

Word, thought, and object in *De int.* 14 and *Metaphysics* Γ3

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En principe, la logique, c'est la description des objets. Si quelqu'un en veut à la logique, il va contre la structure générale du monde et pense de façon irrationnelle. La logique, en tant que description des objets, est description du monde.¹

The discussion of the Principle of Non-Contradiction (PNC) in Aristotle's *Metaphysics* Γ is usually taken to include three 'versions' of the principle: an ontological, psychological, and logical one. In this article I develop an interpretation of *Metaphysics* Γ3 and a parallel text, *De interpretatione* 14, in order to show that these texts are concerned with two related but different principles: a version of the Principle of Identity, and a corollary to this, which concerns the ability to accept two 'opposite' items at the same time. I argue that these principles must be considered separately in order to properly understand Aristotle's remarks about PNC in *Metaphysics* Γ, and in order to defend his approach in these remarks against certain objections raised against the discussion in *Metaphysics* Γ by Jan Łukasiewicz in his seminal study *Über den Satz des Widerspruchs bei Aristoteles*. The main result of my interpretation is to distinguish in the discussion of PNC in *Metaphysics* Γ three principles: one concerning linguistic items (words and statements), one concerning thoughts (δόξαι), and one concerning objects or states of affairs.

1. Introduction

In *Metaphysics* Γ3 Aristotle introduces the claim that a science of being *qua* being will also study «what are called axioms in the mathematical sciences» (1005a19–21). He goes on, in this context, to identify the principles of deduction as falling within the scope of the science in question, the science concerning being in general (1005b5–11). The person responsible for this research task – «the philosopher» (b11) – will know the most stable or certain principles of all that which exists.

According to several influential interpreters, Aristotle introduces in *Metaphysics* Γ several versions of the Principle of Non-Contradiction (PNC), e.g. an ontological version and a logical one.² As I seek to show here, in its initial for-

1 Jozef-Maria Bocheński: *Entre la logique et la foi. Entretiens avec Joseph-M. Bocheński* recueil-lis par Jan Parys, traduit du polonais par Eric Morin-Aguilar (Montricher: Les Editions Noir sur Blanc, 1990) 71.

2 Heinrich Meier: *Die Syllogistik des Aristoteles*, 1. Teil: *Die logische Theorie des Urteils bei Aristoteles* (Tübingen: Verlag der Laupp'schen Buchhandlung, 1896), 41–74 (in particular 42 n. 1), followed by Jan Łukasiewicz: *Über den Satz des Widerspruchs bei Aristoteles*, in: *Bulletin international de l'Académie des Sciences de Cracovie. Classe de philologie, classe d'histoire et de philosophie*. Numéro 1 et 2 (Cracovie: Imprimerie de l'université, 1910) 15–38, and William D. Ross: *Aristotle's*

mulation the Principle is not about contradiction, i.e. a relation between statements. It is rather about how things are, or *can* be. Aristotle introduces the Principle as the statement that «it is impossible that the same property both belong and not belong to the same item in the same respect, and all the other distinctions we add with a view to counter merely definitional objections» (Γ3, 1005b19–22).³ This has been called (and is generally still viewed as) the ‘ontological’ version of PNC. I will call it the Principle of Non-Opposition (PNO), and argue that it is a version of the Principle of Identity.

There is also a psychological version of PNC (so-called): «It is impossible to accept (ὕπολαμβάνειν) that the same thing both is and is not» (Γ3, 1005b23–24).⁴ Properly speaking, this is a *corollary* to PNO: It concerns the capacity to accept the negation of PNO in thought, and states that this is impossible. It too is not about statements in contradiction, but acts of acceptance and how they must be structured. This may be called the Principle of Non-Acceptance, namely that one cannot accept that the same state of affairs both is and is not (the case). The principle identifies a feature of intentional thought: when we entertain a certain ‘propositional content’, we must have an assertive or negative attitude about it, but we cannot have both at once.

Finally, there is the logical version of PNC (so-called), which really is a Principle of Non-Contradiction. It states: «It is the most certain of all principles that contradictory statements cannot be true at the same time» (Γ6, 1011b13–24).

A point of contention in the interpretation of *Met. Γ* is Aristotle’s use of the ‘object-theoretical’ PNC to establish the axiomatic status of the logical version of PNC.⁵ It is agreed that PNC is basic to the practice of linguistic communication and signification, and basic to logic, but unclear how ontological and psychological ‘versions’ of PNC are supposed to support an argument for its status as an axiom. Perhaps the best way into the problem is by way of an interpretation which claims that Aristotle’s discussion of PNC fails. In an incisive critique of

Metaphysics. A Revised Text with Introduction and Commentary, Vol. 1 (Oxford: Clarendon Press, 1924) 264.

3 τὸ γὰρ αὐτὸ ἅμα ὑπάρχειν τε καὶ μὴ ὑπάρχειν ἀδύνατον τῷ αὐτῷ καὶ κατὰ τὸ αὐτὸ (καὶ ὅσα ἄλλα προσδιορισαίμεθ’ ἄν, ἔστω προσδιορισμένα πρὸς τὰς λογικὰς δυσχερείας).

4 ἀδύνατον γὰρ ὄντινοῦν ταῦτὸν ὑπολαμβάνειν εἶναι καὶ μὴ εἶναι.

5 The interpretation of this ‘version’ of the PNC is contested, because at least one interpreter denies that there even is an ontological version of PNC in this passage. See Christof Rapp: *Aristoteles über die Rechtfertigung des Satzes vom Widerspruch*, in: *Zeitschrift für philosophische Forschung* Band 47.4 (1993) 521–541, who seeks to show that the «ontological version» of the principle is in fact logical by claiming that the two occurrences of the word ὑπάρχειν in Γ3, 1005b19–20 cannot mean «belonging» in the sense of a property, but must be taken terminologically and «meta-linguistically» as the «belonging» of a predicate (Ibid., 525–526). One understandable concern which motivates Rapp’s interpretation is excluding PNC from any empirical revision or confirmation. However, in the context of discussing the principles of being *qua* being (Γ3, 1005b10), it does not seem very plausible that Aristotle would suddenly shift to a meta-linguistic formulation.

Aristotle's discussion, Łukasiewicz 1910 raised several objections to the argument in *Met.* Γ from a modern logical standpoint. Łukasiewicz recognized the aforementioned three formulations as different and having different meanings, but claimed that the ontological and logical versions of PNC are supposed to be co-extensive and logically equivalent («gleichgeltend»⁶), an equivalence due to the fact that statements represent states of affairs (Γ7, 1011b26–27).

