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## **Intelligibility and Intensionality**

A common argumentative strategy employed by anti-reductionists involves claiming that one kind of entity cannot be identified with or reduced to a second because what can intelligibly be predicated of one cannot be predicated intelligibly of the other. For instance, it might be argued that mind and brain are not identical because it makes sense to say that minds are rational but it does not make sense to say that brains are rational. The scope and power of this kind of argument – if valid – are obvious; but if it turns out that ‘It makes sense to say that...’ creates an opaque context, such arguments will fail. I analyze a possible counterexample to validity and show that it is not conclusive, as it depends on what syntactical construction is given to the premises. This leads to the general observation that the argument form under consideration works for some constructions but not others, and thus to the conclusion that further analysis of intelligibility is called for before it can be known whether the argumentative strategy is open to the anti-reductionist or not.

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Philosophical reasoning often makes appeal to what it does or does not make sense to say. In particular, one commonly finds in ontological reasoning the use of a strategy, based on assumptions concerning the intelligibility of certain kinds of statement, aimed at refuting claims of identity between types of thing.

So, for instance, it might be argued that individuals cannot be identical to bundles of qualities because, whereas it makes sense to say that a given particular is, for example, six feet tall, it does not make sense to say that a bundle is six feet tall. Or it might be claimed that persons cannot be identified either with streams of consciousness or with bodies, because it makes sense to say that a person is hungry or worried but not that a stream of consciousness or a body is hungry or worried. Or it might be argued that propositions cannot be identical to sets of possible worlds

because it makes sense to say that a proposition is true or false but not that a set is true or false.

The argumentative strategy is a familiar one, deployed most often against reductionism in ontology. It is most familiar to Wittgensteinians and to other ordinary language philosophers influenced especially by Ryle and Strawson, many of whom wield it as something of a knockdown argument against any reductionist enterprise. The intentions of the strategy's exponents may often be good, and the conclusions reached thereby true; used without discrimination, however, it purports to make every thing that there is a *sui generis* entity, a consequence at which even admirers of Bishop Butler's famous slogan might balk. When appealing to it almost by reflex, its employers often fail to pay attention to the details of the reductionist enterprise in question. For when given a chance to spell out some of the details of his thesis, the reductionist is sometimes able to show how, by systematic translations or transformations, truths about the target entities can be expressed as corresponding truths about the reducing entities. In such a case what does not make sense when asserted straight off about the reducing entities does make sense when, suitably interpreted, it is asserted about them. (Let us assume for present purposes that the reductionist has at least some translation programme or strategy, no matter how partial.)

Without proposing to enter into a general evaluation of the strategy, it is to be noted that there is nothing peculiarly Wittgensteinian (or for that matter Rylean) about it. Whatever plausibility it possesses does not depend on the machinery of 'language games' or of categorial grammar. In at least one of two ways it can be taken to be no more than an instance of (the uncontroversial half of) Leibniz's Law:

$$(LL) (x = y) \rightarrow (Fx \leftrightarrow Fy)$$

Let us call the principle embodied in the strategy the Principle of Intelligibility, and formulate it as follows:

(PI) If  $x=y$ , then it makes sense to say that  $x$  is  $G$  iff it makes sense to say that  $y$  is  $G$ .

The first way (PI) can be shown to be an instance of (LL) is by taking a substitution instance of  $F$  in (LL) to be the predicate 'G can intelligibly be predicated of ...' (for any  $G$ ) or, using lambda abstraction,  $\{\lambda x : G \text{ can intelligibly be predicated of } x\}$ . The second way is not to treat intelligible predicability as a predicate instance for (LL) but to introduce a postulate to the effect that if  $F$  cannot intelligibly be

predicated of  $x$ , then  $x$  is not  $F$ . (So if  $Fy$  were true the biconditional would be false.) (PI) would then be a rule governing the truth conditions of (LL).

The present discussion is not concerned in general with the proper employment of (PI). Rather, it is a common objection to (PI) on which I wish to concentrate, namely that ‘It makes sense to say that ...’ is an intensional sentential operator, like ‘ $S$  believes that ...’ or ‘ $S$  says that ...’. Indeed, it might be thought that since ‘ $S$  says that ...’ is intensional, how could ‘It makes sense (for  $S$ ) to say that...’ not be intensional? (Note that the objection does not have anything to do with the alleged existence of a quotation context, since (PI) is stated purely in terms of indirect speech.)

