

# *Aristoteles ex Aristotele: A Response to the Analytical Reconstruction of Aristotelian Ontology*

*Kyle Fraser*

UNIVERSITY OF KING'S COLLEGE

## INTRODUCTION: OXFORD ANALYSIS AND ANCIENT METAPHYSICS

There is a well-known line in Plato scholarship, inspired by Gilbert Ryle, and developed further by G.E.L. Owen and John Ackrill, which claims that Plato, in his later years, abandoned his belief in the separate Forms of the 'middle period.'<sup>1</sup> The idea of participation in the Forms had been introduced to explain, among other things, how one subject could possess multiple attributes. Plato's solution was to reify the predicates—to transform them into higher-order subjects of predication. The absurdities attendant on this move, most notably the paradox of self-predication, were finally exposed by Plato himself in the *Parmenides*. Plato came to realise that the 'one-many' question, to the extent that it was a coherent question at all, was really a question about language, about predication. The problem was to be solved, not by constructing a 'two-worlds' ontology, but by constructing a theory of predication, centring on the analysis of the verb *esti*.<sup>2</sup> Plato is thus represented, from the beginning of his career, as trying to come to terms with problems about language and syntax, which he misrepresents initially as problems about Being, or the relation between the worlds of Being and Becoming. The transcendent metaphysics of the middle period is dismissed as misleading window-dressing, disguising the true nature of the difficulties.

1. See Gilbert Ryle, "Plato's *Parmenides*" (1939), reprinted in *Studies in Plato's Metaphysics* (henceforth cited as *SPM*), ed. R.E. Allen (New York, 1965) 97–148. Ryle's developmental story was later defended by G.E.L. Owen in "The Place of the *Timaeus* in Plato's Dialogues" (1953), reprinted in *SPM* 313–38. This paper was followed by J.L. Ackrill's work on the *Sophist*, which aimed to show that that dialogue embodies Plato's later 'analytical' methodology: see J.L. Ackrill, "Symplōke Eidon" (1955), reprinted in *SPM* 199–206; *idem*, "Plato and the Copula: *Sophist* 251–59" (1957), reprinted in *SPM* 207–18.

2. Ackrill states: "The task assigned in Plato's later dialogues to the dialectician or philosopher is the investigation and plotting of the relations among concepts, a task to be pursued through a patient study of language, by noticing which combinations of words in sentences do, and which do not, make sense" ("Symplōke Eidon" 205).

An analogous tendency to translate metaphysical questions into fundamentally logical or conceptual questions has informed much of the contemporary interpretation of Aristotle's *Metaphysics*, at least in the English-speaking world. This fact can be attributed in large part to the unparalleled influence of G.E.L. Owen in the field of Aristotelian studies. One of Owen's most influential lines of argument is his claim that the method of Aristotelian metaphysics is a development of the procedures of dialectic, as outlined in the *Topics*. Metaphysics, in Owen's view, is not a strict science, in the sense of the *Posterior Analytics*, i.e., a science centred on a single genus of being and its dependencies. Instead, it is a dialectical science that investigates the semantic or conceptual apparatus underlying our discourse about beings as such.<sup>3</sup>

Owen sees the dialectical character of metaphysics as evident in the aporetic of Book B, where the central questions of metaphysics are revealed as conceptual puzzles, arising from a treatment of philosophical *endoxa*.<sup>4</sup> Likewise, he regards the analysis of being *qua* being in Bk. Γ as an analysis of ordinary linguistic practices, revealing the semantic complexity underlying our ordinary talk about beings. What distinguishes metaphysics from standard dialectic, in the sense of the *Topics*, is just the fact that metaphysics supplements the critical methods of dialectic with positive methods of analysis, most notably the method of 'focal meaning.' Aristotle, in Bk. Γ, is not concerned merely with exposing ambiguity in the way we speak about being, but also with establishing in a constructive way the focal interconnections between the various meanings of 'being,' with the concept of substance serving as the semantic foundation. The ontology of Γ is thus 'a general metaphysics whose first object is to mitigate the ambiguity of words which have different uses in the different categories by showing that all their senses have one common focus, one common element.'<sup>5</sup>

3. Owen's interpretation of Aristotelian metaphysics as a dialectical science is developed most fully in his seminal article, "Logic and Metaphysics in some Earlier Works of Aristotle," in *Aristotle and Plato in the Mid-Fourth Century*, ed. Ingemar Düring and G.E.L. Owen (Göteborg, 1960) 163–90. The semantic analysis of 'being' is further developed in "Aristotle on the Snares of Ontology," *New Essays in Plato and Aristotle*, ed. R. Bambrough (London, 1965) 69–95. Owen's interpretation has since been restated in a more radical form by Martha Nussbaum, in "Saving Aristotle's Appearances," *Language and Logos*, ed. M. Nussbaum and M. Schofield (Cambridge, 1982) 267–95. Nussbaum makes the sweeping claim that the whole of Aristotelian science is an exercise in conceptual refinement, arguing that Aristotle's *phainomena* should in all cases be interpreted as *endoxa* and *legomena*. Aristotle need not and should not be saddled with the belief that science seeks to explain theory-neutral 'Baconian' facts.

4. See "Tithenai ta Phainomena," *Articles on Aristotle I*, ed. J. Barnes et al. (1975) 116.

5. "Logic and Metaphysics" 167.

W. Leszl expresses basically the same conception:

Aristotle ... offers a conception of ontology which attributes to it the character not of a knowledge of truths that are inaccessible to non-philosophers, but of a clarification of certain conceptual structures of our intellectual apparatus (esp. of language) which are in principle accessible to everybody.<sup>6</sup>

This view of metaphysics as logic has a definite historical genesis: it can be traced back to Kant's transcendental philosophy, and it is coherent only in terms of a modern subjectivity. The notion that we, as knowers, interpret the world through the mediation of our conceptual structures is entirely alien to Aristotle's understanding of cognition, as developed in the *De Anima*. Aristotle does not even have a word for 'concept.' The closest approximation would be νόημα, 'thought.' But there is no indication that the νοήματα which make up our actual thinking have a conceptual reality that is distinct from the formal objects of thought. On the contrary, thinking and the intelligible forms are identical in actual being. There is no possibility of a pure introspection, in which the mind explores its own given structures. The mind has no inherent structure or content, but is merely a capacity for knowing intelligible essences (429a21–22). Mind has no actual being until it thinks objective forms (οὐθὲν ἔστιν ἐνεργεῖα τῶν ὄντων πρὶν νοεῖν, 429a24), and can know itself only in a mediate way (ἐν παρέργῳ, 1074b36), in virtue of the fact that it is identical in act with the pure essences that it thinks.