Based on this assumption, Łukasiewicz made the following critical and exegetical claims about Aristotle's discussion of PNC. 1. Echoing contemporary criticism of psychologism, Łukasiewicz denies that the psychological version of PNC could be an axiom (21). He argues further that 2. Aristotle attempts to derive the psychological version of PNC from the logical version, and this attempt fails.⁷ 3. It is not the case that PNC in its logical and ontological versions are the most basic axiom, because the Principle of Identity can be seen as more primitive; and the definition of a true statement is logically prior to even the Principle of Identity.⁸ 4. Aristotle is inconsistent in saying that PNC cannot be proven and then attempting to prove it in *Met.* Γ5. Aristotle's arguments for PNC in the logical and ontological versions fail because they are based on faulty object-theoretical assumptions. Finally, Łukasiewicz argues that PNC holds only under the assumption of objects of a certain type (namely: substances), but that Aristotle in the course of his discussion of certain 'Sensualists' entertains objects which are undetermined and thus not bound by the ontological version of PNC. With this, so Łukasiewicz, Aristotle must concede that PNC is limited to a certain type of object (and is thus neither as general nor as primitive as initially claimed).

One can counter at least part of the critique by clearly distinguishing the meaning of the principles (a distinction upon which Łukasiewicz himself rightly insisted). Thus one part of the paper will be devoted to showing how, in *Met.* Γ3, the principles introduced there differ, and how they relate. Another part of the paper will further develop Aristotle's background assumptions (found in *De int.* 14) regarding what one can accept, and how acts of acceptance (δόξαι) are opposed, and what the limits of acceptance are. (The connection between these two was also made by Łukasiewicz⁹).

The overall aim in this paper is to clarify some crucial first steps in Aristotle's argument in *Met.* Γ3, and to provide background for these steps in *De int.* 14. A further purpose is to defend Aristotle's argument in *Met.* Γ3 from at least certain criticisms levelled by Łukasiewicz, and to contribute to an understanding of how the act of acceptance features in it. Acceptance, it will be seen, is an epistemic concept closely related to belief but different from it in important

6 J. Łukasiewicz: Über den Satz des Widerspruchs bei Aristoteles, op. cit., 18

7 Ibid., 18–19.

8 Ibid., 22–23.

9 Ibid., 19.

ways. Łukasiewicz's critical appraisal of our passage brings out the importance of this notion, and gives us a key to defending Aristotle's discussion of PNC against his own criticism of it.

2. Thoughts in opposition: *De int.* 14

As a study in contradiction, Aristotle's remarks in *Met.* Γ have a parallel, the study of contradictory pairs of assertions in *De int.* In both of these texts Aristotle attends to words and their significations with a view to a central ontological question for establishing the relation of contradiction: whether the same thing can both hold and not hold of a subject at the same time.¹⁰ The question is usually framed in terms of an 'ontological version' of the PNC. But in fact this concerns a version of the Principle of Identity. For if we think of an entity as a subject with an attribute, then the failure of the attribute to be stable – which is given when the same thing can both hold and not hold of the same subject – is a failure of identity. As I will argue, for Aristotle the Principle of Identity precedes the Principle of Non-Contradiction, but is related to it closely, since identity is conceived in terms of the impossibility that an item have contrary properties at the same time (*De int.* 14, 24b9).

In *De int.* a version of the Identity Principle is recognized as a requirement for the determinate signification of utterances. It will be useful to introduce this first and consider how the principle there is invoked in the development of what is at least partially a grammatical theory.

Aristotle states in *De int.* 10 that an affirmation (κατάφασις) is a signifying expression with two features. First, an affirmation «signifies something about something» (*De int.* 10, 19b5). This can be understood as an 'aboutness' feature. The aboutness feature requires a stable referent, but it is not completely clear if this need be an item such as a tree or a human being; it could conceivably be a previously introduced account such as a definition. Secondly, the linguistic sign used in an affirmation as a 'noun' (ὄνομα) – whether it happen to be established as a noun, or not – must be predicated to precisely one other expression in the affirmation (*De int.* 10, 19b6–7).¹¹ The target of this description is a 'simple statement'.¹² The description follows one formulated by Plato in the *Sophist* consisting in two linguistic parts: a subject-part and a verbal expression (*Sophist*

10 C.W.A. Whitaker: Aristotle's *De interpretatione*: Contradiction and dialectic (Oxford: Oxford University Press, 1996) 183.

11 Ἐπεὶ δὲ ἐστὶ τὶ κατὰ τινὸς ἢ κατάφασις σημαίνουσα, τοῦτο δ' ἐστὶν ἢ ὄνομα ἢ τὸ ἀνώνυμον, ἐν δὲ δεῖ εἶναι καὶ καθ' ἑνὸς τὸ ἐν τῇ καταφάσει.

12 See John L. Ackrill: Aristotle: Categories and De Interpretatione (Clarendon: Oxford University Press, 1963), 118, whose comment on an earlier passage (16a32) holds also for this one.

262). We may take this as a determination with regard to the ‘word’ aspect of signifying expressions.

The challenge to the Identity Principle in *Met.* Γ is not addressed to this ‘word’-based conception of a simple statement. It is addressed to the identity of the object (be it considered linguistic or otherwise) which the simple statement is about. The challenge is issued originally in the guise of an alleged possibility to accept that the same thing is and is not (Γ3, 1005b23–32). Thought is related to the Principle which makes stable signification possible in the following way: it is impossible for a (presumably: rational) agent in thought to accept and deny the same property of the same subject. This is a thesis about thoughts as acts of acceptance, not about beliefs as properties of the subject.¹³ Thought itself is not a property, but a form of quasi-assertion which cannot take place at all under the assumption of contradictory properties at the same time, in the same respect, etc. This is a thesis about the intentional determination of acts of thinking, and in particular accepting, in relation to their objects (and be those objects linguistic or otherwise).

An unexpressed premiss in this argument is that thoughts conform to the linguistic conditions which also apply to affirmation. We find Aristotle making just this argument in *De int.* 14, and so it will be helpful to consider that passage in this connection.

Aristotle enters upon a discussion of the contrariness of δόξαι in *De int.* 14, a type of propositional attitude which I will render as ‘acceptance’.¹⁴ This is an unusual translation, but it can be clearly motivated by attending to the very beginning of the chapter. *De int.* 14 opens with the question of whether affirmation is «opposite to» (ἐναντία) negation or opposite to another affirmation (23a27–28). The question Aristotle considers is, if one rejects the proposition ‘every man is just’, what proposition must one accept? Must one accept the proposition ‘every human is unjust’? Clearly not. The question in the realm of language is related by Aristotle in *De int.* 14 to the case of thought, because the acts of acceptance and rejecting are intentional. The idea is that one’s intentional

¹³ Pace C.W.A. Whitaker: Aristotle’s *De interpretatione*: Contradiction and dialectic, op. cit., 185, who – like J. Łukasiewicz: Über den Satz des Widerspruchs bei Aristoteles, op. cit., 19 – construes this condition as constraining a subject *s* with a belief *p* at time *t* such that *p* is a property of the subject. Then this condition states that if *s* has *p* at *t*, it is impossible for *s* to have $\sim p$ at *t*. The interpretation is also found in H. Meier (Die Syllogistik des Aristoteles, op. cit. 43–45), who is at pains to show why the «objective» version of PNC, i.e. its ontological formulation, can ground the «psychological» version, a move which Łukasiewicz correctly identified as problematic.

