

Categorizing concept predications and participations in Platonic dialogues: An exhaustive analysis of the various types of participation of things and ideas in ideas throughout the Platonic work

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ABSTRACT

The Platonic work, extended to a lot of dialogues, could be used among others as an analytical instruction of the nature of participation given through various types of predication relations. This article focuses on the identification of the implicit and explicit predications (seen as participations) dispersed in the Platonic work. Nine distinct categories have been found and each of them is comprised of certain structures, carrying distinguishable meanings. Ordinary predication, Pauline predication, identity, difference, otherness and definition are included, while the various senses of self-predication and self-participation are presented. Lastly, concept maps of mutual relations between selected ideas are exhibited in a software ontology environment.

Keywords: Platonic ontology, ancient philosophy, predication, participation, Platonic ideas

INTRODUCTION

Predication is a proposition through which a feature is declared about something (a concrete thing or a number or an idea). The predication has usually the form ‘A is B’, where A is the subject and B is the predicate, that is, B is predicated of A. At times the copula ‘is’ and the predicate are united in one term in the form of a verb. Additionally, the predication is not denoted under the form ‘A is B’ but it is hidden under other expressions such as ‘A possesses B’, ‘B exists in A’. The revelation of the hidden predications in the various Platonic dialogues is one of the main contributions of this article.

Another pole of the current research is the uncovering of the meaning given by Plato to the various predicative propositions. *Predication* in Plato implies *participation* in the most of its occurrences. The operation of participation constitutes the kernel of the Platonic philosophical system. The predication ‘A is B’ implies the participation of A in B; B is an idea in which A participates. Participation is the key process under the Platonic theory of Forms, according to which the sensible things are images or shadows of corresponding ideas, owing to them their existence. In this way the sensibles communicate with the noetic substances. Beyond that Plato provides us with a remarkable extension: not only sensible things but also ideas can participate in ideas.

The most prominent commentators of the nature of Platonic predications –considered as participations– are Allen (1971), Nehamas (1982) and Ryle (1971).

Allen and Nehamas speak about different levels of reality concerning the ideas and the participating sensibles. They follow the main Platonic view that the ideas are noetic entities that exist by themselves, while the sensibles reside in a lower level as mere reflections of the ideas.

Allen, in his attempt to solve the so called *Dilemma of Participation*, finds the more detailed description of the participation process in Plato himself, specifically in his dialogue *Parmenides* (131a-c, 142d-e, 144c-d). Platonic Parmenides tells of the idea as part of the participant: “If anything partakes of an Idea, a part of the Idea is in it: additionally that part of the Idea is a part of the participant” (Allen, 1998, p. 218).

Ryle looks into the nature of the relation between subject and predicate in a predicative proposition. He supports that our linguistic familiarity of this type of proposition does not allow us to face it in accurate scientific terms. A relation between a particular and a universal (*instance-of* relation) is implied, a relation which, if we pay attention to, is not a valid relation, since it connects things of different types. Mathematical equation, for example, relates numbers, that is, members of the same class, while predication relation relates sensibles to ideas. Considering the *instance-of* relation as a pseudo-relation, Ryle concludes to a radical rejection of the whole Platonic theory of ideas (Ryle, 1971, 9-12).

If we identify predication with participation, we should also identify self-predication with self-participation. Nehamas discerns self-predication from self-participation, though. He describes the difference between them as follows: the self-predication ‘F is F’ must be replaced by the most accurate expression ‘F is what it is to be F’; self-predication only tells us what feature it is that the Form constitutes (Nehamas, 1982, p. 355-6). On the other hand, according to Nehamas, the proposition ‘F is F’ implies ‘F participates in F’ or equivalently ‘F is an F-thing’ (Nehamas, 1982, p. 357). Vlastos (1994, p. 479-86) realizes self-predication in the manner Nehamas realizes self-participation: ‘F is F’ means for him

‘F is an F-thing’. As we saw before, Nehamas gives a certain meaning for self-predication and therefore he admits that this could be applied to all ideas. On the contrary, Vlastos considers that self-predication is not valid for all of them. He supports that some –not all– of the ideas are self-predicated, such as the four of the five great genera mentioned in *Sophist* –the being, the rest, the same and the different– while the fifth one –the motion– is not: the *being* is being (namely it exists), the *rest* is rest (namely it rests), the *same* is same (namely it is same with itself) and the *different* is different (namely it is different from anything else), while the motion is not motion (it cannot move and change, since it is an Idea). Additionally, Vlastos wonders whether Plato identifies self-predication with self-participation and thus if self-predication implies necessarily self-participation. He recites two passages of Platonic *Parmenides* about the possibility of self-participation of an idea, leading to ambiguous results: In *Parm.* 158a4-6, Parmenides makes clear that “if something participates in the one then it is not the one itself for if not, it would not partake of the one, but would actually be one; but really it is impossible for anything except one itself to be one”. Clearly this passage supports the self-predication, excluding at the same time the self-participation. The counter-example is extracted from *Parm.* 162a7-b1: the Being (the idea of being) is to be fully being only through participation in Being; thus in this case Being is required to participate in itself (the Idea of being) in order to be being. Thus, in this case the self-predication ‘Being is being’ is necessary and sufficient condition of the self-participation ‘Being participates in Being’.

In *Parm.* 132a1-b2, Parmenides argues that the Idea of largeness cannot participate in itself since in that case the idea of largeness,

considered as large, should participate in a second idea of largeness, leading *ad infinitum*. This is the first reference to the ‘third man argument’ (TMA) paradox. Vlastos (1994, p. 489-98) claims that the paradox can be eliminated if one allows self-participation, without introducing the axiom that whatever participates in an idea cannot be the idea itself.

Mutual predication or communication between ideas is the subject of *Sophist*. Late Plato attempts to reveal how the five great genera-ideas of being, motion, rest, sameness and difference are predicated of each other, if any combination of them is valid and which is the meaning of the valid predications. He is not restricted to the ordinary predication, presenting also the identity-relation and the otherness-relation.

Studying the various predications in Plato in the frame of Fregean Logic and the contemporary Predicate Calculus, we can represent them in the form of two main categories of functions: one-argument functions, such as ‘justice is pious’ transformed into the function *pious* (*justice*) and two-argument functions, such as ‘being is-same-as one’ transformed into the function *same* (*being*, *one*).

The article is structured as follows: In Chapter 2, the various types of predications are analysed theoretically. In Chapter 3, a number of rich in predications Platonic dialogues is selected, organized in nine main categories, based on the theoretical analysis exhibited in the previous chapter. The chapter is integrated with two concept maps, one of the idea *One* and the other of the idea *Being*, by using the drawing environment of the ontology software *OWL Protégé*.