The subsequent sections of this paper examine two key areas of Aristotelian ontology, which have been distorted by the imposition of semantic and conceptualist assumptions:

(1) The notion that Aristotle's interest in ὁμώνυμα and πολλαχῶς λεγόμενα is an interest in analysing the multiple senses of terms, introduces a semantic ontology that is alien to Aristotle's way of thinking about the relation between words and essences. Aristotle's claim that τὸ ὄν is 'said in many ways' is misconstrued by Owen as the claim that the word ὄν has many senses. The πρὸς ἕν doctrine is thus represented as a doctrine of 'focal meaning,' which establishes the idea of substance as the semantic foundation of the other senses of 'being.' Accordingly, the categories of being are regarded not as objective genera, to be analysed according to Aristotle's normal demonstrative method, but as the ordinary senses of the word ὄν. I will argue that the intrusion here of an 'intentional' or 'conceptual' dimension, mediating our talk about the world, is a contemporary distortion that im-

6. W. Leszl, *Aristotle's Conception of Ontology* (Padua, 1975) 2. This is also the view of J. Barnes in the *Cambridge Companion to Aristotle* (Cambridge, 1995) 71–72: "Very roughly speaking, metaphysics as Book Gamma describes it, is logic."

poses an artificial methodological division between Aristotle's first philosophy and his natural sciences.

(2) Aristotle's treatment of the Principle of Non-Contradiction at Γ.3–5 is often cited as evidence of the logical character of ontology. But Aristotle's actual procedure in defending this principle is inconsistent with a narrowly logical interpretation. The principle is treated not as an abstract, or *a priori* condition of our thinking, but as an expression of the objective intelligibility and definiteness of substantial essences. Moreover, the principle is shown to be conditioned by objective distinctions between the substantial and non-substantial categories of being: it has a special and primary relation to the category of substance, and applies only in a derivative and qualified way to the accidental modes of being. The idea that logical axioms could apply to entities in different ways, and even to different degrees, has confounded contemporary interpreters precisely because their understanding of 'logic' is grounded in an abstract subjectivity that determines, and is not determined by, the objective character of beings.

#### ARISTOTELIAN FOCALITY: DEMONSTRATIVE SCIENCE OR CONCEPTUAL ANALYSIS?

In my view, the doctrine of the *πρὸς ἕν λεγόμενα*, introduced at Γ.2, has its origins in Aristotle's theories of scientific demonstration and definition. According to the scientific procedures of the *Posterior Analytics*, the goal of science is to discover the basic essence of the subject genus, which explains the inherence of its properties. The *propria* are united in their common dependency on the genus, but each *proprium* has a special mode of dependency that defines it over and against the others. 'Anger' and 'sleep,' for instance, are both properties of animals *qua* animals, but each has a unique causal relation to the animal, a unique basis in the animal essence: in the case of 'anger' we are looking for the cause or causes of a boiling of the blood around the heart of the animal (*De An.*403a25–b3) while in the case of 'sleep' we are looking for the cause or causes of a kind of *immobility* in the heart of the animal (*Meta.*1044b15–20). Thus the objective in any science is to establish the different 'middles' or modes of inherence that connect the different properties to the single subject genus. The results of this explanatory work are then encapsulated in the scientific definitions of the properties, e.g., anger is a boiling of the blood surrounding the heart of an animal *caused by* a desire for retribution.<sup>7</sup>

7. The full scientific definition combines the pre-scientific 'fact' (τὸ ὅτι) of the property's inherence in its proximate subject (e.g., anger is a boiling in the blood; thunder is a noise in the clouds; eclipse is a privation of the moon's light) with the reason (τὸ διότι) that explains the fact of the inherence (thus: anger is a boiling of the blood caused by a desire for retribution;

This seems to mirror exactly the method of definition that Aristotle envisions for the categories of being as πρὸς ἓν λεγόμενα. All of the non-substance categories are defined with reference to οὐσία, as the common subject of predication and inherence; in the broadest sense the non-substances share a common mode of being, inasmuch as they all exist in virtue of inhering in some substrate (they are τὰ ἐν ὑποκειμένῳ, 1a23). But, on closer analysis, we discover that each category exhibits a distinct mode of inherence: beings are said to 'be' in virtue of different focal relations to οὐσία. Our first objective, then, should consist in demonstratively establishing the different modes of inherence—the different ways of being ἐν ὑποκειμένῳ—that link the non-substance genera to the primary genus. Once we grasp these modes of dependency we will then be in a position to *define* the categories in their causal relations to οὐσία, as a way of formalizing the results of our explanatory work.<sup>8</sup>

This interpretation presupposes that the categories correspond to real genera of entities, and that Aristotle is concerned with defining the essence or 'what-is-being' (τὸ τί ἦν εἶναι) of these genera so as to reveal the different modes of *causal dependency* that each subordinate genus exhibits relative to the primary genus. He is concerned with determining the different modes of inherence in οὐσία which distinguish the non-substantial genera as the unique and irreducible kinds of beings that they are.

