

## IDENTITY AND TWO CONCEPTIONS OF ONTOLOGY

**How is the logical concept of identity applied to the reality that we inhabit? We may think of this as a problem of incarnation. How does *logos* become flesh? Or – less cryptically and more precisely – how does the highly abstract concept of identity make contact with the concrete and messy reality to which it is applied? This short note has two aims. The first aim is to explain how two different answers to our problem of incarnation go hand in hand with two different conceptions of ontology (that is, the study of what there is). The second aim is to outline a strategy for defending one of these conceptions.**

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### 1 Introduction

According to *the rigid conception of ontology*, reality is “carved up” into objects in some unique and fully objective way. Opposed to this stands *the flexible conception*, which insists that we have some choice in how we “carve up” reality into objects.<sup>1</sup> Of course, our choice is limited. It is not an option for a hungry person to “carve up” reality differently so as to produce more bread. The choice invoked by the flexible conception is of an entirely different character. As the great German logician and philosopher Gottlob Frege (1848–1925) observed, reality will provide different answers to ontological questions about what there is depending on which concepts we bring to bear (Frege 1953: §46). If you bring to bear the concept of a loaf of bread, some part of reality (say your room) may answer that there are two such objects. If on the other hand you bring to bear the concept of a molecule of organic matter, you get a very different answer. This much should be uncontroversial. What gives the flexible conception its bite is the addition of the controversial claim that there is no unique privileged set of concepts in terms of which to “carve up” reality. We always have a choice of concepts to apply, and depending on the choice we make, we get different answers to ontological questions.

A proper articulation and assessment of the two conceptions will require a lot of work, however. This short note is little more than an advertisement for a research program that will be required for a proper resolution of the controversy. For a philosopher to engage in such advertising is not without danger. Readers may confuse an appealingly simple advertisement with the complex and arduous research that will be required for the program to be carried out responsibly. A philosopher’s primary responsibility is to do philosophical research, not to engage in advertising. But it can sometimes be useful to adopt a more panoramic view – provided we never forget the obligation to zoom in on the details when appropriate.<sup>2</sup>

### 2 The logic of identity

At the heart of the difference between the two conceptions lies a disagreement about the relation between logic and reality. So I wish to begin by reminding you of some logical notions that are particularly important to the study of ontology. The relevant notions concern what we may call *the logic of identity*. This is the part of logic that studies the identity relation and its interaction with predication (that is, with the ascription of properties to objects).

The logic of identity tells us, first of all, that identity is an *equivalence relation*. In fact, this statement

summarizes three separate claims. Firstly, everything is identical to itself. Secondly, if one thing is identical with another, then that other thing is also identical with the first. And finally, if one thing is identical with a second, and this second thing is identical with a third, then the first thing is identical with the third. Having characterized the identity relation itself, what remains is to describe how the relation interacts with predication. This is done by the last – and by far the most interesting – part of the logic of identity, which consists of *Leibniz's law*. The law says that, if some thing  $x$  is identical with some thing  $y$ , then  $x$  and  $y$  have precisely the same properties. If  $x$  has some property (say  $\Phi$ ), then  $y$  has it too, and *vice versa*. We formalize this as follows:

$$x = y \rightarrow (\Phi(x) \leftrightarrow \Phi(y))$$

This stands to reason. If  $x$  and  $y$  are one and the same thing, then whatever goes for one must also go for the other.

No sooner has Leibniz's law been formulated than apparent exceptions begin to emerge. Consider a famous example inspired by Descartes' *Meditations*. We begin with the instance of Leibniz's law where we let:

$$\begin{aligned} x &= \text{myself} \\ y &= \text{my body} \\ \Phi(\dots) &= \text{'I can doubt the existence of ...'} \end{aligned}$$

That is:

If I am identical with my body, then: I can doubt the existence of myself if, and only if, I can doubt the existence of my body.

Descartes argued, with substantial plausibility, that although I can doubt the existence of my body, I cannot doubt the existence of myself. Assume this is right. Then it follows by the mentioned instance of Leibniz's law and other elementary logical principles that I am distinct from my body! This seems to leave us with a choice between accepting Cartesian dualism and rejecting Leibniz's law.