¹⁴ The translation of δόξαι as ‘belief’ has been unfortunate insofar as it suggests at least to some that this is the genus of which knowledge is a species, a role which δόξαι is not conceived to play in Platonic and Aristotelian contexts. On this issue, see Jessica Moss and Whitney Schwab: The Birth of Belief, in: *Journal of the History of Philosophy* 57 (2020) 1–32, who locate the «birth of belief» as the act of taking to be true specifically in Aristotle’s notion of ὑπόληψις and cite as evidence for this claim i.a. *Metaphysics* Γ (ibid., 20–21). I take it that δόξαι too can play this role in this passage, and render δόξαι as ‘acceptance’ in the sense of the act of taking something to be true.

states or propositional attitudes are reported by statements, and so the way that one's attitudes are opposed will be linguistically so reported: «For things in speech follow those in thought, and there an acceptance of the opposite is opposed, for example (if one accepts that) 'every human is just' is opposed to 'every human is unjust', then also in the case of speech it is necessary for it to hold in this way» (23a32–35).

The main question at issue in this chapter is articulated in 23a38–39: «We must inquire what sort of true acceptance is opposed to a false one, whether it is the one which accepts the contradictory or the contrary».¹⁵ This question arose from the further question whether the (mental) rejection of a certain (mental) assertion requires (not 'belief' but) acceptance of another assertion, or acceptance of a certain negation (23a35–37). For linguistic items, the case has already been established in *De int.* 6, where it was argued that a statement is «opposed» (ἀντικειμένη) to another if these statements are so related that one affirms and the other denies «the same thing of the same thing» (*De int.* 6, 17a26–33). A contradiction (ἀντίφασις) is a pair of statements so related. The relation of contradiction is established by means of an object-model which features an item and a property, and which informs the conception of an assertion cited above: the belonging of a predicate to a subject (*De int.* 10, 19b6–7).

The same object-model informs the consideration of thoughts in opposition. Aristotle considers the question in terms of true and false acceptances. If it is true to accept that a certain good item has the property 'good', there follows from this at least two opposed, false acceptances: that this good item is not good, and that it is bad. Which of these is opposed to the true acceptance (23b2–3)? That is: What must one *most* reject when one accepts the named true proposition?

For the case of thoughts, Aristotle approaches this question in *De int.* 14, 23b7–32 from the perspective of an error theory. This has puzzled interpreters who presume what Aristotle evidently found necessary to establish in *De int.* 14, namely that the case of thoughts in opposition is isomorphic to the linguistic case of contradictory pairs.¹⁶ Aristotle's approach in this chapter is however consistent with his earlier one. He uses the object-model of an item with a property to establish the basis against which we must track words and thoughts. The

15 C.W.A. Whitaker: *Aristotle's De interpretatione: Contradiction and dialectic*, op. cit., 172.

16 See Ammonius: In Aristotelis de interpretatione commentarius, ed. Adolf Busse (Berlin: Reimer, 1891) 251.25 ff., who suspected *De int.* 14 to be either inauthentic or a dialectical exercise for the purpose of refuting a potential objection to Aristotle's account. The reservations expressed by Ammonius concerning *De int.* 14 can be countered. Ammonius doubts the relevance of the chapter; but here Aristotle is concerned to counter an objection from a perspective which was quite different from his own (and which may have issued from the distinction between word-argumentation and thought-argumentation which Aristotle criticizes in *SE* 10). Ammonius' philological feeling that the treatise has reached its appropriate end at the termination of Chapter 13 can be appreciated without being deemed sufficient reason to reject the chapter as spurious.

approach via an error theory was already suggested when he asked: «What sort of true acceptance is opposed to a false one, that of contradiction or the one which accepts that the opposite is the case»? This is conceived specifically as a way of accepting what is false, i. e. being in error (ἀπάτη: 23b13; διέψευσται: 23b21, 23b31). He is clear that it would not be manageable to consider all possible ways to be in error about a given truth, we must rather consider error in terms of the proper opposite of the truth (23b9–15). The two cases of error are illustrated with a model object – a good item – and its property, ‘good’. Aristotle argues that this item has the property of being good in itself, and that of being not-bad only accidentally (23b15–18), and infers from this that the ‘more’ true acceptance regarding this item relates to what it is ‘in itself’ (‘good’), not to what it is accidentally (‘not-bad’). He then concludes that the contradictory acceptance regarding this good item (namely, that it is not good) is more opposed to the truth about it than the contrary acceptance (namely, that it is bad), «for the one most in error about each thing is the one who accepts what is opposed (ἐναντίαν δόξαν) to it» (23b20–22). Here he glosses the particular sense of ‘opposed’ in use by explaining that this word here refers to those things which differ most in relation to one single, same thing (23b22–23). And he notes that the acceptance of the contrary with regard to this good item is a complex case: if you accept that the good item is bad, this entails the assumption that it is not good (23b25–27). The acceptance of the contradictory is simple (i. e. non-complex) because it does not entail the assumption of a contrary property to the truth: if you accept that the truly good item is not good, this does not entail accepting that it is bad.

The method of determining the most extreme form of opposition in thoughts is based on objects, but not merely any objects: objects as conceived with at least one property. And as was pointed out, the reason for using this model of the object is that in the *De int.* we have under consideration objects as they feature in assertions. Assertions are the particular sub-class of statements which can be true or false (*De int.* 4, 17a2–3), and which form the proper subject of the investigation in the *De interpretatione* (17a6–7). Assertions have a certain grammatical structure, one in which «something is said of something» or «something is denied of something» (5, 17a21). Aristotle does not seem to have the concept of a Fregean proposition, i. e. a thought which does not involve the act of acceptance. Compare Frege: «Es ist also möglich, einen Gedanken auszudrücken, ohne ihn als wahr hinzustellen».¹⁷

Thus the instances of assuming which we find in *De int.* 14 are not just any kind of thoughts, but thoughts on the model of assertion and denial, i. e. acceptances (or rejections) of some ‘propositional content’, and not bare thoughts

17 Gottlob Frege: *Der Gedanke. Eine logische Untersuchung*, in: *Beiträge zur Philosophie des deutschen Idealismus* (1918) 62.

without such a rejection or assertion. Yet just as not every statement which seems to be a predicative assertion really is one, not all thoughts which really seem to correspond to predicative assertions really do so. Aristotle recognized that there were vacuous terms which were nevertheless signifying, such as ‘goat-stag’, which – lacking predicates such as ‘is’ or ‘is not’ – may signify without signifying something true or false (*De int.* 1, 16a16–18). It is plausible that, with a view to such vacuous terms, he stipulated that the terms of predicative assertions must be non-vacuous in order for a genuine predicative assertion to come about.¹⁸ In any case, the underlying position in this context reflects a correspondence theory of truth in which there is isomorphism between an assertion and a corresponding property in the object, namely the object’s being or not-being, in the sense of being or not being *true*.¹⁹

Aristotle recognizes an important difference between acceptances (δόξαι) and the objects about which they are made. The same propositional attitude, in this case an act of acceptance, can include objects which are opposed, e.g. one and the same acceptance can be expressed as the assertion of a good item that it is good and the assertion of a bad item that it is bad (23b3–7). This distinction indicates that Aristotle is aware that the point at issue is the way in which the propositional attitudes are opposed, and that this is not properly determined by the nature of their objects. Clearly cases of acceptance do not take on the properties of the things which they are about. But they are based on the property-object model of objects which informs the predicate-subject model of propositions. The result that the most opposed thoughts are the mental equivalent of assertion (an acceptance *that* an object has a certain property) and its contradictory (the rejection *that* said object has said property) is ultimately derived from a thesis about the object-model, namely that «opposed things cannot hold at the same time about the same thing» (*De int.* 14, 24b9). This is a thesis about the identity of objects. Such identity would not be preserved if opposite properties belonged to them at the same time. As we shall see, *Met.* Γ makes use of this same thesis in an argument that it is impossible to even hold as true (i.e. accept or mentally assert) an object with the feature ‘having opposite properties at the same time’.