This article belongs to the interdisciplinary section among humanities, typical logic and informatics, complementing a series of relative articles of the author. In *Philosophical Views*

about *Digital Information and Relational Schemata* a review of old classification schemata is exhibited in the frame of modern relationship types. It is claimed there that the relations mentioned in Platonic *Sophist* imply the earliest distinction between the two ways of predication: BT/NT (broader term/ narrower term) and identity (equivalence) (Dendrinis, 2006). The process of the extraction of typical predicate relations from a philosophical text and the construction of an analytical concept map concerning the various types of relations of the Idea of One has been presented in detail in *Organization of the concepts of the Platonic dialogue Parmenides into a software ontology* (Dendrinis, 2015). Predicative propositions presented by Aristotle in *Prior Analytics* and *Topics* are examined thoroughly in *Concept predications and hierarchies in Aristotelian Organon: A philosophical ontology presented in terms of a software ontology*, where one can also see integrated concept maps concerning the three Aristotelian syllogistic schemes (Dendrinis, 2022).

2. VARIOUS FORMULATIONS OF PREDICATION IN PLATO

Plato interpreted the attribution of a feature to a thing (sensible or number) as *participation* of the thing to a corresponding Idea. The participation process includes, according to Plato, two interrelated situations: the first is that something has a certain feature (the feature is predicated of a specific thing), constituting the so called predication; the second is that there is a cause of this predication in the form of an independent entity –Idea- in which the thing participates. Let call the above type of predication *Plato.type.1.thing-participating-in-idea*.

While in most dialogues Plato presented in detail the predication of sensibles and the equivalent participation of them in Ideas – operating as the ontological analogs of the predicates– one can find in Plato an extended theory of combination of Ideas –Ideas predicated of Ideas– which can be viewed as participation of an Idea in another Idea and in some cases even to itself (self-participation). Such predications are met in great extent in *Protagoras*, *Sophist* and *Parmenides*. Let call this type of predication *Plato.type.2.idea-participating-in-idea*. Passing from the sensibles-participants to the ideas-participants is described in detail in Nehamas¹.

The participation of a thing (sensible or number) or an idea in an idea is usually denoted through the copula *is*: subject *is** predicate [idea in the form of adjective²] (*ἐστίν)³. An equivalent form for the construct ‘is-predicate’ is a composite verb-predicate (without *is*)⁴: subject [idea] *verb-predicate*. Other forms used are the following: subject *participates-in** predicate [idea] (*μετέχει τινός); subject *partakes-of** predicate [idea] (*μεταλαμβάνει τινός); subject *is-near-to** predicate [idea] (*πάρεστι); predicate [idea] *is-present-with** subject (*πάρεστι); [subject] *is-said-as** predicate [idea] (*λέγεται); predicate [idea] *exists-innately-in** subject (*εγγίγνεται).

Predication ‘A is B’ is denoted sometimes by ‘A has B’ as follows: The predication ‘one has parts’ is equivalent to ‘one is divided’ and the predication ‘it has soul’ is equivalent to ‘it is aminate’. The typical expression is: subject *has** predicate [idea] (*ἔχει). The expression *is affected* [πέπονθεν] is also used as an alternate way to denote the participation in an idea, such as the things participating in *unlimited* or in *limit* (*Parm.* 158e4-7), the idea of *three* participating in the idea of *odd* (*Phd.* 104a4). The typical expression is: subject *is-affected-by**

predicate [idea] (*πέπονθεν). Another interesting expression for the participation of a thing (sensible or number) in an Idea is that the Idea possesses the thing (*Phd.* 104d): predicate [idea] *possesses** subject [thing] (*κατέχει).

Following the view of Nehamas, I consider self-predication as a specific type of predication and I denote it as *Plato.type.3.self-predication*. The expression used to denote this predication is: subject [idea] *is-what-it-is-to-be* predicate [idea], e.g. justice is what it is to be just.

Self-participation belongs to the general category of participations: *Plato.type.2.idea-participating-in-idea*. Following the view of Nehamas, we consider self-participation as the relation ‘F is an F-thing’. The expression used to denote this type of predication of an idea to itself is: subject [idea] *participates-in-itself*, e.g. ‘the one is one’, ‘the motion moves’, ‘the rest rests’, ‘the being participates in being’.

Phd. 104e-105a presents a very interesting relation between a thing (material thing or number) and an idea, where a thing A *brings along* [ἐπιφέρει] an idea B, so representing an indirect participation: “as the number three, though it is not the opposite of the idea of even, nevertheless refuses to admit it, but always *brings* its opposite *along* against it, and as the number two *brings* the opposite of the odd *along* and fire that of cold, and so forth”. The meaning of the passage is that number three participates directly in the idea of threeness and indirectly in the idea of oddness, since the set of triads is included within the set of odd numbers; similarly, material fire participates directly in the idea of fire and indirectly in the idea of hotness. Vlastos uses the term *implication* for the description of this relation: If a thing x is A and A *brings along* B then x is B. We could consider the above indirect participation as the inclusion relation, where a thing belongs to a class or

equivalently a class of things included in a broader set. The first is found in *Phil.* 30e, where Socrates presents the mind as belonging to the class of the causes [ἐστὶ γένους τῆς τοῦ πάντων αἰτίου λεχθέντος]. A similar inclusion relation is found, for Vlastos, in *Timaeus*, where Timaeus describes the *intelligible living beings* as ideas existing within the *Living Being* [ἐνούσας ιδέας τῷ ὃ ἔστιν ζῶον], which contains them [ἐν ἑαυτῷ περιλαβὼν] and of which all other living beings, severally and generically, are portions [καθ’ ἐν καὶ κατὰ γένη μέρια] (*Tim.* 30c, 39e).

Let call the above described type of predication *Plato.type.4.is-included-in*. The expressions used to denote this predication are: subject [thing] *brings-along** predicate [idea] (*ἐπιφέρει), subject [idea] *is-subclass-of** predicate [idea] (*κατὰ γένη μέρια), subject [thing] *belongs-to-class** predicate [idea] (*ἐστὶ γένους), subject [idea] *is-part-of** predicate [idea] (*μέρια), predicate [idea] *exists-within** subject [idea] (*ἔνεστι), predicate [idea] *contains** subject [idea] (*περιλαμβάνει/ περιέχει).

Besides, Vlastos introduced apart from the typical predication –called *ordinary predication* (OP), which is the above mentioned *Plato.type.2.idea-participating-in-idea*– another one predication –called *Pauline predication* (PP). He presented PP in his text *The Unity of Virtues in the Protagoras* (Vlastos, 1994, p. 317-402) in order to give meaning to some predications which seem absolutely unreasonable, like ‘the Justice is pious’ or ‘the Piety is just’. He also speaks about PP in his text *An Ambiguity in the Sophist* (Vlastos, 1994, p. 403-448), where the Stranger sets under consideration the premises ‘the Motion rests’ and ‘the Rest moves’. Pauline predication ‘X is y’ is meant not with the ordinary meaning ‘the entity X has the feature y’ but with the meaning ‘x has the feature y’, where x are sensible

manifestations of X. Under this interpretation Vlastos can consider the proposition ‘the Justice is pious’, which is completely nonsense, as ‘every just human is pious’ which makes sense. In the same way, the proposition ‘the Rest moves’ should be examined in the frame of the sensible world under the formulation ‘the resting things are moving’, for Vlastos, since the Stranger does not deal in the specific context in *Sophist* with the ideas, but with the nature of the sensible things. Vlastos has spent a great effort to categorize the various predications found in *Sophist* in these two distinct classes. He considers the predications in 256a1, 256c-d as *OP*, while the predications in 250a11-12, 252d2-11, 255a6-12, 256b7-9 as *PP*. I do not agree with him, in the sense that all his mentioned predications in *Sophist*, characterized as *PP*, are, in my opinion, due to the reference of the idea as idea itself, obviously *OP*. Among them 255a6-12 is indeed dubious, since, in spite of its apparent *OP* typical formulation, the logic proof of Vlastos seems indeed to support *PP* (Vlastos, 1994, p. 438-9). All of them will be presented in detail in Chapter 3.