Fortunately, a solution has emerged and is now widely accepted (Quine 1956). There are some special predicates that result in claims that are not solely about the referents of the terms to which the predicate is applied but also about the terms themselves or the way they pick out their referents. Predicates involving quotation

marks provide a good example. Consider the following predicate:

'...' consists of a single letter

Obviously, the inscription 'I' consists of a single letter, while 'my body' does not. But it would be madness to conclude on this basis that I am distinct from my body! For the mentioned predications are concerned, not with me and my body, but solely with two expressions that are used to pick out these things. Similar features are found in predicates involving propositional attitudes, such as 'I can doubt that ...', 'you believe that ...', 'she hopes that ...'. These predicates too are concerned not only with the referents of the terms to which they are applied but also with the way in which these terms pick out their referents. In all these cases, there is no reason to expect Leibniz's law to hold. There is only reason to uphold the law in cases where makes a claim that is properly about the objects  $x$  and  $y$  that are identical. And in all these cases, Leibniz's law is a perfectly valid logical principle.

Having reviewed the logic of identity, let us now ask how this logic is applied to reality. The question is important. For in practically every part of our thought and discourse, we identify and distinguish things and predicate properties of them. Objects are presented to us in many different ways and from many different perspectives. Questions of identity can therefore be very hard. Is Hesperus (the heavenly body visible in the evening) identical with Phosphorus (visible in the morning)? Is the friendly Dr Jekyll identical with the evil Mr Hyde? We also track objects through time and alternative circumstances, which gives rise to further hard questions of identity. Assume you are looking at two marbles that are qualitatively perfectly alike. Which of them is identical with the marble you lost yesterday? In all of these cases, we are relying on a conceptual apparatus for identification and predication. The logic of identity articulates the formal aspects of this apparatus.

### 3 The rigid conception of ontology

On the rigid conception of ontology, *first* reality provides a domain of objects, to which we *then* apply our formal apparatus of identity and predication. This means that there is a unique right way to apply to the formal apparatus to reality: we must ensure that each singular term is assigned one of the objects that reality provides, and then regard an identity statement as true just in case its two singular terms have been assigned one and the same object. On this

view, there is therefore no philosophical “problem about identity”. David Lewis expresses the view well:

Identity is utterly simple and unproblematic. Everything is identical to itself; nothing is ever identical to anything except itself. There is never any problem about what makes something identical to itself; nothing can ever fail to be. (Lewis 1986: pp. 192–193)

This picture operates with what we may call *the lego block conception of reality*. Reality is regarded as uniquely structured into well-defined objects – the “lego blocks” – which are available independently of, and antecedently to, any application of our formal apparatus of identity and predication. All that is required for this apparatus to “hook on” to reality is that each singular term is associated with a unique “lego block”, and each predicate, with a property (or relation) that may hold of (or obtain between) the “lego blocks”.

On resulting conception of ontology, each question of identity has a unique and definite answer. There is no room for vagueness or indeterminacy.

#### 4 The flexible conception of ontology

The opposing flexible conception of ontology rejects the idea of an all-inclusive domain of objects or “lego blocks” that are available independently of, and antecedently to, any application of our formal apparatus of identity and predication. This dashes any hopes that our formal apparatus of identity and predication will “hook on” to reality in a direct and unproblematic way. We cannot even make sense of any objects to which logic might “hook on” until the logic of identity is in play. Instead we need some form of *simultaneous* explication of the application of the logic of identity and the range of objects to which this logic is applied. What might such a simultaneous explication look like?

There may well be several viable options. The explication that I develop in a forthcoming book (cf. note 2) focuses on criteria of identity. Our discourse about books provides a good illustration. Suppose we start with a practice of identifying and distinguishing physical copies of books – or *book tokens*, as I shall call them – and predicating properties of these. You can meaningfully say, for example, that your copy of *Anna Karenina* weighs

400 grams. But we also talk about books in a more abstract way. Suppose you and I have read separate tokens of *Anna Karenina*. We nevertheless regard it as true to say that you and I have read one and the same book. That is, we identify and ascribe properties not only to book tokens but also to *book types*, such as the book that you and I have both read. Our practice of identifying and predicating properties of book types is extensive, highly systematic, and fully compliant with the logic of identity. This shows how versatile and flexible our formal apparatus of identity and predication is.