¹⁸ On this issue see Paolo Crivelli: Aristotle on Truth (Cambridge: Cambridge University Press, 2006) 152–161. Crivelli argues for the yet stronger claim that for Aristotle predicative assertions must contain not only non-vacuous terms but also non-empty ones, i.e. terms which signify not only items of the appropriate kinds, but which also signify *existent* items of the appropriate kinds.

¹⁹ *Ibid.*, 135–138.

3. The limits of acceptance: *Met.* Γ3, 1005b11–34

The argument in *Met.* Γ which opens the discussion of PNC in earnest is found in Γ3, 1005b11–34. It has many similarities with that of *De int.* 14, and assumes certain results of that chapter. A first similarity concerns error theory. The discussion opens with an indirect but important reference to error: it concerns a principle so «secure» that it is impossible to be in error about it (1005b11–12). What this means is that one cannot avoid accepting it in thought, though of course it is possible to *claim* that one rejects it and deny that one mentally accepts it – which, according to Aristotle’s words in the opening lines of *Met.* Γ4, some do (1005b35–1006a3). In answer to them Aristotle states that «we have now assumed that it is impossible for something at the same time both to be and not to be, and through this we have shown that this is the most secure of all principles» (Γ4, 1006a3–5). This must be a reference to the preceding passage, *Met.* Γ3, 1005b11–34, where we find a further claim from *De int.* 14: that opposites cannot hold at the same time of the same thing (Γ3, 1005b19–22; 1005b26–27). Here too we may see how this is a thesis about the identity of all items which can lay claim to be objects of acceptance (and rejection) in contradiction, which is explicitly invoked as part of the argument for the claim that this is the securest of all principles (1005b28–32).

The argument in this passage has three clearly marked stages. In the first, Aristotle argues that the principle under consideration is the most secure (1005b11–19). In the second, he determines what the principle is (1005b19–23). And in the third, he defends the identification of the most secure principle with the principle so defined (1005b23–34). I shall discuss these passages in order.

***Met.* Γ3, 1005b11–19.** The argument for the security of the principle under discussion is based on a certain definition of it. The most secure principle is defined as the one about which it is impossible to be wrong (1005b12). Aristotle adds to this definition three further features of the principle: 1. It is most known (1005b13), 2. those who don’t know it are all in error (b13–14), and 3. it is without further hypothesis (b14). He then explains how these three features relate and ground the claim that the principle is most secure. If it is necessary to have a principle in order to understand anything which is (ὅτιούν τῶν ὄντων, b16), then this principle is not a «supposition» (ὑπόθεσις).

«Supposition» is defined in *An. Post.* A10, where it is distinguished from «what must be the case on account of itself, and what must seem true», i.e. be accepted (76b23–24) – which is the very sort of thing under discussion in *Met.* Γ3. What must be accepted on account of itself is, it seems, an element of «internal argument»; Aristotle claims that «it is always possible to object to external argument, but not always possible to object to internal argument» (*An. Post.* A10, 7626–27). It is implied but not explicitly stated here that supposition and

postulate relate to moves made in «external» argument, which we may certainly understand as a context of explicit linguistic utterances. Supposition is defined as something which belongs to a didactic context, the context of a «learner» (76b27–28). In this context, if you posit something you could prove (but do not prove it), and it is something with which the learner agrees, it is a supposition; but if you make such a posit and the learner has no view on the matter or would disagree, the additional assumption is called a postulate (ἀίτημα) (76b27–31, with 76b23).

The distinction can be read in the light of *De int.* 14 as one between types of acceptance in two different contexts. Both «external proof» (articulated in actual utterances) and «the argument in the soul» (76b24–27) are types of deduction, and as deductions they will be linguistic items, consisting of premisses and conclusion. The argument in the soul is a context in which certain things must be accepted in and of themselves. Here it is not always possible to object. The external argumentation context is one in which even such a basic assumption could be challenged: «For it is always possible to raise an objection against the external argument, but with regard to the internal argument this is not always possible» (76b26–27). Suppositions and postulates belong to acceptance behavior as evidenced in a context of external proof, where acceptance is a matter of agreement between multiple parties. «What must be and be deemed true [i.e. accepted] on account of itself» is not subject to such arbitration. It is literally a pre-supposition in the sense of an acceptance which precedes any context of communication or «external proof». But as we shall see, we should not think of such a pre-supposition as non-linguistic, since Aristotle thinks that thoughts are basically structured like one type of linguistic item, namely assertions.

This is how we are to understand the claim in *Metaphysics* Γ3 that the principle under discussion is «without hypothesis» (ἀνυπόθετον, 1005b14). The claim is explicated with reference to a learning situation when Aristotle states that the principle «must be had by anyone who would understand anything which is», but which is «not a supposition» (1005b15–16). The previous acceptance of the principle for any learning context whatsoever is re-iterated in the immediately following lines: «that which someone must know in order to know anything whatsoever is something which he must already have come to possess» (b16–17). A supposition is something which can be added during the process of acquiring knowledge, in the learning context. The principle under consideration is something which the learner must already have and bring to the learning context.

The principle is most secure, then, in the sense that it is not a supposition in a certain proof, but a *presupposition* for grasping anything at all, including such primitive starting-points of proof such as definitions. Aristotle also distinguishes definitions from suppositions in *An. Post.* A10, and states that it is merely necessary to understand them, a process he distinguishes from supposi-

tion (76b35–39). But accepting this principle is presumably anterior even to the grasping of a definition, since it must be had in order to understand anything at all.

We may arrive now at a more precise description of the way in which the principle under discussion is «most secure». It is secure in that it pertains to a type of acceptance which can be challenged in speech, but which cannot be challenged in thought, at least by anyone who would presume to know or learn something. That is why it is impossible to be wrong about it: when you are learning or knowing anything whatsoever, you already have tacitly accepted the principle as a presupposition.