Those scholars who adopt G.E.L. Owen's approach will take an entirely different view. They will urge that what Aristotle actually says in Γ.2 is that *we*, as Greek speakers, use the expression τὸ ὄν or the verb εἶναι in multiple senses, senses which are nonetheless connected and not completely homonymous: τὸ δὲ ὄν λέγεται μὲν πολλαχῶς, ἀλλὰ πρὸς ἓν καὶ μίαν τινὰ φύσιν καὶ οὐχ ὁμωνύμως (1003a33–34). There are multiple reasons why beings are denominated 'beings' according to ordinary linguistic practice, but the λόγοι which express these multiple reasons or senses are connected. If this is the correct way to interpret Aristotle's concerns—as concerns about ordinary language and meaning—then the multiple λόγοι which express the different modes of being should not be construed as defining different generic essences, but only as defining the different beliefs that ordi-

thunder is a noise in the clouds caused by an extinction of fire; eclipse is a privation of the moon's light caused by the earth's intervention). The initial 'fact' is treated as the conclusion (συμπέρασμα) or theorem of a demonstrative syllogism which must be explained by a 'middle' term. Aristotle's most developed treatment of the process of scientific discovery is presented at *Post. An.* II.8.

8. I have developed these connections between focality and the explanatory structure of demonstrative science more fully in a recent article, "Demonstrative Science and the Science of Being *qua* Being," *Oxford Studies in Ancient Philosophy* XXII (Summer 2002): 43–82.

nary speakers tacitly assume about what counts as an  $\delta\nu$  in the Greek language. In defining the various ‘categories’ we will merely be defining these multiple meanings of the expression  $\tau\omicron\ \delta\nu$ , and displaying their common semantic connection to the concept  $\omicron\upsilon\sigma\acute{\iota}\alpha$ . Our inquiry will be a second-order reflection, a reflection not on the world as it presents itself objectively to us, but on the assumptions that *we* implicitly make when we approach and interpret the world through our linguistic and conceptual structures.

These are the kinds of conclusion that force themselves upon us if we interpret the doctrine of  $\pi\rho\omicron\varsigma\ \acute{\epsilon}\nu$  predication as a doctrine about ordinary linguistic practice—as a doctrine of ‘focal meaning.’<sup>9</sup> Thus construed the doctrine becomes wholly disconnected from Aristotle’s ‘first-order’ explanatory concerns, and becomes nothing more than a method for analyzing the conceptual structure underlying the ordinary use of a term or expression. The priority of  $\omicron\upsilon\sigma\acute{\iota}\alpha$  over the other categories is not the priority of a genus over its derivative properties; it is the logical priority of the concept, ‘substance,’ over the subordinate senses of ‘being.’

As for the universal  $\acute{\alpha}\rho\chi\alpha\acute{\iota}$  which are said in  $\Gamma.1$  to define the subject matter of this science (1003a26), evidently these are not to be regarded as the intrinsic causes of  $\omicron\upsilon\sigma\acute{\iota}\alpha$ , causes to be demonstratively employed in a deductive analysis of the categories. These  $\acute{\alpha}\rho\chi\alpha\acute{\iota}$  are merely fundamental concepts related to the main meanings of ‘being,’ concepts like ‘form’ and ‘matter,’ and ‘potency’ and ‘act,’ which are essential to beings *qua* beings in the sense that they are logically implicated in the attempt to articulate the different senses of ‘being.’ Like ‘being’ itself these terms conceal a conceptual diversity—they are used in many senses—and so it falls to the philosopher to define their senses, and to determine their mode of connection, whether it be focal meaning or, as in the case of ‘form’ and ‘matter’ and ‘potency’ and ‘act,’ analogical meaning.

How plausible is this idea that Aristotle’s interest in the varieties of  $\pi\omicron\lambda\lambda\alpha\chi\omega\varsigma\ \lambda\epsilon\gamma\acute{o}\mu\epsilon\nu\alpha$  or  $\acute{o}\mu\acute{\omega}\nu\nu\mu\alpha$ , is an interest in defining the different senses of terms, and systematically relating these senses so as to clarify the conceptual structure underlying our usage? Are the  $\lambda\acute{o}\gamma\omicron\iota$ , which express the ‘many ways’ things are spoken of, to be construed as expressing the many *meanings* of the homonymous predicate (i.e., are they ‘nominal’ definitions), or are they, as I have indicated, expressive of the real, scientific essences of the entities denominated by the predicate?

9. The ‘focal meaning’ terminology was first introduced by Owen in “Logic and Metaphysics.” The terminology has been almost universally accepted; but adequate attention has not always been paid to its interpretative basis.

The ὁμώνυμα are defined by Aristotle as the class of entities that share a common name, but have each different definitions corresponding to that name (ὁ δὲ κατὰ τοῦνομα λόγος τῆς οὐσίας ἕτερος, 1a1–2), in contrast with the συνώνυμα which have *both* a common name *and* a common definition corresponding to the name (ὁ κατὰ τοῦνομα λόγος τῆς οὐσίας ὁ αὐτός, 1a7). Immediately, we are struck by the fact that the homonyms are entities, not words. Homonymy in language—words corresponding to multiple definitions—would seem to arise from homonymy in entities. But those who hold a semantic interpretation of homonymy will draw our attention to the correspondence between words and definitions. Aristotle's expression 'the definition corresponding to the name' (ὁ κατὰ τοῦνομα λόγος) is cryptic. We should like to ask Aristotle what *kind* of correspondence exists between the name and the definition. In particular, we should like to know whether the corresponding definition is strictly a definition *of the name*, i.e., a semantic definition.

Aristotle says elsewhere that the λόγος and the ὄνομα 'signify' (σημαίνειν) the same thing, and are interchangeable.<sup>10</sup> Evidently the correspondence between name and definition can be analyzed in terms of these connected criteria of identity of signification and interchangeability. A synonymous term can be replaced by a single verbal λόγος because it has a single signification which gets expressed through that single λόγος.<sup>11</sup> An homonymous term, by contrast, can be replaced by *multiple* verbal λόγοι because it has multiple significations, each expressed through a different λόγος. If we assume that 'signifying the same thing' is equivalent to 'having the same meaning,' it plainly follows that the many λόγοι corresponding to, and interchangeable with, an homonymous term are expressive of its many meanings. In this way, Owen's semantic interpretation might seem to be vindicated.<sup>12</sup>

But 'to signify' (σημαίνειν), in Aristotle's technical use of the term, is not 'to mean.' In general what a name signifies, according to Aristotle, is

10. On identity of signification see: *Top.*162b37–163a1: in the case of synonymy the name and λόγος signify the same; *Post An.* 92b26–34: a λόγος is a collection of words signifying precisely the same as a name; *Met.*10306ff: it is a necessary, though not a sufficient condition for having an ὀρισμός that we have a name and a λόγος that signify the same. On interchangeability see: *Top.*101b39–102a: the ὄρος, i.e., the λόγος of the essence, is stated in place of a name or another λόγος; *Top.*149a2–3: the one defining states a λόγος in place of a name; *Met.*1029b19–20: the λόγος of the essence replaces the name without mentioning it.