The flexible conception of ontology has two important consequences. Both can be illustrated in terms of the example just discussed. The first consequence concerns the possibility of what we may call *brute existence failures*. Might a coherent application of our apparatus of identification and predication – such as the one concerned with book types

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– fail to pick out appropriate objects? On the

rigid conception, such a brute existence failure is conceivable: reality might simply not contain any book types. The flexible conception disagrees. On this conception, there can be no talk of objects prior to, and independently of, an application of our apparatus of identification and predication. So we cannot make sense of a range of all the objects that reality provides, which might fail to include the kind of objects with which a coherent application of the mentioned apparatus is concerned. Rather, where we have a coherent application of this apparatus, nothing more is required for there to be objects of the relevant type. There is no higher standard for the existence of objects, which this coherent application might fail to meet.

The flexible conception has a second important consequence as well. On this conception, we have no reason to believe there is a unique best way to “carve” reality into objects or a unique right answer to the ontological question “What is there?”. Once we recognize that the logic of identity doesn’t “hook on” to reality in a direct or obvious way, there is no reason to expect a unique right answer to the question of what objects there are. Rather, to apply the logic of identity and the associated Fregean concept of object is to effect a form of conceptualization. And as Frege

emphasized, there are cases where we have a choice how to apply these very general and abstract tools to reality, resulting in different alternative conceptualizations.

The flexible conception has been defended by some great philosophers. An early example is Kant, who argued that objects can be given to us only when subsumed under certain fundamental logico-metaphysical concepts, namely the categories. Thus, he famously characterizes an object as “that in the concept of which the manifold of a given intuition is united” (Kant 1997: B37). My main source of inspiration, however, is Frege, who endeavored to make sense of objects – such as book types – that have no location in space and time. Although my token (or physical copy) of Anna Karenina is located on my shelf, the book type that you and I have both read lacks spatiotemporal location. Such objects are known as *abstract*. Frege’s ingenious proposal is that we can make sense of book types by means of *criteria of identity* which specify under what conditions two book tokens count as tokens of the same book type. Under what conditions is it appropriate to say that you and I have read the same book type, for example, although we have never touched one and the same book token? By explaining how these criteria of identity figure in a coherent practice of identifying and predicating, Frege tried to make logical and philosophical sense of objects that would otherwise be problematic. This is connected to Frege’s famous *context principle*, which urges us never to ask for the meaning of an expression directly but only in the context of a sentence – or, as I might prefer to put it, only in the context of a coherent practice of identification and predication (Frege 1953: §62).

## 5 How to adjudicate

Having outlined the two competing conceptions of ontology, I would like to close with some extremely brief remarks about how we might adjudicate between them.

The rigid conception faces a variety of challenges. One is that its “lego block” conception of reality bears little resemblance to anything we find in real science. Our best shot at such “lego blocks” comes from physics, which studies the basic building blocks of physical reality. It appears that even physics fails to deliver the desired “lego blocks,” however. I find it particularly striking that even the number of particles involved in a quantum mechanical system fails to be invariant between observers who are traveling at different velocities.<sup>3</sup> In other words, if you and I are travel-

ling at different velocities, we may disagree on the number of particles involved in some physical system, without either of us making a mistake.

Another challenge is that the rigid conception threatens to place all ontological questions beyond our epistemic reach. By using techniques from mathematical logic, a system can always be redescribed in a way that involves different objects but gives rise to the same observational predictions.<sup>4</sup>

It is not enough to develop objections to the rigid conception, however. We also need to develop and defend the alternative, flexible conception. This will require a great deal of philosophical work. In particular, the idea of a mutual explication of a domain of objects and an application of the formal apparatus of identification and predication needs to be developed in proper detail.<sup>5</sup> It is reassuring to know that philosophers won’t run out of work anytime soon!<sup>6</sup>

## REFERENCES

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## NOTES:

- This distinction has much in common with Hilary Putnam’s distinction between ‘metaphysical’ and ‘internal’ realism. See (Putnam, 1987) for a brief introduction. There are important differences, however, especially as concerns the connection between this debate about ontology and the application of (what I shall call) the logic of identity.
- My own attempt to zoom in takes place in a monograph entitled *Thin Objects: An Abstraction Account*, forthcoming with Oxford University Press.
- This is known as *the Unruh effect*.
- One example is provided in (Ladyman et al., 2012), Theorem 8.2 and ensuing discussion.
- I attempt to do so in the book mentioned in an earlier footnote. Another attempt is made by Agustín Rayo (who is Professor II at IFIKK, UiO) in his (Rayo, 2013).
- Thanks for Mirja Hartimo for comments on an earlier version.