Met. Γ3, 1005b19–23. The ‘ontological version’ of the principle is formulated in this passage. It concerns the relation of «belonging» (ὑπάρχειν):

It is impossible for the same property to belong and not belong to the same item in the same respect, and all the other distinctions we add with a view to counter merely definitional objections (Γ3, 1005b19–22).²⁰

It has been noted by commentators following Meier 1900 that this is a «law of being» (Ross 1924, 264). They nevertheless continue to identify it with the Principle of Non-Contradiction, of which this is said to be a ‘version’. But the principle so formulated concerns not contradiction but opposite properties, namely the properties of being as true and not-being as false which we identified as the proper corresponding object-states for truth-apt predicative assertions. We should therefore not read this principle as being a ‘version’ of the PNC at all, but rather as an independent principle concerning the identity of objects. It is this principle which is presupposed by all who seek even the most passing knowledge or acquaintance with anything whatsoever.

Reading this passage in this way, in the light of the *De int.*, can save Aristotle from a potent objection. It has been said that Aristotle takes only fleeting notice of the Principle of Identity.²¹ A related objection to his argument in *Met. Γ* states that Aristotle assumes the Principle of Non-Contradiction is axiomatically basic, when the Principle of Identity is more primitive.²² But as I have argued here, the ‘ontological’ principle in *Met. Γ3* concerns the identity of an item under its description as being (as corresponding to true assertion) or not-being (as corresponding to false assertion), not contradiction. This approach may seem tautologous, because it explicates the notion of truth through «being–as–true».²³ But in fact we may understand in this way how identity of the being

²⁰ τὸ γὰρ αὐτὸ ἅμα ὑπάρχειν τε καὶ μὴ ὑπάρχειν ἀδύνατον τῷ αὐτῷ καὶ κατὰ τὸ αὐτὸ (καὶ ὅσα ἄλλα προσδιορισαίμεθ’ ἄν, ἔστω προσδιορισμένα πρὸς τὰς λογικὰς δυσχερείας).

²¹ Joseph M. Bocheński: *Formale Logik* (Freiburg/München: Karl Alber, 1956)106–107.

²² J. Łukasiewicz: *Über den Satz des Widerspruchs*, op. cit., 22.

²³ See the objections raised to the theory by Franz Brentano: *Über den Begriff der Wahrheit* (1889), in: *Wahrheit und Evidenz*, hg. v. Oskar Kraus (Hamburg: Felix Meiner, 1930) 27.

of the object which is the target of a predicative assertion or thought grounds the truth and falsehood of the assertion or thought, and thus also can be expressed as the principle which precedes and supports PNC, namely PNO: «it is impossible that the same property both belong and not belong to the same item in the same respect, and all the other distinctions we add with a view to counter merely definitional objections» (Γ3, 1005b19–22). Ultimately, the relevant object property will be being in the sense of being true.

The conception of object-identity in terms of sameness with regard to properties has an older pedigree. We find formulations indicating such a conception in *Topics* H1: «Inquire if that in relation to which one thing is the same, the other is also the same. For if both of these do not belong to this same thing, then it is clear that they are not identical to each other» (H1, 152a31–32). This is a test for the identity of properties; it states that those properties which do not belong to the same objects are non-identical. Aristotle states in this connection a corollary of this thesis, now regarding the identity of objects:

Further, make inquiry based on properties of these things and the items for which they are properties. As many as belong to one item must also belong to the other, and that to which the one belongs, to this same object must also the other belong. If something among these doesn't match up, it is clear that the items under consideration are not identical (*Topics* H1, 152a33–37).²⁴

On this thesis two objects are «the same» (a34–35), and properties are the same if they belong to the same things (a35–36). Thus for the same property to «both belong and not belong to the same item» (Γ3, 1005b19–20) is an infringement on a version of the Identity Principle which we find in the *Topics*.

The belonging of a property to an object is often expressed by Aristotle with the term *ὑπάρχειν*, as we find it also here (*Met.* Γ3, 1005b19, 20; see also Γ3, 1005b19). This use of the term is summarized in Bonitz' *Index Aristotelicus*.²⁵ Bonitz distinguishes within these contexts of use between two types of case. In one type, those things are said to 'belong' to another item in the manner of being the property of that other thing, be it as external objects or as affections and qualitative states (789a12–15). This is the case-type to which Bonitz attributes this passage and subsequent uses of *ὑπάρχειν* in *Met.* Γ3–6 (789a29–30). In the other case-type, Bonitz writes, «this signification of the word for the thing and truth (*ad rem et veritatem*) is transferred onto thought and assertion (*ad cogitationem et enunciationem refertur*) in such a way that it may be possible to discern (with difficulty) where it shifted from one use to another»

²⁴ Ἐτι ἐκ τῶν τούτοις συμβεβηκότων καὶ οἷς ταῦτα συμβέβηκεν ἐπισκοπεῖν-ὅσα γὰρ θατέρῳ συμβέβηκε, καὶ θα-τέρῳ δεῖ συμβεβηκέναι, καὶ οἷς θάτερον αὐτῶν συμβέβηκε, καὶ θάτερον δεῖ συμβεβηκέναι. εἰ δέ τι τούτων δια-φωνεῖ, δηλονότι οὐ ταῦτά.

²⁵ Hermann Bonitz: *Index Aristotelicus*, in: *Aristotelis Opera*, ex rec. Immanuelis Bekkeri, editio altera quam curavit Olof Gigon, Vol. V (Berlin: de Gruyter, 1961) 789a12–b4.

(789a30–34). The *locus* cited for this shift is the use of *ὑπάρχειν* in the *Prior Analytics* and in particular in *An. Pr.* A37: «That this belongs to that, viz. that this is true of that, should be grasped in as many ways as the forms of predication (κατηγορίαί) have been distinguished» (49a6–8). The sense of *ὑπάρχειν* here denotes predication of a predicate to a subject (Ross 1949, 408; Striker 2009, 226), hence the reference here to «predications» (thus the translation of *κατηγορίαί* in Smith 1989, 55). This is the primary sense of *ὑπάρχειν* in the *Prior Analytics*, where the word is used to express the relation of a predicate to a subject. For this grammatical use of the term one need look no further than the introduction of the notion of a «premiss»: «A premiss is a statement which asserts or denies something of something, and this is universal, particular, or indeterminate. I call it universal if it belongs to all or none of something; particular if it belongs to some or not to some or not to all; and indeterminate if it belongs without universality or particularity» (*An. Pr.* A1, 24a16–20).

Commenting on this use of *ὑπάρχειν*, Heymann Steinthal remarked that the «Sprachverhältnis» expressed by locutions such as *κατὰ πάντος καὶ μηδενός* κατηγορεῖσθαι seems to be coordinated with an «Objektverhältnis» in the expression *ὑπάρχειν τινί*.²⁶ This observation would occasion the less careful claim that the logical, ontological, and linguistic levels here are «intertwined» («ineinander») in Aristotle's terminology at the outset of the *Prior Analytics*: «ὑπάρχειν τινί bezeichnet ein logisch-begriffliches Verhältnis, aber unmittelbar zugleich ein reales, ontologisches».²⁷ To the contrary, it seems that the grammatical use of *ὑπάρχειν* in the *Prior Analytics* is already quite independent of objects. Though one can find colloquial cases of the first case-type, the second type of case – the grammatical use of *ὑπάρχειν* – smacks of something terminological.²⁸

The purpose of this terminology has been the object of some debate. Alexander suggested three didactic (ἐν τῇ διδασκαλίᾳ) reasons for the presentation of syllogistic premisses in the form 'belongs to every' and 'belongs to none': 1. In order to show the «connection of statements» (συναγωγή τῶν λόγων)²⁹; 2. In order that predicate and subject become clear; and 3. Because the expression 'of every' expresses the relation of being in a whole, which is basic to

26 Heymann Steinthal: Sprachwissenschaft bei den Griechen und Römern. Mit besonderer Rücksicht auf die Logik (Berlin: Ferd. Dümmler's Verlagsbuchhandlung, 1863) 198.

