# Introduction

**Motivation**

Monograph on formal ontology (by CUP) with Adjunct Professor Markku Keinänen (Tampere)

Peter van Inwagen & Meghan Sullivan (SEP: Metaphysics, 2014): “it would be flying in the face of current usage (and indeed of the usage of the last three or four hundred years) to stipulate that the subject-matter of metaphysics was to be the subject-matter of Aristotle's Metaphysics.”

Therefore, they ask: “is there any common feature that unites the problems of contemporary metaphysics?”

**Theses**

In this programmatic talk, I argue for an integrated metametaphysical view about the main questions and fields of metaphysics that is inspired historically by Aristotle, Brentano and Husserl. I propose these questions are the following:

1. *What is it (for something, anything) to be? How does being relate to other things in the vicinity such as existence?*
2. *What is there and why?*
3. *If there is something, are beings as beings in different ways?*

Accordingly, general metaphysics (Q1) divides into ontology (Q2) and formal ontology (Q3).

I call a core element of this view *formal ontology first* (in relation to ontology).

I shall also argue that my view explains nicely why specific metaphysical problems are, indeed, metaphysical.

**Structure:**

2. General Metaphysics, 3. Ontology ↔ Formal Ontology, 4. Formal Ontology First, 5. Specific Metaphysical Problems

# General Metaphysics

According to Aristotle, as is well-known, the first philosophy investigates *being as being* (*to on hê on*, literally “that which is in so far as it is”) and the attributes of the being in itself (*Met*. 4.1, 1003a 21-2).

This is the most abstract point of view to being in which it is considered in so far as it is being, apart from its possible specific features. I suggest this is the point of view of *general metaphysics* and it has stood the test of time well. Aristotle’s *basic question* in *Metaphysics* is then *what is being* (*tí to on*; Politis 2004, 2)?

*One reading* of this basic question is *what is it (for something, anything) to be* (ibid., 3)? This may be understood as the question about the essence and/or definition or characterization of being *itself* (not its meaning or sense) in relation to other things in the vicinity, such as existence, subsistence, becoming, being real and their opposites like non-being. In principle, one may think that being can or cannot be given definition or characterization.

However, these are metaphysical matters, which should not be settled in metametaphysics. I only propose that “what is it to be?” is the *fundamental question of general metaphysics* and there have been several different answers to it in the history of philosophy. It does not presuppose Aristotelian substance metaphysics or essentialism.

Pluralism is one of these answers: being is not unitary. There is not only one *way to be*: beings are in different ways, e.g. in the independent vs dependent way. This is also suggested by Aristotle when he famously states that “being is said in many ways” (*to on legetai pollachôs*, *Met*. 4.2, 1003b5). So *a further general question* unfolds here: if there is something, *are beings as beings in different ways*?

This is the fundamental *formal ontological* question since ways of being are traditionally called “modes/forms of being”, that is, *ontological forms* such as perhaps ontological dependences, unity, numerical identity and distinctness. *Formal ontology*, coined by Husserl, is the branch of philosophy considering ontological forms.

*Another reading* of Aristotle’s basic question (what is being) is the following: what does being consist of, *what is there and why*? I propose that this is the *ontological* question of what beings and their grounds, i.e. primary beings are (primary being: *to protôn on*, *protê ousia*, often simply *ousia*).

“*Ontologia*” is a 17th century Greek neologism coming from *ontos*: being’s and *logos*: study, doctrine. I use “ontology” in the Quinean (study of what there is) rather than the German Protestant early modern understanding of ontology as general metaphysics (e.g. Wolff).

Accordingly, I propose that general metaphysics (what it is to be) divides into two main branches: *ontology* and *formal ontology*. This is a crucial distinction giving us rich resources to understand metaphysics and to do it, as I have argued elsewhere in the context of trope theory (Hakkarainen 2018).