11. For the claim that synonyms signify one thing (τὸ ἓν σημαίνειν) see Γ.4 1006a32ff where this condition is presented as fundamental to all thought and discourse. Aristotle allows for instances of homonymy only as long as the multiple significations of the homonymous word are limited in number (ὀρισμένοι δὲ τὸν ὀρισθόν, 1006b4).

12. Owen reads identity of signification as identity of meaning: "Snares of Ontology" 73.

the substance or essence of the entity to which the name is applied.<sup>13</sup> For instance, 'man' signifies the essence of a man, and signifies that this essence alone is what being is for him: 'For there was one thing which it signified (εσήμαινεν), and this was the οὐσία of something; and signifying one thing is signifying that the being of that thing is nothing else' (1007a25–27). The significate of the ὄνομα is a *real universal* and not a meaning. The same holds for the λόγος corresponding to the name. Aristotle says at *Topics* 101b38 that the ὄρος is a λόγος which signifies (σημαίνων) the τὸ τί ἦν εἶναι. He makes it clear that he is speaking of the λόγος given in place of the name (ἀντ' ὀνόματος, 102a1–2). It would appear, then, that the name and its corresponding λόγος signify the same thing, and are interchangeable, because they denote the same essence or 'what-is-being,' not because they mean the same. We can infer, *mutatis mutandis*, that the many λόγοι that are interchangeable with an *homonymous* predicate are expressive of the multiple essences to which the name can be applied, and not of the many meanings of the name.<sup>14</sup>

If the definitions corresponding to the homonymous name are definitions of real essences, then they cannot be articulated in the light of a 'second-order' reflection on ordinary linguistic practice: they will be discoverable only by determining the real kinds which are properly denominated by the name. The many modes of being, for instance, will be discoverable only by investigating the basic genera of being that exhibit these modes. This is not to suggest that Aristotle ignores ordinary linguistic conventions. To the extent that science begins from what is more knowable to us, and proceeds to what is more knowable essentially, the starting point for the scientist is often a consideration of the ordinary or reputable opinions on the subject at hand, the so-called *endoxa*.<sup>15</sup> So, for instance, the search for the essence of thunder begins from a basic and quite ordinary understanding of what 'thunder' signifies, namely that it is 'a noise in the clouds.' It is on the basis of this vulgar or pre-scientific opinion that Aristotle subsequently arrives at a deeper cause—the extinguishing of fire—which explains the 'inherence' of noises in the clouds.<sup>16</sup> The search for the scientific essence of an entity does not proceed *ex nihilo*: the scientist assumes a pre-scientific opin-

13. On Aristotle's technical and essentialist use of τὸ σημαίνειν I am indebted to the important analysis of T. Irwin in "Aristotle's Concept of Signification," *Language and Logos* (1982): 241–67.

14. This conclusion is also drawn by T. Irwin in "Homonymy in Aristotle," *Review of Metaphysics* 34 (1981): 253–54.

15. The *endoxa* or notable opinions fall into two kinds, the ordinary opinions of the many or the minority opinions of the wise (*Topica* I.1). The sciences make use of these *endoxa* as a starting-point in arguing to the first principles or primary essences (*Top.* I.2). Cf. *Met.* B.1.

16. See note 7, *supra*.



ion, a 'fact,' and then attempts to solidify that opinion—to convert it into knowledge—by explicating the middle term that links the entity to its observable properties.

Clearly, then, ordinary opinions constitute an important starting-point for scientific inquiry. But Aristotle is not content to restrict his efforts to an analysis of such *endoxa*. He begins from what is more knowable to us, in order to penetrate to the deeper, intelligible causes, which are not directly accessible to ordinary speakers.<sup>17</sup> He begins with the facts, which are directly observable to all, and proceeds to the underlying reasons. Moreover, it is important to see that these pre-scientific opinions or 'facts,' from which science proceeds, are not understood by Aristotle as 'concepts' or 'meanings' in the modern sense. These ordinary opinions already involve some direct grasp of what an entity essentially is, some actualization in the intellect of the formal nature of the entity (ἔχομεν τι τοῦ τί ἐστίν, 93a28; ἔχοντές τι αὐτοῦ τοῦ πράγματος, 93a22). The scientific search for essences can only begin if the intellect is already in some positive relation to the essences which it seeks—if the intellect is already in process of becoming those essences in actuality. Thus science is not a matter of adequating our subjective preconceptions to the objective structure of essences; it is a matter of progressively actualizing the intellect itself in conformity with essences.

The fact remains, however, that Aristotle is speaking in Γ.2 of the many ways that beings are *called* 'beings.' And this concern is readily construed as relating to the many semantic criteria or senses underlying the ordinary usage of the expression τὸ ὄν. Does Aristotle suppose that in explicating the different modes of being and their diverse relations to substance, he is explicating the ordinary conception of the verb 'to be' in its different senses?

17. Likewise, Aristotle's tendency to take stock of the notable opinions and assumptions of other philosophers should not be understood as reflecting a 'second-order' or conceptual level of investigation. We can grant that the central problems outlined in Book Beta emerge in large part from a reflection on the metaphysics of Plato and the Academy, without committing ourselves to the idea that these are purely conceptual puzzles, relative to a certain historical period or philosophical tradition. It seems clear that Aristotle regards these puzzles as essential to the subject matter of metaphysics, as puzzles that inevitably arise in any philosophical reflection on being and substance. There is no reason to suppose that the Platonic *endoxa* are entertained merely as *endoxa*, as one would expect in the properly dialectical context of the *Topics*. It seems obvious that they are entertained in order to arrive at a clearer and truer conception of the objective problems that confront a science of being. This point has been developed with admirable clarity by Edward Halper in "The Origin of Aristotle's Metaphysical 'Απορίαι,'" in *Essays in Ancient Greek Philosophy V: Aristotle's Ontology*, ed. A. Preuss and J.P. Anton (Albany, NY, 1992) 133–51.