27 Heinrich Maier: Die Syllogistik des Aristoteles. Zweiter Teil: Die logische Theorie des Syllogismus und die Entstehung der aristotelischen Logik, Erste Hälfte: Formenlehre und Technik des Syllogismus (Tübingen: Verlag der Laupp'schen Buchhandlung, 1900) 6 n.1.

28 For a list of such occurrences see Jonathan Barnes: Grammar on Aristotle's Terms, in: Michael Frede and Gisela Striker (eds.), Rationality in Greek Thought (Oxford: Clarendon Press, 1996) 184 n. 27.

29 See the translation and notes in Jonathan Barnes, Susanne Bobzien, Kevin Flannery S.J., and Katerina Ierodiakonou, Alexander of Aphrodisias: On Aristotle's *Prior Analytics* 1.1–7 (Ithaca, New York: Cornell University Press, 1991) 117, who translate *συναγωγή τῶν λόγων* as «the deduction». I have opted for a more literal translation.

the theory of syllogistic (Alexander, *In Ar. An. Pr.* I, 54: 21–25). Günther Patzig, following Łukasiewicz, focuses on Alexander's second reason and suggests that this type of locution was introduced for the purposes of regimentation, to express the logical structure of propositions.³⁰ Jonathan Barnes rejects this interpretation and suggests instead a semantic one: formulae such as ὑπάρχειν τινί in Aristotle's logic are «intended in part as semantic descriptions of categorical sentences».³¹

Barnes' remark is useful for understanding the sense of ὑπάρχειν in our passage. Here we have the ontological underpinning for what is expressed when one asserts that a property belongs to some subject: namely one definite property, which belongs to one and the same subject. *Pace* Heinrich Maier, then, there is not an *Ineinander* of linguistic, logical and ontological levels in the logical use of ὑπάρχειν. But there is reference to the basic ontological relation which makes statements of the form 'A belongs to B' true, namely the belonging of A to B. The sense of the word in our passage is that of a property in relation to an item which bears it, and Bonitz was right to list it with other uses in this sense, and not with the sense that ὑπάρχειν takes on in Aristotle's logic – though it now may be seen how the two are related. It is this version of the Identity Principle that, according to the argument in *Met.* Γ3–6, even its opponent must accept in thought, if not in word. The commitment in thought to the Identity Principle – no item can both have and not have the same property – is treated in the third relevant passage of *Met.* Γ3, to which we now turn.

***Met.* Γ3, 1005b23–34.** Aristotle has been concerned with establishing that the Identity Principle is the most secure of all principles. The next step of the argument is the one in which he discusses the possibility of rejecting this Principle as a case of having «opposing acceptances» (δόξαι ἐναντία). This is the passage in which the Principle of Non-Contradiction is first introduced, as a case of acceptances in contradiction (ἐναντία δ' ἐστὶ δόξα δόξῃ ἢ τῆς ἀντιφάσεως). This agrees with the result he arrived at in *De int.* 14 that the primary forms of opposition in thought is between contradictory thought-assertions which are ordered like a contradictory pair. We will first consider the passage and then consider its interpretation by other authors, particularly by Łukasiewicz, who raises serious objections to Aristotle's argument at this stage.

The main claim of the passage is clear: «It is impossible for anyone whatsoever to accept that the same thing both is and is not the case» (1005b23–24; b29–30). This genuinely is a version of the Principle of Non-Contradiction, as it involves a relation between assertion-like thoughts, δόξαι, concerning a given

³⁰ Günther Patzig: *Die aristotelische Syllogistik. Logisch-philologische Untersuchungen über das Buch A der «Ersten Analytiken»* (Göttingen: Vandenhoeck & Ruprecht, 1963, 2. verbesserte Auflage)

²² Łukasiewicz draws attention to the passage in Alexander in his: *Aristotle's Syllogistic from the Standpoint of Modern Formal Logic* (Oxford: Clarendon Press, 2. Edition, 1957) 17.

³¹ J. Barnes, *Grammar on Aristotle's Terms*, op. cit., 186–187.

object, not an opposition of properties in a given object. The argument for the claim runs like this:

If it is impossible for opposite properties to belong to the same thing at the same time (let the usual qualifications we provide for this premiss be added), and if an act of acceptance is opposed to another through contradiction, then it is clear that it is impossible for the same person to accept (ὑπολαμβάνειν) that the same thing both is and is not. For whoever should be in error about this would have opposed acceptances at the same time (1005b26–32).³²

In interpreting this passage we may recall that in the first step of the argument in *Met.* Γ3 Aristotle claimed that the most secure principle was *presupposed* (ἀνυπόθετον, 1005b14). At this juncture Aristotle now considers the possibility of resisting this presupposition in one's acceptance behaviour. As he says, you might verbally deny the presupposition as a Principle (Heraclitus and others do), but it still remains a presupposition even for those who disavow it. The reason for this is that one presupposes the Principle of Non-Opposition in even having one single, assertion-like thought – including the thought which rejects PNO. For the thought which rejects PNO is itself structured like an assertion. The PNO is the presupposition of any thought structured like this, because an assertion is conceived as one member of a contradictory pair, and the act of holding-true, of accepting, is structured like an assertion. Its linguistic expression in the form of a categorical sentence 'A holds of B' reflects the semantic feature of the objects which inform such thoughts, namely objects as conceived under the presumption of PNO.

It is not, then, that the PNO is here being applied to thoughts, as if these were properties of an individual which could not be opposed.³³ PNO is a presupposition involved in any thought that has the structure of an assertion, which a denial of PNO would also have. In order to have one single, assertion-like thought, PNO is presupposed. It is the simulated attempt to deny PNO which leads Aristotle to formulate PNC.

32 εἰ δὲ μὴ ἐνδέχεται ἅμα ὑπάρχειν τῷ αὐτῷ τάναντία (προσδιωρισθῶ δ' ἡμῖν καὶ ταύτη τῇ προτάσει τὰ εἰωθότα), ἐναντία δ' ἐστὶ δόξα δόξη ἢ τῆς ἀντιφάσεως, φανερόν ὅτι ἀδύνατον ἅμα ὑπολαμβάνειν τὸν αὐτὸν εἶναι καὶ μὴ εἶναι τὸ αὐτό· ἅμα γὰρ ἂν ἔχοι τὰς ἐναντίας δόξας ὁ διεψευσμένος περὶ τούτου.

