediting the elements with self-motion from the Stoics, by way of Philoponus and Averroes, so as to suggest the origins of Newton’s concept of an active power responsible for the principle of his First Law (a body persists in motion or rest unless subject to an external force). In Newton’s own century Zabarella argued that for Aristotle there must be an immediate source of the elemental impulse to fall or rise (318-24). It would have been interesting to see a comparison between modern interpreters and the high scholastics. Zabarella is certainly no lightweight, influencing Joachim’s authoritative commentary on GC (1922). Of course a collection on such a large, albeit now almost forgotten, scientific topic cannot do everything, and what this one achieves is significant: it emphasises that (owing to Waterlow as much as Furley) the question of Aristotle’s view of self-motion is back at the centre of debate about his conception of nature.

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The Alexandrian Library made the book into a defining cultural product in a new way in the third century BC. Down market, the project of collecting all of Greek literature brought forth a grab-bag of odd texts misattributed to big-name authors, for the benefit of buyers acting for the Ptolemies; while abler minds saw that, as a vehicle for their work, publication in books