Let call this extraordinary type of Pauline predication between ideas: *Plato. type.5. Pauline-Predication*, and the corresponding expression: subject [idea-1] *is-PP* predicate [idea-2 in the form of adjective] ⇔ the class of the sensible manifestations of [idea-1] *is included in* the class of the sensible manifestations of [idea-2]. A similar predication concerns two ideas applied to each other in such a way that their sensible manifestations are in fact related, such as the mastership is mastership of slavery, which can be meant as a master is master of a slave (*Parm.* 133d-e). The expression used to denote this type of predication is: subject [idea-1] *is-applied-on-PP* predicate [idea-2] ⇔ a sensible manifestation

of [idea-1] expresses the relative property with regard to a sensible manifestation of [idea-2].

Ackrill contributed a lot to the clear discrimination between predication, identity and idea-to-idea communication, through a deep analysis of a critical passage of *Sophist*. At first he studies the Platonic phrase in *Sophist* about Motion: “it (the Motion) *is* because it shares in being” [ἔστι δὲ γὰρ διὰ τὸ μετέχειν τοῦ ὄντος] [*Sophist*, 256a1]. The word because [διὰ] here does not introduce a proof that Motion partakes of being, since this has already been agreed without question before. Therefore, for Ackrill, the term *is* [ἔστι] in this passage must be taken existentially: “the Motion exists” (Ackrill, 1971 [1957], p. 211-2). The expression used to denote this predication is: subject [idea] *exists** (*ἔστιν). The predicate *exists* is equivalent to the predicate *participates-in* being. Therefore, it is a specific case of *Plato. type.2. idea-participating-in-idea*.

The remaining meanings of *is* [ἔστιν] are the ordinary copula and the identity-sign. Where the ‘*is*’ is being used as copula it is equivalent philosophically to participating [μετέχειν], as we saw it in the beginning of the modes of participation in an idea. When the ‘*is*’ is used as identity, it is equivalent to the expression ‘shares in sameness’ [μετέχειν τοῦ ταυτοῦ], whereas the ‘*is not*’ [οὐκ ἔστιν] is equivalent to the expression ‘shares in difference’ [μετέχειν τοῦ θατέρου] (Ackrill, 1971, p. 213-4). Vlastos also marks the cases where the copula is meant as identity-sign (Vlastos 1994, p. 444): Motion partakes of the same (*Soph.* 256a10), Motion / Rest partake of the same (*Soph.* 255b3), all partake of the same (*Soph.* 256a7-8). Additionally, Ackrill mentions the Fregean *identity*-role of ‘*is*’ versus its *copula*-role (in predications) via quoting some of Frege’s examples: ‘something is green’ or ‘something is mammal’ versus ‘the morn-

ing star is Venus'. The last example denotes identity, where the 'is' is equivalent to 'is no other than' (Ackrill, 1971 [1957], p. 213).

Identity is a commutative relation, that is, 'A is same as B' and also 'B is same as A'. Let call the identity type of relation between ideas *Plato.type.6.identity*. The expression used to denote *identity* is: subject [idea] *is-same-as** predicate [idea] (* ταὐτόν ἐστι). The relation *is-same-as* is equivalent to the relation *participates-in* sameness to. A specific case of identity is the declaration that an idea is identical to itself, such as 'motion is the same as motion' and 'rest is the same as rest' (mentioned in *Sophist*). The predication 'idea *is-same-as* itself' is equivalent to 'idea *participates-in* sameness to itself', which can be abbreviated to the formal expression: [idea] *participates-in* sameness [μετέχει τοῦ ταυτοῦ], following the Platonic text. This predication is included as a specific case of *Plato.type.2.idea-participating-in-idea*.

Similarly, let call the difference type of relation between ideas *Plato.type.7.difference*. The expression used to denote the relation of *difference* is: subject *is-different-from** predicate (* ἕτερόν/ θάτερον ἐστι). The relation *is-different-from* is equivalent to not *same-as* and also equivalent to the relation *participates-in* difference from. According to the above terminology, an idea A is *different from* an idea B, when A is not the same as B. This relation could be also named as *unlike* [ἀνόμοιον], as mentioned in Platonic *Parmenides*.

Another important relation between two ideas is the relation of *otherness*, with A and B completely different, not sharing any common characteristic (the term used in *Parmenides* is ἕτερον). Let call this type of relation between ideas *Plato.type.8.otherness*. The expression used to denote the relation of *otherness* is: subject [idea] *is other-than** predicate [idea] (* ἕτερόν ἐστι)⁵.

Ackrill mentions a very informative extract of David Ross, where he presents two different textual constructions: the first one with genitive for an idea sharing of/ partaking of an idea [κοινωνεῖν τινός, προσκοινωνεῖν τινός] (*Parm.* 250b9, 252a2, b9, 254c5, 256b2, 260e2) versus the second one with dative for an idea in combination or communication with an idea [κοινωνεῖν τινί, προσκοινωνεῖν τινί] (251d9, e8, 252d3, 253a8, 254b8, c1, 257a9, 260e5). Though Ross believes that the two constructions are used by Plato indifferently, Ackrill supports that the usage of the genitive or the dative is used consciously by Plato to differentiate between the non-symmetrical relation of participation and the symmetrical relation of connectedness (Ackrill, 1971, p. 219-220).

These additional expressions belong to the general category 'participation of an Idea in an Idea' (*Plato.type.2.idea-participating-in-idea*) and they are given as follows: subject [idea] *shares-in** predicate (*κοινωνεῖ τινος) and subject [idea] *communes-with** predicate [idea] (*προσκοινωνεῖ τινος), where the verbs κοινωνεῖ and προσκοινωνεῖ are followed by genitive.

Another usual practice of arranging ideas, found in the Platonic dialogues, is the attempt for the definition of a term through its genus and the proper differentia. The term to be defined is a species, which is described through a higher term, the genus. Cases of this type have been extracted from *Laches*, *Euthyphro*, *Theaetetus*, *Protagoras*, *Alcibiades I* and *Hippias Major*, where Socrates tries to define certain ideas (usually virtues). Between them an 'is' is intervened. Thus, in this case, an idea (the genus) is the predicate of another idea (the species). Let call this type of predication between ideas: *Plato.type.9.Definition-Predication*, and the expression used to denote this type of predication: subject [idea-1] *is-defined-by* predicate [idea-2]

3. CONSTRUCTING THE PLATONIC CONCEPTUAL SCHEME

After the theoretical analysis presented in the previous chapter, certain cases of the various types of predication follow along with the passages of Platonic dialogues they are mentioned in (the translation from ancient Greek to English is based on Perseus Digital Library of Tufts University)⁶. The dialogues used are: *Sophist*, *Parmenides*, *Timaeus*, *Phaedo*, *Philebus*, *Protagoras*, *Meno*, *Alcibiades I*, *Laches*, *Lysis*, *Charmides*, *Theaetetus*, *Euthyphro*, *Hippias Major*.