33 Pace H. Meier, *Die Syllogistik des Aristoteles*, 1. Teil, op. cit., 41–74; J. Łukasiewicz, *Über den Satz des Widerspruchs*, op. cit., 19; et al.

4. Acceptance and its objects

Łukasiewicz claimed that the «psychological» version of PNC is simply false and cannot be shown on the basis of the «ontological» version.³⁴ His reconstruction of Aristotle's argument for this «psychological» version of PNC states that if two acts of contradicting acceptances existed in the same consciousness, then this consciousness would be the bearer of opposite properties – which the «logical» version of PNC excludes.³⁵

But as we have seen, the principle which goes as the «psychological» version of PNC, namely the Principle of Non-Acceptance, is not about the identity of a single consciousness entertaining statements. It is about the structure of one single, assertion-like thought, the act of acceptance. The thesis that one cannot accept both x and $\sim x$ at the same time is based on the notion of assertion as it is developed in the *De int.* and on the further assumption, defended in *De int.* 14, that acts of acceptance are structured like assertions: predicating one property of one thing. This feature of assertion-like thoughts reflects a symmetry between belonging as a property and belonging as a predicate. It is a semantic feature of assertions and acceptances to individuate objects in terms of subjects which bear (the same) properties.

This follows immediately from the presupposition in Aristotle's first steps in the argument of *Met.* Γ concerning PNC, a presupposition which he has identified as such (ἀνυπόθετον). It is not a presupposition regarding contradiction, but emerges from a theory of identity which operates with the notion of opposite properties, the Principle of Non-Opposition. However, the object-theoretical thesis PNO can also be expressed without referring to properties and opposition. For we find a clear back-reference to the principle in *Met.* Γ4 in the following terms: «We have now taken on the assumption (εἰλήφαμεν) that it is impossible for the same thing to be and not to be the case, and we have shown that this is the most secure of all principles» (1006a3–5).

It is important to note that at this point Aristotle does not claim to have proved PNC, only to have shown something about it based on an assumption.³⁶ It would be «lack of educatedness» to try to prove this as a principle (ἀπαιδευσία). He has claimed that this assumption is a primitive presupposition; in *Met.*

34 J. Łukasiewicz, Über den Satz des Widerspruchs, op. cit., 19–21. For a recent criticism of this interpretation and an exhaustive treatment of Aristotle's *principles* (note the plural) of contradiction see Walter Cavini: Principia Contradictionis. Sui principii aristotelici della contraddizione (§§3–4), in: Antiquorum Philosophie (Vol. 1–2007) 124–169, in particular 143 n. 4. I may note that if one consults the German version of Łukasiewicz' essay, one sees that he cites Maier as the source of this interpretation (see J. Łukasiewicz, Über den Satz des Widerspruchs, op. cit., 19 n.1; cf. Cavini, *ibid.*).

35 J. Łukasiewicz, Über den Satz des Widerspruchs, op. cit., 19.

36 See Alan Code: Metaphysics and Logic, in: Mohan Matthen (ed.), Aristotle Today: Essays on Aristotle's Ideal of Science (Edmonton: Academic Printing & Publishing, 1987) 127–149, in particular Code's remarks on proving things about the PNC, 139–144.

Γ4, he attempts to show why. This is the object of his elenctic and apogogical arguments which bear the brunt of the criticism by Łukasiewicz. It is not possible to treat those arguments in detail here, but in closing we may show how our interpretation of *Met.* Γ3 could deflect this criticism.

The first point to mention is that Aristotle does not elenctically prove PNC, but PNO, and this distinction makes a significant difference. A proof in the proper sense proceeds from the principle which grounds further theorems, but an elenctic proof takes place under the assumption of a denial and with regard to an interlocutor.³⁷ Aristotle's argument is not directed against a 'position' from which PNC is denied. As commentators have shown, this would be quite difficult, since a refutation is a contradiction of the thesis, and the interlocutor denies that there is any logical basis for such a procedure.³⁸ As we see from Aristotle's text, the thesis under discussion is not PNC, but (the abbreviated version of) PNO. For Aristotle states that one should not demand the interlocutor to accept PNO itself, as this could be seen as a case of *petitio*:

The beginning for all things of this sort is not to demand that someone say that something either is or is not the case – for someone could easily counter that this is just what has to be shown in the first place – but rather to demand that the person signify something to himself and another person. This is necessary if he says anything at all (1006a18–22).

What is necessary for any sort of signification and meaning (Aristotle does not really distinguish these two) is the assumption of a definite object with non-opposite, properties: PNO. If the interlocutor does this, PNO is already in effect as a presupposition. The refutation of the denier of PNO is pragmatic in the sense that the denier of PNO contradicts herself by talking – also when talking about PNO.

The further argument in *Met.* Γ4 makes it clear that the presupposition under discussion is related to identity. The presupposition is necessary for signifying anything, and signification is repeatedly characterized as requiring some «one thing» (ἐν: 1006a28–b11). At issue is identity, not contradiction. It is true that the elenctic arguments put forward by Aristotle in this section of the text cannot establish PNC. But they are not meant to, because they concern another Principle, a version of the Principle of Identity. And thus the criticism that Łukasiewicz directs against Aristotle when he points out that Identity is a more primitive principle than Non-Contradiction is obviated by our interpretation. Iden-

³⁷ C. Rapp: Aristoteles über die Rechtfertigung des Satzes vom Widerspruch, op. cit.

³⁸ See R.M. Dancy: Sense and Contradiction: A Study in Aristotle (Dordrecht & Boston: D. Reidel, 1975) 59–63, and Luca Castagnoli: Ancient Self-Refutation. The Logic and History of the Self-Refutation Argument from Democritus to Augustine (Cambridge: Cambridge University Press, 2010) 68–75.

tity, indeed, seems to be the core concern of the first steps of argument in *Met.* Γ which will go on to treat contradiction.

Perhaps the sharpest objection to Aristotle's argument in *Metaphysics* Γ is on another level. Łukasiewicz claims that Aristotle's argument for PNC is merely metaphysical, because it operates upon the assumption of objects of a restricted domain, namely substances.³⁹ Łukasiewicz himself states that the type of «object» appropriate to the axiomatic investigation is Meinongian:

Unter 'Gegenstand' verstehe ich mit Meinong alles, was 'etwas' und nicht 'nichts' ist, mit 'Merkmal' bezeichne ich alles, was von einem Gegenstande ausgesagt werden kann.⁴⁰

But the argument in *Met.* Γ4 does not seem to require that one presupposes the existence of substances in order to meaningfully communicate. And as Łukasiewicz himself points out, Aristotle will later be willing to accommodate «indefinite» or underdetermined objects which are purely potential and not actual.⁴¹ The requirement would be merely that one be able to track the object as the *same* bearer of various properties. This is in Aristotle's view a salient feature of substance, but in identifying it as a feature he can distinguish it from individual substance:

It seems to be most a property of substance to be able to take on opposites while remaining the same and being one in number (*Cat.* 5, 4a9–10).⁴²

This remark seems to be made with a view to «first» substances – individuals – in particular. But in fact the case could be made that this property holds of other things, such as qualities or dispositions, and indeed of anything which is a «continuant».⁴³ This reading is supported by another passage in which the identity of non-substantial entities is taken up explicitly and with recourse to the theory of the categories. In confronting certain fallacies of signification in the *Sophistici Elenchi* – fallacies «that depend on identical expressions of things that are not identical» – Aristotle invokes the theory of the categories, or «kinds of predications» (*Soph. El.* 22, 178a4–5). Aristotle cites as one such fallacy a variant of the third man argument:

There is also the argument that there is a certain, individual third man distinct from man [as a species] and individual men. 'Man' and each general term signifies not a

³⁹ J. Łukasiewicz, *Über den Satz des Widerspruchs*, op. cit., 31.