Here, once again, one must distinguish between an *analysis* of language, which would seek only to explicate what is already tacitly understood by ordinary speakers, and a reflection on ordinary language and opinion as a *starting point* in defining objective essences. One might plausibly suppose that ordinary speakers have a tacit grasp of the distinction between substances and non-substances, as reflected in the linguistic difference between essential and accidental predications. But it is highly implausible to suppose that ordinary speakers have any inkling of the more technical differences between the non-substance categories and their proper modes of inherence in οὐσία (e.g., the difference between the modes of inherence of qualities and quantities). These technical differences in πρὸς ἔν dependency are not such as one could reasonably expect an ordinary speaker to grasp, even in a confused and unarticulated way. Could Aristotle really be so misguided as to suppose that ordinary speakers *mean* one thing by ἔστω when they say 'red exists,' and another when they say 'walking exists'? Aristotle's claim that 'being' has many connected significations does not make reasonable sense as a claim about ordinary meaning or ordinary linguistic competency; but it does make good sense as a claim about the objective categorical structure of beings *qua* beings.<sup>18</sup>

These considerations weigh strongly against a semantic interpretation of Aristotle's treatment of homonymy and focality at Γ.2. There is no justification in the texts for turning the focus from entities and their essences to words and their meanings, and thus no reason for asserting a radical methodological divide between 'conceptual' metaphysics and the 'empirical' demonstrative sciences. The implausibility of such a divide becomes painfully obvious when we consider the way that Aristotle introduces the other principles studied in the science. Those who approach the actual subject matter of ontology—e.g., opposition, contrariety, whole and part, sameness and otherness, the axioms of demonstration—as conceptual principles, logically embedded in the meanings of 'being', are generally unable to make sense of Aristotle's methodology.

Take, for instance, the so-called forms (εἴδη) of unity and plurality, i.e., sameness and otherness, similarity and dissimilarity, equality and inequality. These modes of unity and their contraries are held to fall under the scope of the science of being in virtue of the correlativity of τὸ ὄν and τὸ ἔν. 'Being' and 'unity,' Aristotle tells us, are really 'one and the same nature' (ταυτὸν καὶ μία φύσις, 1003b23), not in the sense that they are expressed by the same λόγος, but in the sense that they follow upon one another (τῶ

18. For a similar objection to the semantic reading see R. Bolton, "Science and the Science of Substance in Aristotle's *Metaphysics Z*," *Form, Matter and Mixture in Aristotle*, ed. F. Lewis and R. Bolton (Oxford, 1996) 277, note 9.

ἀκολουθεῖν ἀλλήλοις), as having the same range of application: everything that 'is' is also 'one' and vice versa. On the basis of this principle of correlativity, Aristotle infers that there are as many forms of unity as there are of being (ὅσαπερ τοῦ ἑνὸς εἶδη, τοσαῦτα καὶ τοῦ ὄντος, 1003b33–34). What is the basis of this correspondence between the forms of being and unity?

The correspondence is not, as some scholars suppose, a relation of identity. Aristotle does not imply that the εἶδη of τὸ ὄν are identical to the εἶδη of τὸ ἕν. Instead he supposes that for each kind or εἶδος of being, there will be a correlative εἶδος of oneness. So, for instance, 'sameness' is a oneness in the category of οὐσία, 'similarity' is a oneness in the category of quality, and 'equality' is a oneness in the category of quantity.<sup>19</sup> The one-to-one correspondence of the εἶδη of unity and the εἶδη of being allows Aristotle to extend the scope of his science, in a way that preserves the integrity of the πρὸς ἕν structure and the essential differentiation between the categories. The basis of the correspondence lies in the πρὸς ἕν interconnection of the modes of being and unity, the fact that each of the modes of unity must be defined in terms of a 'sameness' in one of the categories of being. In explaining what it means to be 'similar,' for instance, we must make reference to what it means to be a quality, since similarity is just sameness in the quality of two or more substances. This point is expressed in ch.8 of the *Categories* :

One thing is similar to another only with respect to that in virtue of which it is qualified [καθ' ὃ ποτόν]. Consequently, it must be a property of quality for similarity or dissimilarity to be predicated of it [ὥστε ἴδιον ἂν εἴη ποιότητος τὸ ὁμοιον ἢ ἀνόμοιον λέγεσθαι κατ' αὐτήν]. (11a16–19)

Aristotle notes, analogously, the *per se* relation of equality and inequality to the category of quantity: "Ἴδιον δὲ μάλιστα τοῦ ποσοῦ τὸ ἴσον τε καὶ ἄνισον λέγεσθαι (6a26–27). Thus similarity and dissimilarity are among the *per se* dependencies of quality, and belong properly to the sphere of qualitative being, while equality and inequality are among the *per se* dependencies of quantity (in the company of 'long and short,' 'much and little,' 'deep and shallow' and such-like: Cf. Δ.13, 1020a19–25), and belong properly to the sphere of quantitative being.