General Predication Type *Plato*. *type.1.thing-participating-in-idea*

Textual expression 1.1: subject *participates-in** predicate [idea] (* μετέχει τινός)

[Pred.1] [two] *participates-in* [duality]

Relative passage: “You would exclaim loudly that you know no other way by which any thing can come into existence than by participating in the proper essence of each thing in which it participates, and therefore you accept no other cause of the existence of two than participation in duality, and things which are to be two must participate in duality” (*Phd.* 101c).

Textual expression 1.2: predicate [idea] *possesses** subject [thing] (* κατέχει)

[Pred.2] [triad] *possesses* [thing]

Relative passage: “You know of course that those things which the idea of triad possesses must be not only three but also odd” (*Phd.* 104d).

Textual expression 1.3: predicate [idea] *exists-innately-in** subject [thing] (* ἐγγίγνεται)

[Pred.3] [unity] *exists-innately-in* [number]

Relative passage: “If you ask what exists innately in a number through which it becomes odd, I shall not say oddness, but unity, and so forth” (*Phd.* 105c).

General Predication Type *Plato*. *type.2.idea-participating-in-idea*

All the various expressions that follow are categorized under the general expression: *participates-in*.

Textual expression 2.1: subject [idea] *is** predicate [idea in its very form or in the form of adjective] (* ἐστίν)

[Pred.4] [one] *is* [all] / [Pred.5] [one] *is* [whole]

Relative passages: “But yet nothing hinders that which has parts from possessing the attribute of unity in all its parts and being in this way one, since it is all [πᾶν] and whole [ὅλον]” (*Sophist*, 245a1-3). “– Must not the one which exists [ἔν ὄν] be a whole of which the one and being are parts? – Inevitably” (*Parm.* 142d4). “Whatever one, then, exists is a whole and has a part” (*Parm.* 142d8-9).

[Pred.6] [one] *is* [infinite] / [Pred.7] [one] *is* [divided] / [Pred.8] [one] *is* [many] / [Pred.9] [one] *is* [limited]

Relative passages: “– The existent one would be infinite in number? – Apparently” (*Parm.* 143a1-2). “Can the one be in many places at once and still be a whole? Consider that question – I am considering and I see that it is impossible. – Then it is divided into parts, if it is not a whole; for it cannot be attached to all the parts of existence at once unless it is divided” (*Parm.* 144d1-5). “The one, then, split up by existence, is many and infinite in number. – Clearly. – Then not only the existent one is many, but the absolute one divided by existence, must be many. – Certainly. – And because the parts are parts of a whole, the one would be limited by the whole” (*Parm.* 144e4-10).

[Pred.10] [good] *is* [perfect]

Relative passage: “Socrates: Is the class of the good necessarily perfect or imperfect? – Protarchus: The most perfect of all things, surely, Socrates” (*Phil.* 20d).

|Pred.11| [good] *is* [sufficient]

Relative passage: “Socrates: Well, and is the good sufficient? – Protarchus: Of course; so that it surpasses all other things in sufficiency” (*Phil.* 20d).

|Pred.12| [good] *is* [beautiful] / |Pred.13| [good] *is* [symmetric]

|Pred.14| [good] *is* [true]

Relative passage: “Then if we cannot catch the good with the aid of one idea, let us run it down with three: beauty, proportion, and truth” (*Phil.* 65a).

|Pred.15| [justice] *is* [virtue]

Relative passage: “Yes, I think so; for justice, Socrates, is virtue” (*Meno*, 73d).

|Pred.16| [bravery] *is* [virtue] / |Pred.17| [prudence] *is* [virtue] / |Pred.18| [wisdom] *is* [virtue] / |Pred.19| [grandiosity] *is* [virtue]

Relative passage: “Well then, bravery, I consider, is a virtue, and prudence, and wisdom, and grandiosity; and there are a great many others” (*Meno*, 74a).

|Pred.20| [virtue] *is* [good]

Relative passage: “Socrates: Well now, surely we call virtue a good thing, do we not, and our hypothesis stands, that it is good? Meno: Certainly we do” (*Meno*, 87d)

|Pred.21| [bravery] *is* [beautiful]

Relative passage: “But bravery was admitted to be something beautiful” (*Laches*, 193d).

|Pred.22| [good] *is* [friendly]

Relative passage: “– But now, is the good a friend? – I should say so” (*Lysis*, 220b)

Textual expression 2.2: subject [idea] *participates-in** predicate [idea] (* μετέχει τινός)

|Pred.23| [motion] *participates-in* [different]

|Pred.24| [rest] *participates-in* [different]

Relative passage: “Both (motion and rest) certainly participate in the same and the other” (*Sophist*, 255b3).

|Pred.25| [one] *participates-in* [being]

Relative passage: “One participates in being” (*Parm.* 142c6)

|Pred.26| [one] *participates-in* [straight-shape] / |Pred.27| [one] *participates-in* [round-shape] / |Pred.28| [one] *participates-in* [mixed-shape]

Relative passage: “And the one, apparently, being of such a nature, will participate in some shape, whether straight or round or a mixture of the two” (*Parm.* 145b4-6).

|Pred.29| [part] *participates-in* [one]

Relative passage: “The part must participate in the one” (*Parm.* 157e5-158a1)

|Pred.30| [prudence] *participates-in* [good] / |Pred.31| [pleasure] *participates-in* [good]

Relative passage: “Prudence’s participation in good is greater than pleasure’s” (*Phil.* 60b).

Textual expression 2.3: subject [idea] *partakes-of** predicate [idea] (* μεταλαμβάνει τινός)

|Pred.32| Not [motion] *partakes-of* [rest]

Relative passage: “Stranger: Then even if absolute motion partook in any way of rest, it would not be absurd to say it was at rest? Theaetetus: It would be perfectly right, if we are to admit that some of the classes will mingle with one another, and others will not” (*Sophist*, 256b7-11).

Textual expression 2.4: subject [idea] *participates-in-itself*

|Pred.33| Not [motion] *moves* ⇔ Not [motion] *participates-in* [motion] ⇔ Not [motion] *participates-in-itself* (the self-participation here is evidently not valid)

Relative passage: “Stranger: And in granting that they (motion and rest) exist, do you mean to say that both and each are in motion? Theaetetus: By no means. Stranger: But do you mean that they are at rest, when you say that both exist? Theaetetus: Of course, not” (*Sophist*, 250b2-7).

|Pred.34| [being] *participates-in* [being] ⇔ [being] *participates-in-itself*

Relative passage: “The existence of the existent and the non-existence of the non-existent would be best assured, when the existent partakes of the existence of being existent and of the non-existence of not being non-existent” (*Parm.* 162a7-b1)

Textual expression 2.5: subject [idea] *participates-in* sameness* (*μετέχει τοῦ ταυτοῦ)
– Self-sameness

[Pred.35] [being] is-same-as [being] ⇔ [being] *participates-in* [sameness] / [Pred.36] [motion] is-same-as [motion] ⇔ [motion] *participates-in* [sameness] / [Pred.37] [rest] is-same-as [rest] ⇔ [rest] *participates-in* [sameness]

Relative passages: “Each of them (being, motion, rest) is, then, different from the remaining two, but the same as itself” (*Sophist*, 254d15-16). “Both (motion and rest) certainly participate in the same and the other” (*Sophist*, 255b3). “But yet we found it (motion) was the same, because all things participate in the same” (*Sophist*, 256a7-8).