⁴⁰ *Ibid.*, 16.

⁴¹ *Ibid.*, op. cit., 30 in reference to *Met.* Γ4, 1007b28–29.

⁴² Μάλιστα δὲ ἴδιον τῆς οὐσίας δοκεῖ εἶναι τὸ ταῦτόν καὶ ἐν ἀριθμῷ ὄν τῶν ἐναντίων εἶναι δεκτικόν. My thanks goes to an anonymous reviewer for pointing out the relevance of this passage and *Soph. El.* 22 (discussed below) to my interpretation.

⁴³ J.L. Ackrill: *Categories and De Interpretatione*, op. cit., 90.

certain this, but a quality, a quantity, a relation, or something of this sort. Similarly also with the one which goes: ‘Coriscus and cultivated Coriscus: same or different?’ The one term signifies an individual, the other signifies a quality, and it is not possible for it to be isolated. It is not isolating which makes the third man, but agreeing that it is an individual, for it is not an individual like Kallias, but what man is (*Soph. El.* 22, 178b36–179a5).⁴⁴

As recent interpreters have recognized, Aristotle is here defending the move of «isolating» (ἐκθέσθαι) by claiming that it is insufficient to generate the difficulty of the third man.⁴⁵ In order to generate such a difficulty, we must also concede that the general term man actually refers to an individual; isolating the general term in thought over against a series of individuals to which the term is predicated does not count as reifying the general term so isolated. The categories are invoked here as an explanation for why not every item signified is an individual. Still, a principle of non-opposition will hold for each thing which one signifies, no matter its ontological status. In this way we can see that the PNO is in fact not just the product of a particular ontological theory, but made to hold of whatever object may be isolated in thought.

Conclusion

The interpretive result reached here seeks to fulfill an objective set out by Łukasiewicz, and sought by many interpreters since: Find a reconstruction of Aristotle’s discussion of PNC in *Metaphysics* Γ which does not reduce the validity of this principle to either, on the one hand, to the nature of belief (or any other psychological disposition), or on the other hand to a particular ontological prejudice in favor of entities such as substance. The challenge, to put it in the terms of Łukasiewicz’s own time, is to interpret the discussion of PNC in a way which gives it an appropriate place as an axiom of logic, and this means as an object-theoretical principle.

My strategy has been to begin with the «psychological» version of PNC and to show that this is not a principle of contradiction *per se* but a principle stating the isomorphism of thoughts, understood as predicative assertions, and the objects to which they are oriented. This was the result yielded from the interpretation of *De int.* 14. In this interpretation I have argued that the specific act involved in

⁴⁴ και ὅτι ἔστι τις τρίτος ἄνθρωπος παρ’ αὐτὸν καὶ τοὺς καθ’ ἕκαστον· τὸ γὰρ ἄνθρωπος καὶ ἅπαν τὸ κοινὸν οὐ τὸδε τι ἀλλὰ τοιόνδε τι ἢ ποσὸν ἢ πρὸς τι ἢ τῶν τοιούτων τι σημαίνει. ὁμοίως δὲ καὶ ἐπὶ τοῦ Κορίσκου καὶ Κορίσκου μουσικός, πότερον ταῦτόν ἢ ἕτερον; τὸ μὲν γὰρ τὸδε τι, τὸ δὲ τοιόνδε σημαίνει, ὥστ’ οὐκ ἔστιν αὐτὸ ἐκθέσθαι. οὐ τὸ ἐκτίθεσθαι δὲ ποιεῖ τὸν τρίτον ἄνθρωπον, ἀλλὰ τὸ ὅπερ τὸδε τι εἶναι συγχωρεῖν· οὐ γὰρ ἔστι τὸδε τι εἶναι, ὥσπερ Καλλίας, καὶ ὅπερ ἄνθρωπός ἐστιν.

⁴⁵ Nicholas P. White: A note on ἐκθεσις, in: *Phronesis* Vol. 16 No. 2 (1971) 164–168; Louis-André Dorion: *Les réfutations sophistiques: introduction, traduction et commentaire* (Paris: Librairie Philosophique J. Vrin/ Laval: Presses de l’Université Laval, 1995) 361–364.

such thoughts is best understood as «acceptance», a predicative assertion-like thought-act directed to a like-structured object. Assertions, as linguistic items, are isomorphic to their objects. The relation of both thought and assertion to objects seems to have led Aristotle to introduce the unusual way of speaking in which the objects (including states of affairs) are themselves false or true.⁴⁶

In a second step of interpretation, I sought to show how the «ontological» version of PNC is in fact a version of the principle of identity. As a principle of non-opposition, the principle articulated in *Metaphysics* Γ expresses a feature of all objects (including states of affairs) which can be objects of mental reference and linguistic signification. In a third step of my interpretation, I have tried to show that the level of the principle really is object-theoretical, i.e. not limited to entities of a certain type such as substances, but based on a kind of pre-supposition which is supposed to hold for all thought and speech which is capable of being true or false.

The tripartite nature of the discussion of PNC reflects the three types items which Aristotle recognizes as bearers of truth and falsehood: states of affairs, thoughts, and statements.⁴⁷ This trinity would resonate later in the Aristotelian tradition with Twardowski's theory of thought as tri-partite, consisting of mental act, content, and object. Still, much separates this later tri-partition from the original Aristotelian trinity. Aristotle would probably have balked at an object like Meinong's «round square», for such an object would seem to contradict PNO by combining properties which are mutually exclusive and in this specific sense «opposed». Such a limitation on the domain of objects can be defended upon the basis of appearances, to which Aristotle's theory must also answer.⁴⁸ For appearance is informed by acceptance: both seem to be expressed at the same time in the particular notion of δόξα. And acceptance is structured in a way which mirrors the way any even only possible objects are structured, namely as objects bearing the same (i.e. not opposite) properties at a given time. In identifying this object-structure as a presupposition in *Met.* Γ3, Aristotle engages in what Łukasiewicz's younger contemporary Jozef Maria Bocheński referred to as the task of logic, namely the description of the «structure of the world»^{49, 50}

46 See e.g. *Cat.* 5, 4b8–10: «It is through some matter being the case or not that a statement is said to be true or false».

47 See P. Crivelli: Aristotle on Truth, op. cit., 45.

48 J. Łukasiewicz: Über den Satz vom Widerspruch, op. cit., 31.

49 J.-M. Bocheński: Entre la logique et la foi, op. cit., 71.

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