Further, I wish to confine myself to one intriguing example, in order to see whether at least it gives support to the charge that (PI) invokes an intensional context. Suppose the opponent of (PI) argues as follows. Just as we cannot infer, from ‘ $S$  believes that  $x$  is  $F$ ’ and ‘ $x = y$ ’, that ‘ $S$  believes that  $y$  is  $F$ ’, so we cannot infer, from ‘It makes sense to say that  $x$  is  $F$ ’ and ‘ $x = y$ ’, that ‘It makes sense to say that  $y$  is  $F$ ’. Take ‘ $F$ ’ to be ‘a tortoise’ and ‘ $x = y$ ’ to be ‘Pythagoras’s most famous discovery is the equation  $a^2+b^2=c^2$ ’. We cannot argue from

(1) It makes sense to say that Pythagoras’s most famous discovery is a tortoise

and

(2) Pythagoras’s most famous discovery is the equation  $a^2+b^2=c^2$

to

(3) It makes sense to say that the equation  $a^2+b^2=c^2$  is a tortoise.

Hence, the objection concludes, ‘It makes sense to say that ...’ must be an intensional operator.

The supporter of (PI) might, however, reply that the objection trades on an equivocation over ‘is’. If ‘is’ in (1), (2) and (3) is the ‘is’ of identity then (3) is indeed false, but so is (1) – how could a discovery be intelligibly said to be identical with a tortoise, any more than a mathematical formula? But (1) is true, and this must be because in that sentence ‘is’ is read in a broadly functional sense (what linguists call, more precisely, the objective genitive): ‘Pythagoras’s most famous discovery is of a tortoise’, which is intelligible.

This reply does alert us to a possible equivocation, but not concerning the use of ‘is’. Rather, (1) might be seen to be ambiguous between

(1a) It makes sense to say that the thing Pythagoras is most famous for having discovered is a tortoise

and

(1b) It makes sense to say that the discovery of Pythagoras for which he is most famous is (his discovery) of a tortoise

where the distinction is between the object of discovery and the act of discovering. Once we evaluate the objection according to each interpretation in turn, the confusion in the initial hypothetical reaction stated above will disappear and we will see that for the supporter of (PI) there is good news and bad news.

First the bad news. Suppose we take (1) in the sense of (1a) – call this the objective reading of ‘Pythagoras’s most famous discovery’. To avoid equivocation we must give the objective reading in (2) as well:

(2a) The thing Pythagoras is most famous for having discovered is the equation  $a^2+b^2=c^2$ .

Next, we need to avoid the charge that ‘the thing Pythagoras is most famous for having discovered’ is not a genuine referring expression, otherwise (2a) would not be a genuine identity statement licensing substitution into (1a); so we can rigidify the singular term and instead speak of ‘the actual thing Pythagoras is most famous for having discovered’, giving us:

(1a’) It makes sense to say that the actual thing Pythagoras is most famous for having discovered is a tortoise

(2a’) The actual thing Pythagoras is most famous for having discovered is the equation  $a^2+b^2=c^2$

and

(3) It makes sense to say that the equation  $a^2+b^2=c^2$  is a tortoise.

It still looks as though (3) does not follow from (1a’) and (2a’). Indeed with the argument taken this way, ‘It makes sense to say that ...’ looks to be generating a context every bit as intensional as ‘S believes that ...’, and hence that (PI) does not work. But the supporter of (PI) might insist that this is to confuse *de re* and *de dicto* readings of ‘It makes sense to say that x is F’, and that ‘F can intelligibly be predicated of x’, which looks more like a *de re* construction, is what he means when

he asserts (PI). In this sense, (PI) would be thought of as generating an extensional context, and hence if (3) is false so is (1a').

This escape route for the supporter of (PI), nevertheless, leads to difficulty. For whereas we might have an intuition that (1a') is false (asserting perhaps that the falsity of (3) provides an explanation for the intuition), we are overwhelmingly convinced that, for example, it makes sense to say of persons that they have desires. But on a *de re* reading of (PI) the supporter has no right to claim, for instance, that having desires is intelligibly predicable of persons but not of streams of consciousness; which goes back to my earlier point. Since one man's *modus tollens* is another man's *modus ponens*, if the anti-reductionist supporter of (PI) seeks to deny the identity between persons and streams of consciousness because what is intelligibly predicable of one is not intelligibly predicable of the other, the reductionist can insist, if he has a *prima facie* argument for the identity, that the anti-reductionist needs to understand how best to interpret the reduction in such a way that it comes out intelligible that streams of consciousness can be said to have desires. In general, one might expect that the question of whether to identify one kind of thing with another needs to be evaluated on metaphysical rather than semantic grounds and hence that objections founded on the latter are not going to be able to sustain conviction in the face of compelling metaphysical argument.

The supporter of (PI), then, has a dilemma if he takes the objective reading of 'Pythagoras's most famous discovery': either 'It makes sense to say that...' generates an intensional context and (PI) is false, or it creates an extensional context, which allows the deflection of the Pythagoras example but not of putative metaphysical reductions based on arguments which carry stronger conviction than the semantic intuitions which might be invoked to defeat them.