[Pred.38] [one] is-same-as [one] ⇔ [one] *participates-in* [sameness]

Relative passage: “It (the one) must be the same with itself” (*Parm.* 146a9).

[Pred.39] [one] is unlike [one] ⇔ Not [one] is-same-as [one] ⇔ Not [one] *participates-in* [sameness]

Relative passage: “It is, then, also (the one) unlike itself” (*Parm.* 147c1-2).

Textual expression 2.6: predicate [idea] *exists** (*ἔστιν)

[Pred.40] [motion] *exists* ⇔ [motion] *participates-in* [being] / [Pred.41] [rest] *exists* ⇔ [rest] *participates-in* [being]

Relative passages: “But it (motion) exists, by reason of its participation in being” (*Sophist*, 256a1). “And yet you say that both (motion and rest) and each of them equally are?” (*Sophist*, 250a).

Textual expression 2.7: subject [idea] *verb-predicate*

[Pred.42] Not [being] *moves* ⇔ Not [being] *participates-in* [motion] / [Pred.43] Not [being] *rests* ⇔ Not [being] *participates-in* [rest]

Relative passage: “According to its own nature, then, being is neither at rest nor in motion” (*Sophist*, 250c6-7).

[Pred.44] Not [rest] *moves* ⇔ Not [rest] *participates-in* [motion] / [Pred.45] Not [motion] *rests* ⇔ Not [motion] *participates-in* [rest]

Relative passage: “Theaetetus: Because motion itself would be wholly at rest, and rest in turn would itself be in motion, if these two could be joined with one another. Stranger: But surely this at least is most absolutely impossible, that motion be at rest and rest be in motion? Theaetetus: Of course” (*Sophist*, 252d6-11).

[Pred.46] [one] *moves* ⇔ [one] *participates-in* [motion] / [Pred.47] [one] *rests* ⇔ [one] *participates-in* [rest]

Relative passage: “– This being its nature, must not the one be both in motion and at rest? – How is that?” (*Parm.* 145e7-8).

Textual expression 2.8: subject [idea] *is-said-as** predicate [idea] (*λέγεται)

[Pred.48] [one] *is-said-as* not [divided]

Relative passage: “Why surely that which is really one must, according to right reason, be said to be completely without parts” (*Sophist*, 245a8-9).

Textual expression 2.9: subject *has** predicate [idea] (*ἔχει)

[Pred.49] [being] *has* [soul] ⇔ [being] *is* [aminate] / [Pred.50] [being] *has* [mind] ⇔ [being] *is* [thoughtful] / [Pred.51] [being] *has* [life] ⇔ [being] *is* [living]

Relative passage: “Then shall we say that it has mind and life and soul, but, although

endowed with soul, is absolutely immovable?” (*Sophist*, 249a11-12).

[Pred.52] [one] *has* [part] ⇔ [one] is [divided]

Relative passage: “Whatever one, then, exists is a whole and has a part” (*Parm.* 142d8-9).

[Pred.53] [one] *has* [being] ⇔ [one] is [being] / [Pred.54] [being] *has* [one] ⇔ [being] is [one]

Relative passage: “Always one has being and being has one” (*Parm.* 142e7-8).

Textual expression 2.10: subject [idea] *is-affected-by** predicate [idea] (*πέπονθεν)

[Pred.55] [part] *is-affected-by* [one]

Relative passage: “But yet nothing hinders that which has parts from possessing the attribute of unity in all its parts and being in this way one, since it is all [πᾶν] and whole [ὅλον]” (*Sophist*, 245a1-3)

[Pred.56] [the-others] *is-affected-by* [unlimited] / [Pred.57] [the-others] *is-affected-by* [limit]

Relative passage: “– Inasmuch as they (the others) are all by their own nature unlimited, they are all in that respect affected in the same way – Certainly – And surely inasmuch as they all partake of limitation, they are all affected in the same way in that respect also” (*Parm.* 158e4-7).

Textual expression 2.11: [subject] *is-near-to** predicate [idea] (*πάρεστι)

[Pred.58] [living-being] *is-near-to* [good]

Relative passage: “Whatever living being is near to the good always, altogether, and in all ways, has no further need of anything, but is perfectly sufficient” (*Phil.* 60c).

Textual expression 2.12: predicate [idea] *is-present-with** subject (*πάρεστι)

[Pred.59] [whiteness] *is-present-with* [locks of hair]

Relative passage: “– Suppose some one tinged your golden locks with white lead, would they then be or appear to be white? – Yes, they would so appear, he replied. – And,

in fact, whiteness would be present with them? – Yes” (*Lysis*, 217d).

Textual expression 2.13: subject [idea] *shares-in** predicate [idea] (*κοινωνεῖ τινος)

[Pred.60] [motion] *shares-in* [being] / [Pred.61] [rest] *shares-in* [being]

Relative passage: “Since you comprehend and observe that they (motion and rest) share in being” (*Sophist*, 250b9).

Textual expression 2.14: subject [idea] *communes-with** predicate [idea] (*προσκοινωνεῖ τινος)

[Pred.62] [motion] *communes-with* [being] / [Pred.63] [rest] *communes-with* [being]

Relative passage: “Stranger: Well, then, will either of them (motion and rest) be, if it does not commune with being? Theaetetus: It will not” (*Sophist*, 252a2-4).

General Predication Type *Plato.type.3.self-predication*

Textual expression 3.1: subject [idea] *is-what-it-is-to-be* predicate [idea]

[Pred.64] [justice] *is-what-it-is-to-be* [just]

Relative passage: “The thing you named just now, justice, is that itself just or unjust? ... then justice is of a kind that is just” (*Prot.* 330c).

[Pred.65] [piety] *is-what-it-is-to-be* [pious]

Relative passage: “Do you say this thing itself [piety] is of such nature as to be impious, or pious? For my part I should be annoyed at this question, I said, and should answer: Hush, my good sir. It is hard to see how anything could be pious, if piety itself is not to be pious” (*Prot.* 330d-e).

General Predication Type *Plato.type.4.is-included-in*

All the various expressions that follow are categorized under the general expression: *is-included-in*.

Textual expression 4.1: subject [idea] *brings-along** predicate [idea] (* ἐπιφέρει)

[Pred.66] [three] *brings-along* [oddness] / [Pred.67] [two] *brings-along* [evenness] / [Pred.68] [fire] *brings-along* [hotness]

Relative passage: “As the number three, though it is not the opposite of the idea of even, nevertheless refuses to admit it, but always *brings* its opposite *along* against it, and as the number two *brings* the opposite of the odd *along* and fire that of cold, and so forth” (*Phd.* 104e-105a). “You know of course that those things which the idea of triad possesses must be not only three but also odd” (*Phd.* 104d).