# Ontology ↔ Formal Ontology

**Ontology** studies questions *what is there and on what ground*? It involves the questions what fundamental and non-fundamental beings are and how they relate to each other, which have been lately discussed in the literature on metaphysical grounding and fundamentality.

Ontology also covers questions such as *what exists* and *what is real* since general metaphysical views about being itself in relation to existence and reality have implications for the question-setting of ontology. After Quine (1948), typically “what is there”, “what exists” and “what is real” are considered interchangeably. Similarly, other answers to the fundamental question of general metaphysics (what is it to be?) have consequences to what ontological questions are considered to cover (e.g. what subsists, what is becoming?).

Ontology is not the only field that studies what there is etc.; special sciences do that, too. The distinctive perspective of ontology is that it considers being, existence, reality, becoming etc. and their ground *primarily from the point of view of general metaphysics* and *formal ontology*: being in so far as it is being and the forms of being. The relation of special scientific problems to general metaphysics and formal ontology is much more intermediate.

Nowadays a paradigmatic ontological problem is, are there *abstract objects* (in particular numbers, sets, properties or propositions) rather than are there, for example, gravitational waves? In the Quinean tradition, this is taken to be interchangeable with the problem whether abstract objects exist.

Here it is presupposed that there is no difference between being and existence (general metaphysics) and in particular that both are unitary. The latter is a formal ontological presupposition.

It is further presupposed that objects are individual *beings having numerical identity* – another formal ontological presupposition. So within the paradigm of contemporary ontology, it is not even possible to understand the ontological question-setting about abstract objects without making formal ontological presuppositions – implicitly or explicitly.

This conclusion generalizes since we are talking about a paradigmatic ontological problem. Thus, formal ontology informs the problem-setting of ontology. The latter presupposes the former (more examples below).

Actually, *abstract objects* form a putative *ontological category*. Of ontological categories, I have further developed the view suggested by Peter Simons (1992, 2010) and E.J. Lowe (2006): roughly, they are construed as groups of beings based in the ontological forms of entities. Each being of a category shares the same, probably complex ontological form with every other member of the category. For example, *abstracta* are individual beings that are not located in space-time and universals are beings that can be instantiated. (Hakkarainen 2018)

This does not entail *ontological pluralism* (or, more precisely formal ontological pluralism): that being is literally modified or fragmented (defended by e.g. McDaniel 2017). I have argued that we can combine *ontological monism* (no difference between being and existence and they do not modify) with beings having several ontological forms due to standing in different certain kind of internal relations: *formal ontological relations* (Hakkarainen 2018) In other terms, there is only one elite existential quantifier but several formal ontological relational predicates such as *being existentially dependent on*.

Hence, I think that questions about ontological categories are formal ontological problems as well as those of ontological forms. These include questions about the relations, ground and fundamentality/non-fundamentality of ontological categories and forms.

Formal ontological study may take the general form of asking about the entire category structure of being or focus on more specific questions about some ontological categories and their relations such as properties and objects, events or processes and objects.

# Formal Ontology First

In the previous section, I concluded that *ontology presupposes formal ontology*. The converse does not hold true because one may consider hypothetically merely possible (in some sense) ontological forms and categories without making any ontological commitments. We can for example discuss hypothetically what it is to be an abstract object without being committed to the existence of abstract objects. But it is not possible even to set and understand ontological problems without formal ontological presuppositions. An ontological question is indeed whether there are abstract objects. No ontology without formal ontology as the main sub-fields of metaphysics.

This is the *formal ontology first* approach to metaphysics, which is followed by Lowe (2006) in the contemporary formal ontological tradition stemming from Brentano and Husserl. Its other main representatives are Barry Smith (e.g. 1978; Arp et al. 2015) and Simons (e.g. 1992, 2010). According to it, there obtains an asymmetry between formal ontology and ontology in which the former is prior to the latter as disciplines.

This is also correct about the ontological questions of ontological dependence and fundamentality in the discussion on them and grounding (cf. also below). For instance, ontological dependence/independence is presumably an ontological form, without which one cannot consider which entities are ontologically dependent/independent and hence derivative/fundamental in that sense.