In short, the inclusion of the εἶδη of oneness in the science of being *qua* being follows from their subordination as properties of the categorial εἶδη of being. With this established we are in a position to understand a

19. Δ.15, 1021a10: κατὰ γὰρ τὸ ἕν λέγεται πάντα, ταῦτα μὲν γὰρ ὄν μία ἡ οὐσία, ὁμοία δ' ὄν ἡ ποιότης μία, ἴσα δὲ ὄν τὸ ποσὸν ἕν.

feature of the argument of Γ.2 that has not generally been understood by commentators: namely, Aristotle's description of the contraries as the *per se* affections or ἴδια of being *qua* being:

For just as there are also proper affections of number *qua* number [ἔστι καὶ ἀριθμοῦ ἢ ἀριθμὸς ἴδια πάθη]—for instance, oddness and evenness, commensurability and equality, excess and deficiency—and these inhere in numbers both in themselves and relative to each other ... so also there are certain properties of being *qua* being [καὶ τῷ ὄντι ἢ ὄν ἔστι τινὰ ἴδια], and these are matters about which the philosopher must consider the truth. (1004b10–17)

Here Aristotle indicates that the contraries are among the *per se* attributes of beings *qua* beings, and constitute the *demonstranda* of the science; they are held to parallel the demonstrable properties of numbers *qua* numbers in the science of arithmetic. Each pair of contraries is properly dependent on one of the highest genera of being *qua* being: similarity and dissimilarity are proper to quality and qualified subjects, equality and inequality are proper to quantity and quantified subjects. Each pair of contraries is grounded, demonstratively, in one of the categories of being.

The inclusion of the contraries in the science of being *qua* being is, therefore, fully consistent with the explanatory structure of the apodeictic sciences. The contraries are included in the science as *per se* accidents of the categories of being *qua* being. Crucially, there is no indication in Aristotle's procedure that these forms of unity are viewed as concepts, which are logically or semantically implicated in the various meanings of 'being.' Instead, the clear indication is that these forms of unity are objective, demonstrable properties of the categories. The language and apparatus of demonstrative science pervades the discussion, contrary to the expectations of the conceptualist reading.

#### ONTOLOGY AND THE PRINCIPLE OF NON-CONTRADICTION

Another key feature of the ontological project of Bk.Γ, which is often adduced as essential evidence for the conceptualist interpretation, is the treatment of the logical axioms, notably the principle of non-contradiction. But those approaching the text with the expectation of an abstract or formal proof of this principle are invariably confounded by Aristotle's actual procedure.

He begins by explaining that it belongs to ontology to study the axioms on the grounds that these principles hold true of all beings *qua* beings, and not in virtue of any essential distinction in being. It does not belong to the special scientists to offer any defence of the axioms, since they extend universally in their application, beyond any particular genus of be-

ings: they hold true of animals, lines, or plants indifferently. Thus far the logical interpretation could be upheld: Aristotle might be understood as implying that the axioms are entirely abstract, *a priori* principles, which are foundational to our conceptual and linguistic apparatus. However, in the subsequent lines the philosophical investigation of the axioms is explicitly distinguished from a 'logical' treatment. Aristotle states that those who raise questions about what can and cannot be demonstrated, and who demand demonstration of all things, are deficient in their logical training (δ' ἀπαιδευσίαν τῶν ἀναλυτικῶν, 1005b3–4, Cf. 1006a5–8) and ill-prepared for any specialized inquiry. This is extremely revealing. The primary axiom to which all others 'reduce' (ἀνάγουσιν, 1005b32) is the principle of non-contradiction, which states that the same attribute cannot at the same time belong and not belong to the same subject and in the same respect (1005b19–20). Precisely because this principle is primary and the basis of the other axioms, its truth cannot be demonstrated—it cannot be derived as an implication from prior, more knowable premises. Evidently Aristotle thinks that anybody who has studied the *Analytics* should know that it is impossible to provide an abstract, *a priori* proof of this principle without circularity. The further implication is that *we*, who are listening to this lecture, will not be studying the principle and its derivative forms from a merely logical or formal point of view, but with reference to the primary object of our inquiry, substance: 'It is therefore evident that it belongs to the philosopher, who investigates the nature of all substance, to inquire also concerning the syllogistic principles' (1005b5–8, Cf. 1006a35–36). In other words, our inquiry will assume a concrete metaphysical perspective, that of the first philosopher, who investigates the categories of being in their focal relations to primary substance. This is reflected in the procedure followed in the ensuing argument of Γ.4–5, which is not to demonstrate that the principle of non-contradiction is true *a priori* (which again is a logical impossibility) but to establish that it must be true given the ontological character of substance and essence.<sup>20</sup> The principle will indeed be established as a necessary condition for thinking and speaking, however the necessity will be shown to follow not from the side of cognition and language, but from the definite nature of the substantial essences that give actual content to our thinking. The

20. Aristotle sees himself as providing an ἔλεγχος or 'negative demonstration' (τὸ δ' ἐλεγκτικῶς ἀποδείξει, 1006a11–12). In a negative demonstration premises are elicited from an opponent which lead to a conclusion that contradicts the opponent's original thesis. This method of demonstration is acceptable here because our opponent will be the one responsible for asserting the truth of the principle of non-contradiction: he will commit himself to the principle through his admissions about the way that words signify essences, and so we cannot be charged with begging the question. For a similar reading of the argument see, Jonathan Lear, *Aristotle: the Desire to Understand* (Cambridge, 1988) 249–65.

necessity for thought and language is determined by a necessity in essential being.

In Γ.4, Aristotle argues that the principle of non-contradiction is grounded in the necessary identity of a substantial form with its essence. If there are to be any determinate objects of thought and discourse we must allow that not everything is both 'so and not so' (οὕτως καὶ οὐχ οὕτως, 1006a28). Aristotle's imaginary opponent is asked to concede certain propositions about the way that words signify beings, and these propositions are shown to commit him to a certain view of the ontological structure of the significate. More precisely, the opponent is asked to concede a fundamental distinction between subject-terms like 'man' and 'trireme,' which signify a single entity (τὸ ἓν σημαίνειν), and adjectival words like 'pale' and 'musical,' which signify about an entity (τὸ καθ' ἑνός σημαίνειν, 1006b15–18), and this distinction between modes of signification is shown to be conditioned by an ontological difference between the essential and accidental attributes of the entity.