Textual expression 4.2: subject [idea] *is-subclass-of** predicate [idea] (* κατὰ γένη μόρια)
[Pred.69] [intelligent-living-being] *is-subclass-of* [Living-Being]

Relative passage: “But we shall affirm that the Cosmos, more than aught else, resembles most closely that Living Being of which all other living beings, severally and generically, are portions⁸” (*Tim.* 30c).

Textual expression 4.3: subject [thing] *belongs-to-class** predicate [idea] (* ἐστὶ γένους)
[Pred.70] [mind] *belongs-to-class* [cause]

Relative passage: “Mind belongs to that one of our four classes which was called the cause of all. Now, you see, you have at last my answer” (*Phil.* 30e).

[Pred.71] [pleasure] *belongs-to-class* [infinite]

Relative passage: “Mind was akin to cause and belonged more or less to that class, and that pleasure was itself infinite and belonged to the class which, in and by itself, has not and never will have either beginning or middle or end” (*Phil.* 31a).

Textual expression 4.4: subject [idea] *is-part-of** predicate [idea] (* μέρη)

[Pred.72] [knowledge] *is-part-of* [virtue] \ [Pred.73] [justice] *is-part-of* [virtue] \ [Pred.74]

[bravery] *is-part-of* [virtue] \ [Pred.75] [prudence] *is-part-of* [virtue] \ [Pred.76] [piety] *is-part-of* [virtue]

Relative passages: “Among the parts of virtue, no other part is like knowledge, or like justice, or like bravery, or like prudence, or like piety” (*Prot.* 330b). “Then it seems that justice or prudence or piety or some other part of virtue must accompany the procuring of these things” (*Meno*, 78d-e). “Socrates: that it is a part, there being also other parts, which taken all together have received the name of virtue. – Nicias: Why, of course. – Socrates: Besides bravery, I refer to prudence, justice, and other similar qualities” (*Laches*, 198a).

[Pred.77] [piety] *is-part-of* [justice]

Relative passage: “Piety is a part of the just” (*Euthyphro*, 12d)

Textual expression 4.5: predicate [idea] *exists-within** subject [idea] (* ἐνέσσι)

[Pred.78] [intelligent-living-being] *exists-within* [Living-Being]

Relative passage: “Reason perceives Forms existing in the Living Being itself, such and so many as exist therein” (*Tim.* 39e).

Textual expression 4.6: predicate [idea] *contains** subject [predicate] (* περιλαμβάνει/περιέχει).

[Pred.79] [Living-Being] *contains* [intelligent-living-being]

Relative passage: “Living Being embraces and contains within itself all the intelligible living beings” (*Tim.* 30c-d).

[Pred.80] [being] *contains* [motion] / [Pred.81] [being] *contains* [rest]

Relative passages: “All things immovable and in motion, and must say that being and the all consist of both” (*Sophist*, 249d). “Being, then, you consider to be something else in the soul, a third in addition to these two, inasmuch as you think rest and motion are embraced by it” (*Sophist*, 250b8-10)

General Predication Type *Plato. type.5.Pauline-Predication*

Textual expression 5.1: subject [idea] *is-PP* predicate [idea in the form of adjective]

[Pred.82] [justice] *is-PP* [pious/ idea:piety]
 ⇔ all just humans *are* pious

[Pred.83] [piety] *is-PP* [just/ idea:justice]
 ⇔ all pious humans *are* just

Relative passage: “Justice is pious and piety is just” (*Prot.* 331b).

[Pred.84] [virtue] *is-PP* [beneficial]

Relative passage: “Socrates: And if we are good, we are beneficial; for all good things are beneficial, are they not? Meno: Yes. Socrates: So virtue is beneficial? Meno: That must follow from what has been admitted” (*Meno.* 87e).

[Pred.85] All just things *are* beautiful ⇔ [justice] *is-PP* [beautiful]

Relative passage: “Socrates: Well, are all just things beautiful? Alcibiades: Yes” (*Alcib. I.* 115a).

[Pred.86] All just things are profitable ⇔ [justice] *is-PP* [profitable]

Relative passage: “Socrates: And that just things are profitable? Alcibiades: Yes” (*Alcib. I.* 116d).

Relative passage: “Socrates: And everyone is good in that wherein he is prudent? Alcibiades: Yes” (*Alcib. I.* 125a).

[Pred.87] All prudent men are good ⇔ [prudence] *is-PP* [good]

[Pred.88] [prudence] *is-PP* [beautiful] ⇔ all prudent humans *are* beautiful

[Pred.89] [prudence] *is-PP* [beneficial] ⇔ all prudent men benefit (from prudence)

Relative passages: “And prudent men are also good? – Yes. – Well, can that be good which does not produce good men? – No, indeed. – And we conclude that it is not only beautiful, but good also” (*Charm.* 160e). “To acknowledge this to be prudence until I have made out whether such a thing as this would benefit us or not. For, you see, I have a presen-

timent that prudence is something beneficial and good” (*Charm.* 169b).

[Pred.90] All happy men are prudent ⇔ [happiness] *is-PP* [prudent/ idea:prudence]

[Pred.91] All happy men are good ⇔ [happiness] *is-PP* [good]

Relative passage: “Then it is impossible to be happy if one is not prudent and good” (*Alcib. I.* 134a).

[Pred.92] All good things are beautiful ⇔ [good] *is-PP* [beautiful]

[Pred.93] All beautiful things are befitting ⇔ [beautiful] *is-PP* [befitting]

Relative passage: “Socrates: And the better is also more beautiful? Alcibiades: Yes. Socrates: And the more beautiful more befitting? Alcibiades: Of course” (*Alcib. I.* 135b).

[Pred.94] [vice] *is-PP* [befitting-slavery] ⇔ vicious humans benefit slavery

[Pred.95] [virtue] *is-PP* [befitting-freedom] ⇔ virtuous humans benefit freedom

Relative passage: “Socrates: So vice is a thing that befits slavery. Alcibiades: Apparently. Socrates: And virtue a thing that befits freedom. Alcibiades: Yes” (*Alcib. I.* 135c).

[Pred.96] All good humans are wise ⇔ [good] *is-PP* [wise/ idea:wisdom]

[Pred.97] All brave men are good ⇔ [bravery] *is-PP* [good]

[Pred.98] All brave men are wise ⇔ [bravery] *is-PP* [wise/ idea:wisdom]

Relative passage: “Nicias: I have often heard you say that every man is good in that wherein he is wise, and bad in that wherein he is unlearned. Socrates: Well, that is true, Nicias, I must say. Nicias: And hence, if the brave man is good, clearly he must be wise” (*Laches.* 194d).

[Pred.99] All brave men are learned ⇔ [bravery] *is-PP* [knowledge]

Relative passages: “Who has knowledge of what is to be dreaded and what is not—the man

whom I call brave?” (*Laches*, 195d). “Socrates: do you say that bravery is knowledge of what is to be dreaded or dared? Nicias: I do” (*Laches*, 196c-d).