# Specific Metaphysical Problems

What I have said so far explains nicely why specific metaphysical problems are, indeed, metaphysical.

Let’s consider some paradigmatic specific metaphysical problems briefly:

The basic question in metaphysics of **causation** is whether there is causation/causation exists. If there is, is causation an external relation, a process or a being of some other ontological category? Given causation is a relation, what is the ontological category of its relata? Are they for instance events or objects?

We ask similar ontological *and* formal ontological questions about **space-time**. Does space-time exist? Is it there? If it is, what is its ontological category? Is it a substance, perhaps? Or, does it consist of relations? If it does, are these relations internal or external and what is the ontological category of their relata?

Are there **dispositions** fundamentally or derivatively? If there are, are they properties and given they are, are they universals or particulars?

What are **laws of nature**? Do they exist? If they do, to which ontological category do they belong? Are they e.g. relational universals as Armstrong suggests or primitive entities (Maudlin)?

The ground of metaphysical **modalities**. Is it metaphysically possible worlds? If it is, do these worlds exist? If they do, are they abstract or concrete? Or is the ground non-modal essence? If it is, does non-modal essence exist? If it does, is it property or proposition or something else?

What are metaphysical **grounds** and grounded? If they exist, are they facts or entities of some other category such as abstract beings (propositions)? Is grounding ontological dependence, which is presumably an ontological form? Is it a relation as Schaffer proposes?

Are there **natural kinds** distinct from their members? If there are, are they universals or particulars: kind universals, property universals, sets or mereological sums?

Finally, are **elementary particles individuals** (i.e. beings with numerical identity)? If they are not but they are beings, what is their ontological category? Caboodles (i.e. pluralities), perhaps (Keinänen & Tahko)? If they are individuals, are they objects, substances, bundles of tropes or universals, events, fields or processes?

These paradigmatic examples reflect the general point that specific metaphysical problems are or at least essentially involve ontological questions *primarily* informed by and presupposing ontological forms and categories, that is, formal ontology and general metaphysics. They are essentially metaphysical problems. By contrast, whether there are gravitational waves is not primarily informed by formal ontology since gravitational wave is not an ontological category or form.

This conclusion generalizes since these problems are paradigmatic. Specific metaphysical problems are metaphysical since they are primarily informed by and presuppose formal ontology and general metaphysics that come first. They are, indeed, metaphysical problems by nature.

# Bibliography

Aristotle (1924), *Metaphysics, a Revised Text with Introduction and Commentary by W.D. Ross*. Clarendon Press.

Arp, R., Smith, B & Spear, A.D. (2015), *Building Ontologies with Basic Formal Ontology*. MIT Press.

Hakkarainen, J. (2018), “What Are Tropes Fundamentally? A Formal Ontological Account”, *Acta Philosophica Fennica* Vol. 94, pp. 129-159.

Lowe, E. J. (2006), *The Four-Category Ontology: A Metaphysical Foundation for Natural Science*. Clarendon Press.

McDaniel, K (2017): *The Fragmentation of Being*. Oxford University Press.

Politis, V. (2004), *Routledge Philosophy Guidebook to Aristotle and the Metaphysics*. Routledge.

Simons, P. (1992), *Philosophy and Logic in central Europe from Bolzano to Tarski*, Kluwer Academic Publishers.

Simons, P. (2010), “Why Categories Matter: Grossmann and Beyond”, in *Studies in the Ontology of Reinhardt Grossmann*, ed. J. Cumpa. Ontos Verlag.

Smith, B. (1978) “An Essay in Formal Ontology”. *Grazer Philosophische Studien*, 6, pp. 39–62.

Smith, B. (2005), “Against Fantology”, in J. C. Marek & M. E. Reicher (eds.), *Experience and Analysis*, HPT&ÖBV, pp. 153-170.