A subject word like 'man' must have a single signification: it must denote a defined and exclusive nature, so that when we predicate 'man' of some subject we are able to pick out that subject unambiguously as 'what it is,' in this case a 'rational animal.' The substance of an entity, in virtue of its definiteness, excludes all other substantial determinations; and this understanding is shown to be implicit in our use of such words. 'Signifying one thing' (τὸ ἓν σημαίνειν) is contrasted with 'signifying about one thing' (τὸ καθ' ἑνός σημαίνειν), the mode of signification proper to accident-terms like 'pale' or 'musical' whose ontological correlates exist only as inherent and incidental features of an underlying substrate. In signifying about an entity one does not imply the exclusion of other accidental determinations: Socrates can be pale and musical at the same time. Aristotle's point is that it is not possible that *all* our predications should turn out to be accidental in this way, since then there would be no definite subject or τόδε τι about which attributions could be made: there would be an infinite regress of predications (1007a33–b18). Our linguistic practices reveal the existence of basic substantial forms which are self-contained and identical with their essences. To deny the PNC, to maintain that everything can be both 'so and not so,' is to do away with the very idea of substance and essence (ὅλως δ' ἀναιροῦσιν οἱ τοῦτο λέγοντες οὐσίαν καὶ τὸ τί ἦν εἶναι, 1007a20–21), to claim that there is no such thing as being essentially a man or animal.

Aristotle's imagined opponent might, of course, deny that substance words like 'man' and 'plant' signify singular, defined natures. He might prefer to embrace a radical indeterminacy in being. However, Aristotle can respond that, if all things are 'so and not-so' and there is no such thing as

'being essentially a man,' language and thought are precluded from the start. Aristotle can expose the divergence of his opponent's theory and practice: on the one hand, the opponent insists that all things are both 'so and not so,' but at the same time he *insists* that this is indeed the case, and not otherwise than it is. The fact that we speak, think and act in purposive ways discloses a deep-seated conviction in the basic intelligibility of the cosmos and this 'basic intelligibility' is, for Aristotle, explicated in terms of the existence of primary substances.

Commentators have been puzzled by the fact that Aristotle in  $\Gamma.4$  provides what seems to be a limited treatment of the principle of non-contradiction. The original formulation of the principle at 1005b19–20 includes the qualifications of time and respect, and thus is broad enough to apply to accidental predications. So why does Aristotle give us a special treatment for essential predications?<sup>21</sup> Why does he draw our attention to these two modes of signification, when he could provide a more abstract and comprehensive defence of the principle from the start?

Aristotle seems to believe that the principle of non-contradiction has a direct and primary application to substantial forms or, which is really the same, to sensible substances conceived just in terms of their formal essences (e.g., Socrates *qua* human). In its primary mode, the principle is a subjective statement of the way in which actual cognition is constrained by the formal cause.<sup>22</sup> This feature of Aristotle's procedure raises difficulties for those who assume a logical understanding of the principle, detached from the focal structure of being. Thus, for instance, J. Thorp writes:

... the actual subject matter of the science of being *qua* being—the principles of logic—seems to have no special connection with the nominal object of the science, substance. Certainly, substance is governed by the principles of logic, but no more pre-eminently or primordially so than anything else.<sup>23</sup>

21. J. Lukasiewicz argues that the approach is inadequate since "it would at best establish the Law of Contradiction for a very restricted range of objects, viz., for the 'essences' of things or for their substance. Its validity for accidents would still be an open question." "Aristotle on the Law of Contradiction," *Articles on Aristotle III: Metaphysics*, ed. J. Barnes et al. (London, 1979) 56.

22. Here the analysis of J. Owens still stands as the best account, because it is the most faithful to Aristotle's psychology: "The Stagirite seems to look upon the principle of contradiction as merely the expression of the formal cause in the act of the intellect that composes and divides. A formal cause, by the fact that it is actual and definite, is confined to itself and is identical with no other form." *The Doctrine of Being in the Aristotelian Metaphysics* (Toronto, 1951; 2d ed. 1963) 286.

23. J. Thorp, "Does Primacy Confer Universality? Logic and Theology in Aristotle," *Apeiron* XXII no.2 (1989): 106.

To the extent that one approaches the argument with a formal or propositional understanding of the principle of non-contradiction, Aristotle's procedure will seem mistaken and confused. In particular, Aristotle will appear to be confusing a subjective principle of logic with an objective property or attribute of beings. But if one accepts from the start the central tenet of Aristotelian psychology—the actual identity of thought and intelligible form—the procedure appears consistent and coherent in its own right, having been placed in its proper philosophical context. From Aristotle's perspective, the principle does belong primarily and pre-eminently to substances, and is merely a subjective expression of the self-contained and indivisible unity of form and essence.<sup>24</sup> The primacy of the substantial application of the principle is reflected in the fact that it requires no qualifications of time, respect, potency or actuality. The broader statement of the principle, which includes these qualifications, only comes into play in Γ.5 when Aristotle extends his treatment to the material and accidental dimensions of sensible substances.

Among his philosophical predecessors, Aristotle finds numerous examples of thinkers who seem to deny the principle of non-contradiction and assert that all things are both 'so and not so.' For example, there are the Protagoreans who maintain that all opinions and appearances are equally true and the Heracliteans who claim that nothing can be truly affirmed or denied due to the absolute flux of nature. Some of these men are simply sophists, while others fall into this error because of genuine *aporia* about the sensible (1009a17ff). The latter class of men we can easily cure (1009a19). Some thinkers, because they see that contraries come to be in the same subject, infer that the entity in question must somehow *be* both at once, and that it must be the case, as Anaxagoras maintains, that all things are mixed (1009a22–28). This is only a partial truth: there is a sense in which a thing can be both X and not-X, but not *in the same respect* (οὐ κατὰ ταὐτό, 1009a34). We must distinguish between being as 'potentiality' and being as 'actuality.' To say that Socrates is both musical and unmusical can mean only two things: Socrates is now musical, whereas he was formerly unmusical, or Socrates is actually musical, but potentially unmusical (i.e., he could forget his musical training). In other words, the claim that a subject both is and is not X must be qualified either with respect to time, or with respect to the ontological difference between potency and act.

24. At *Post. An.* I.10, Aristotle explains that the axioms are common only by analogy (κοινὰ κατ' ἀναλογίαν, 76a38–39), having a special application within each genus of substance. Clearly, Aristotle does not regard the axioms as logical abstractions, but as attributes, conditioned by the essential differences between substances.