Textual expression 5.2: subject [idea] *is-applied-on-PP* predicate [idea]

[Pred.100] [mastership] *is-applied-on-PP* [slavery], that is, mastership is mastership of slavery ⇔ a master is master of a slave

[Pred.101] [slavery] *is-applied-on-PP* [mastership], that is, slavery is slavery of mastership ⇔ a slave is slave of a master

Relative passage: “if one of us is master or slave of anyone, he is not the slave of master in the abstract, nor is the master the master of slave in the abstract; each is a man and is master or slave of a man but mastership in the abstract is mastership of slavery in the abstract, and likewise slavery in the abstract is slavery to mastership in the abstract” (*Parm.* 133d-e).

General Predication Type *Plato*. type.6.identity

Textual expression 6.1: subject [idea] *same-as** predicate [idea] (* ταὐτόν ἐστι)

[Pred.102] [being] *is-same-as* [one] / [Pred.103] [being] *is-same-as* [whole]

Relative passage: “Stranger: And will they say that the whole is other than the one which exists or the same with it?” Theaetetus: “Of course they will and do say it is the same” (*Sophist*, 244d-e).

[Pred.104] [one] *is-same-as* [the other(s)]

Relative passage: “And likewise (the one is) the same with the others” (*Parm.* 146b1-2).

[Pred.105] [one] is unlike [the-others(s)] ⇔ Not [one] is-same-as [the-other(s)]

Relative passage: “It is, then, also (the one) unlike the others” (*Parm.* 147c1-2).

[Pred.106] [beautiful] *is-same-as* [good]

Relative passage: “Hence we have seen again that beauty and good are the same thing” (*Alcib. I*, 116c).

General Predication Type *Plato*. type.7.difference

[Pred.107] [being] *is-different-from* [motion] / [Pred.108] [being] *is-different-from* [rest]

Textual expression 7.1: subject *different-from** predicate (* ἕτερόν/θάτερόν ἐστι)

[Pred.109] [motion] *is-different-from* [rest]

Relative passages: “Then being is not motion and rest in combination, but something else, different from them” (*Sophist*, 250c3-4). “Each of them (being, motion, rest) is, then, different from the remaining two, but the same as itself” (*Sophist*, 249d). “Then we must not say that motion, or rest either, is the same or different” (*Sophist*, 255b5-6). “Stranger: Take motion first; we say that it is entirely other than rest, do we not? Theaetetus: We do. Stranger: Then it is not rest” (*Sophist*, 255e11-14). “Stranger: Whatever term we apply to rest and motion in common cannot be either of those two. Theaetetus: Why not? Stranger: Because motion would be at rest and rest would be in motion; in respect of both, for whichever of the two became ‘different’ would force the other to change its nature into that of its opposite, since it would participate in its opposite” (*Sophist*, 255a6-b1).

[Pred.110] [motion] *is-different-from* [same]⁹ / [Pred.111] [motion] *is-different-from* [difference] / [Pred.112] [rest] *is-different-from* [same] / [Pred.113] [rest] *is-different-from* [difference]

Relative passages: “But certainly motion and rest are neither different nor the same” (*Sophist*, 255a3-4). “Now motion again is different from the same... Therefore it is not the same” (*Sophist*, 256a3-5). “Stranger: Then let us recapitulate: Motion is different from the different, just as we found it to be different from the same and from the rest. Is that true? Theaetetus: Inevitably. Stranger: Then it is in

a sense not different and also different, according to our present reasoning” (*Sophist*, 256a3-5).

[Pred.114] [being] *is-different-from* [same]

Relative passage: “Stranger: But should we conceive of ‘being’ and ‘the same’ as one? Theaetetus: Perhaps. Stranger: But if ‘being’ and ‘the same’ have no difference of meaning, then when we go on and say that both rest and motion are, we shall be saying that they are both the same, since they are. Theaetetus: But surely that is impossible. Stranger: Then it is impossible for being and the same to be one” (*Sophist*, 255b8-c4).

[Pred.115] [being] *is-different-from* [difference]

Relative passage: “If the other, like being, partook of both absolute and relative existence, there would be also among the others that exist another not in relation to any other; but as it is, we find that whatever is other is just what it is through compulsion of some other... Then we must place the nature of ‘the different’ as a fifth among the classes in which we select our examples... And we shall say that it permeates them all; for each of them is other than the rest, not by reason of its own nature, but because it partakes of the idea of the other” (*Sophist*, 255d4-e6).

General Predication Type Plato. *type.8.otherness*

Textual expression 8.1: subject *is-other-than** predicate (* ἕτερόν ἐστι)

[Pred.116] [one] *is-other-than* [one]

Relative passage: “It (the one) must be other than itself” (*Parm.* 146a9).

[Pred.117] [one] *is-other-than* [the other(s)]

Relative passage: “And likewise (the one is) other than the others”¹⁰

[Pred.118] [one] is like [one] ⇔ Not [one] is-other-than [one]

[Pred.119] [one] is like [the-others(s)] ⇔ Not [one] is-other-than [the-other(s)]

Relative passage: “It is, then, also (the one) like itself and others” (*Parm.* 147c1-2).

General Predication Type Plato. *type.9.Definition-Predication*

Textual expression 9.1: subject [idea] *is-defined-by* predicate [idea]

[Pred.120] [bravery] *is-defined-by* [wisdom]

Relative passage: “So the wisdom that knows what is and what is not dreadful is bravery” (*Prot.* 360d).

[Pred.121] [prudence] *is-defined-by* [knowledge-of-self]

Relative passage: “Socrates: And self-knowledge did we admit to be prudence? Alcibiades: To be sure” (*Alcib. I*, 133c).

[Pred.122] [bravery] *is-defined-by* [wisdom]

Relative passage: “Our friend appears to me to mean that bravery is a kind of wisdom” (*Laches*, 194d).

[Pred.123] [bravery] *is-defined-by* [knowledge]

Relative passage: “Socrates: do you say that bravery is knowledge of what is to be dreaded or dared? Nicias: I do” (*Laches*, 196c-d).

[Pred.124] [prudence] *is-defined-by* [knowledge]

Relative passage: “For if prudence is above all a knowledge of the knowledges, and presides too over the other knowledges, surely she will govern this knowledge of the good, and so benefit us” (*Charm.* 174e).