Other thinkers, who follow Protagoras in equating φρόνησις with αἴσθησις, present a different sort of challenge to the principle of non-contradiction, one based on the relativity of perception. They argue, for example, that what appears sweet to one man may appear bitter to another due to differences in their respective bodily states (1009b2–6). These perceptual relativists are also impressed by the fact that one's own senses may, at different times, convey different appearances. However, Aristotle counters that there is never any question about the proper objects of perception in any given instance: if we sense sweetness we do not suppose, at the same time, that we are also sensing bitterness. Doubt can arise only in determining whether the underlying substance is really sweet or bitter (1010b19–21). In short, it appears that the way to save the principle of non-contradiction from relativistic analyses of perception and accidental change is to make use of various qualifications—of respect, perspective, time and so on—which compensate for the indeterminacy of matter and change. These qualifications are necessary in order to overcome dialectical objections (λογικὰς δυσχερείας, 1005b22), stemming from the appearance of contradiction in change and motion, and the conflicting data of sensory cognition.

However, Aristotle's primary concern in Γ.5 is clearly not to vindicate the coherence of accidental being: indeed, the fact that we are forced to introduce these qualifications is presented as a reflection of the *imperfection* of material nature. Matter, as indeterminate, fails to provide an adequate basis for the principle of non-contradiction. Aristotle repeatedly says that the best thing we can do for these men is draw their attention *away* from sensible things in which the nature of the indeterminate (ἡ τοῦ ἀόριστου φύσις, 1010a3–4) is ever-present and show them that there is a different type of substance which does not admit of change, becoming or corruption (1009a36–38, 1010a32–35, Cf. 1005a31–b2). Aristotle's procedure is to show them that there must be a purely actual and determinate substance which is the implicit ground of the indeterminate, ceaseless motion of the sub-lunary world.<sup>25</sup> The unchanging substance to which Aristotle points is no doubt the formal essence, which he has already established as the foundation for intelligible discourse. But he also seems to allude to the divine actuality, suggesting in fact that the investigation of the principle of non-contradiction belongs properly to the theologian: 'Since there is a thinker above the

25. On the other hand, it is certainly not the case that Aristotle denies the validity of the principle of non-contradiction in the material world, as J. Lukasiewicz suggests: "Thus according to Aristotle, the perceptible world, the world of generation and decay, may, since it has merely potential being, contain contradictions" ("Aristotle on the Law of Contradiction" 59). Aristotle's point is just that there are different modes and degrees of application—he never denies that the principle is universally valid.

physicist (for nature is one genus of being), the inquiry concerning these matters must also belong to the one who theorises universally and is concerned with primary substance' (πρώτην οὐσίαν, 1005a33–b1). The language is strikingly similar to the closing lines of E. 1, where Aristotle identifies ontology and theology, in virtue of the focal primacy of divine substance. The implication here, strange though it may sound to contemporary ears, is that the principle of non-contradiction belongs pre-eminently to the super-celestial substance. There are other theological allusions as well. Aristotle says, at one point, that it would have been more just if the relativists had acquitted (τὸ ἀποψηφίζεσθαι) the corruptible, sub-lunary world, instead of condemning (τὸ καταψηφίζεσθαι) all of nature and with it the blameless, incorruptible heavenly bodies which disclose the reality of changeless substance (1010a28–32).

It is clear that Aristotle conceives of primary and derivative applications of the principle of non-contradiction and that this distinction is based on categorical distinctions within entities, primarily the difference between their substantial and accidental modes of being. The focal or πρὸς ἓν structure of the ontological categories underlies the entire procedure. The notion that non-substances depend essentially for their being on substances, existing only as inherent attributes, carries the implication that there are degrees of actuality and unity. Whereas substance is a τόδε τι, non-substances are defined (like the paradigmatic 'snub') as 'this in that' (τόδε ἐν τῷδε, see Z.4–5). The qualities and quantities of a substance do not enjoy the same degree of self-relation, fixity and permanence as its essential attributes. In short, Aristotle does not consider the principle of non-contradiction from an abstract or *a priori* perspective but presumes, throughout the discussion, the ontological distinctions between substance and accident, and actuality and potentiality.

#### CONCLUSION

There can be no doubt that Aristotle regards metaphysics as the most general and, in some sense, most abstract of the sciences. In investigating the categories of entity the philosopher prescind from the determinate kinds and species of entity that are studied in the special sciences, and studies entities only in their fundamental modes of being and unity. But we must resist the temptation to equate the 'abstractness' of the science of being with a philosophical method that is detached from the world as it is objectively given. The notion that metaphysics is a second-order inquiry is not Aristotle's: it is part of the Kantian heritage of our contemporary analytic tradition, which consciously limits philosophical investigation to the introspective clarification of language and concept.

Abstraction (ἀφάιρησις, see e.g., 1077b9–10), for Aristotle, is primarily a mathematical concept, which describes the process by which the sensible qualities and matter of a substance are stripped away in order to focus exclusively on the quantitative dimensions. This methodological feature has an analogous application in the other sciences. In any scientific sphere, one must abstract those aspects of an entity that fall outside of the level of investigation, as delimited by the ‘*qua*’ operator. For instance the biologist demonstrates about living substances, *qua* living substances, and draws conclusions that apply to all living substances in general or as such. Yet surely no one would be tempted to claim, on this basis, that generic conclusions about living substances *qua* living substances are less scientific or more ‘conceptual’ than the conclusions drawn in the specific branches of biology, like zoology or botany. The fact that Aristotelian genera are only potential realities, existing in and through their specific members, does not imply that they have a merely conceptual significance.

Likewise, then, the generality of metaphysics does not have the implication that it is a second-order science, less rigorous in its structure and method than the empirical sciences. Its difference from the other sciences is a matter of *degree*, not of kind. Moreover, the primacy of metaphysics, for Aristotle, is not only a consequence of abstractness—the fact that it deals with the widest kinds of entity—but follows also from the focal universality of its primary object, substance, which functions as the explanatory ground for all other modes of entity. Metaphysics is universal in this way, because it is first (καθόλου οὕτως ὅτι πρώτη, 1026a30–31), the first and most authoritative of the demonstrative sciences.