[Pred.125] [knowledge] *is-defined-by* [right-opinion]

Relative passage: “Then, it seems, if asked, ‘What is knowledge?’ our leader will reply that it is right opinion with the addition of a knowledge of difference; for that would, according to him, be the addition of reason or explanation” (*Theaet.* 210a)

[Pred.126] [piety] *is-defined-by* [knowledge]

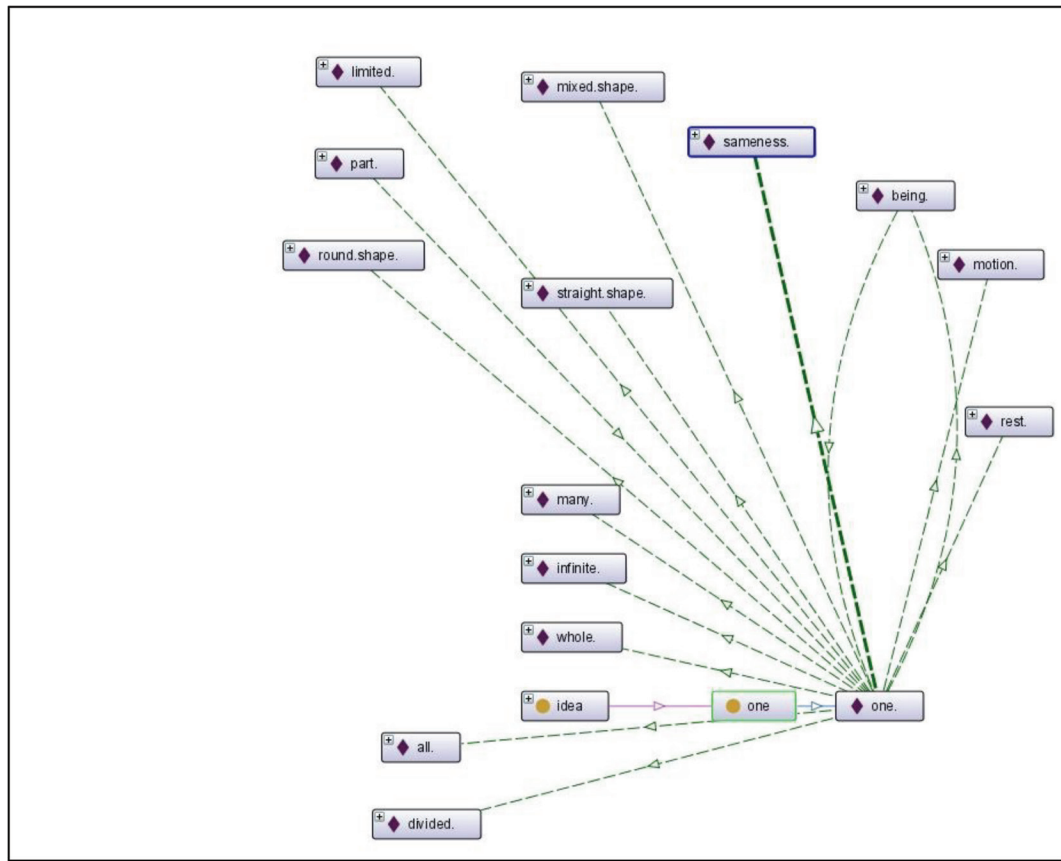


Figure 1. Idea of *one*: its participations in various Ideas (one rests, one moves, one is being, being is one etc). The relation *participates in* is depicted by green line. [Drawing environment: Protégé, Ontograf].

Relative passage: “Then piety, according to this definition, would be a knowledge of giving and asking concerning the gods” (*Euthyphro*, 14d)

[Pred.127] [beautiful] *is-defined-by* [befitting]

Relative passage: “Whatever is befitting for any particular thing makes that thing beautiful” (*Hippias Major*, 290d)

[Pred.128] [beautiful] *is-defined-by* [useful]

Relative passage: “Whatever is useful shall be for us beautiful” (*Hippias Major*, 295c)

[Pred.129] [beautiful] *is-defined-by* [joyful]

Relative passage: “What is beautiful makes us feel joy” (*Hippias Major*, 297e)

Figure 1 presents the concept-map of the idea *one*.

Figure 2 presents the concept-map of the idea *being*.

CONCLUSION

This article could help the transformation of the natural language philosophical propositions to typical logical expressions, which is prerequisite for processes, such as automatic deduction and mechanical evaluation of argumentation. Besides, it could contribute to locating similarities among apparently distant

be predicate [idea], subject [idea] *participates-in-itself*, subject [idea] *brings-along** predicate [idea] (*ἐπιφέρει), subject [idea] *is-subclass-of** predicate [idea] (*κατὰ γέννη μόρια), subject [thing] *belongs-to-class** predicate [idea] (*ἐστὶ γένους), subject [idea] *is-part-of** predicate [idea] (*μόρια), predicate [idea] *exists-within** subject [idea] (*ἔνεστι), [idea] *participates-in* sameness [μετέχει τοῦ ταυτοῦ], predicate [idea] *contains** subject [idea] (*περιλαμβάνει/περιέχει), subject [idea]: *is-PP* predicate [idea], subject [idea] *is-same-as** predicate [idea] (*ταυτόν ἐστι), subject *is-different-from** predicate (*ἕτερόν/θάτερον ἐστι), subject [idea] *is other-than** predicate [idea] (*ἕτερόν ἐστι), subject [idea] *is-defined-by* predicate [idea].

Taking into account the various predication relations of significant philosophical terms we can represent them overall in graphical form in ontology software environments. This will increase researchers of philosophy to have a total concise view of the philosophical ‘paths’ of main concepts within the work of a certain philosopher or extensively in the general frame of philosophy.

Lastly, since predicative propositions constitute a great part of dialectics and rhetoric it is expected that this work could be considered as a guide for standardization of the various freely expressed conceptual schemata and technics, leading to a deeper understanding of the great art of discourse.

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ENDNOTES

- 1 “In *Sophist* participation also obtains between one Form and another. Now that this categorical barrier has, for some reason, been crossed, we may want to ask whether participation can obtain between a Form and itself. Can a Form be among its own participants? The question is not without interest” (Nehamas, 1982, p. 351-2)
- 2 Such as just for justice, good for goodness, unitary for unity, moving for motion, resting for rest etc.
- 3 The predication ‘A is B’ is a non-commutative relation $\text{Pred}(A,B)$ with the property: $\text{Pred}(A,B) \neq \text{Pred}(B,A)$ since ‘A is B’ does not in general imply ‘B is A’. The specific case $\text{Pred}(A,B) \Leftrightarrow \text{Pred}(B,A)$, that is, if B is predicated of A and also A is predicated of B, it means that A is the same to B. This is the identity relation (Plato.type.6.identity) studied later.
- 4 Such as *moves* (instead of *is a moving thing*), *rests* (instead of *is a resting thing*) etc.
- 5 We must make here a distinction between the relation ‘other than’ mentioned above and the concept ‘the others’ used in Parmenides as a term for the not-one.
- 6 <http://www.perseus.tufts.edu/hopper/>
- 7 “ἀλλὰ μὴν τό γε μεμερισμένον πάθος μὲν τοῦ ἐνὸς ἔχειν ἐπὶ τοῖς μέρεσι πᾶσιν οὐδὲν ἀποκωλύει, καὶ ταύτῃ δὴ πᾶν τε ὄν καὶ ὄλον ἐν εἶναι”.
- 8 “οὐδ’ ἔστιν ἄλλα ζῶα καθ’ ἓν καὶ κατὰ γένη μόρια”.
- 9 We must make here a distinction between the genera ‘same’, ‘different’ and the relations ‘is-same-as’, ‘is-different-from’.
- 10 “καὶ τοῖς ἄλλοις ὡσαύτως ἕτερον εἶναι” (Parm. 146b1-2). We must distinguish between the relational term ‘other than’ and the ‘others’, which are the not-one.