Now the good news for the supporter of (PI). On an active reading of 'Pythagoras's most famous discovery', we read (1) as (1b):

(1b) It makes sense to say that the discovery of Pythagoras for which he is most famous is his discovery of a tortoise.

Then we must read (2) as:

(2b) The discovery of Pythagoras for which he is most famous is his discovery of the equation  $a^2+b^2=c^2$

and (3) as:

- (3b) It makes sense to say that Pythagoras's discovery of the equation  $a^2+b^2=c^2$  is his discovery of a tortoise.

(3b) is true, though the embedded proposition is of course false. On a *de re* reading, the soundness of the argument does not seem to support (PI) for the same methodological reasons as those given earlier in respect of (1a'), (2a'), (3): semantic objections have to give way to convincing metaphysical argument. On a *de dicto* reading, however, it is not nearly as clear that 'It makes sense to say that...' now generates an intensional context. To see why (3b) is true, consider that a single act of discovery might nevertheless be of two distinct things: the tortoise Pythagoras discovered may at the very moment of discovery, through certain psychological associations, have caused the famous theorem to pop into his head, thus making his discovery of one the same act as his discovery of the other. It might be replied that these are no more than causally linked but distinct acts separated by a minute temporal interval, or that it may even be a case of simultaneous causation. It is not obvious how to evaluate such replies, but note that all that is necessary for the truth of (3b) is that it be intelligible that there could be a single act of discovery. And the point is that one does not have to think of two causally related, perhaps simultaneous acts. Suppose that someone has written Pythagoras's Theorem in chalk on the back of the tortoise: when Pythagoras discovers the tortoise, he there and then discovers the theorem he had been wondering about. Surely this is intelligibly one and the same psychological act? To say that there must be two acts here is to run the risk of far too fine-grained an approach to act identity which disallows the intelligibility of a psychological act that encompasses more than one object. Less fancifully, one might say that a biologist's discovery of a certain gene is the same act of discovery as his discovery of certain proteins coded for by the gene. Note that all that is necessary for present purposes is that it makes sense to assert this. So all one needs to do is to conceive of a biologist's being in such a psychological state that his alighting on certain proteins and his discovery of the gene that codes for these occur simultaneously and in respect of the same empirical data, but without there being a discernible causal link between distinct mental acts: his realization that these proteins exist and his realization that there is a certain gene which codes for them are so intertwined in his own mind that one can intelligibly speak of a single act of discovery.

Consider another interesting example.<sup>1</sup> Suppose one argued:

- (Q1) It makes sense to say that Quine's strongest desire is his desire for a tortoise.  
 (Q2) Quine's strongest desire is his desire of a sloop.  
 (Q3) It makes sense to say that Quine's desire of a sloop is his desire of a tortoise.

Is (Q3) false? I do not think it is, because all that is needed to establish the truth of (Q3) is to imagine a situation, no matter how fanciful, in which intelligibility is demonstrated. For instance, suppose a psychoanalytical interpretation were given to Quine's desires, whereby it was asserted that Quine's desire of a sloop is really a desire for a tortoise (given some suitably aberrant psychoanalysis of Quine). Or again, suppose Quine is hallucinating – he thinks the sloop before him is a tortoise, in which case it would make sense to say that his desire for what is (in fact) a sloop is, from Quine's viewpoint, a desire for a tortoise.<sup>2</sup>

Note that we must add 'Pythagoras's discovery' and 'his discovery' to (1b), (2b) and (3b) in order for the latter to follow from the first two. Otherwise we would have in the conclusion 'It makes sense to say that the equation  $a^2+b^2=c^2$  is of a tortoise', which is clearly false. What this shows is that functional contexts of the form '... is of an F' are elliptical contexts whose missing element needs to be made explicit before substitution *salva veritate* can be seen to be legitimate: the missing element will usually be a phrase of the form 'a so-and-so' or 'the so-and-so' with the article followed by a verbal noun, a deverbal noun (e.g. discovery, arrival, suggestion) or perhaps some other kind of noun suitable for forming a genitive

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<sup>1</sup> Suggested by an anonymous referee.

<sup>2</sup> Here is another construction (possessive genitive, unlike 'the discovery of the theorem', which is objective genitive) for which the argument goes through even more obviously than the one mentioned above:

- (1b') It makes sense to say that the occasion of the discovery of Pythagoras for which he is most famous is the occasion of his discovery of a tortoise.  
 (2b') The occasion of the discovery of Pythagoras for which he is most famous is the occasion of his discovery of the equation  $a^2+b^2=c^2$

Hence:

- (3b') It makes sense to say that the occasion of Pythagoras's discovery of the equation  $a^2+b^2=c^2$  is the occasion of his discovery of a tortoise.

In the scenario I imagine, e.g. of Pythagoras's finding a tortoise with the theorem painted on its back, it is clear that the occasion of discovery of both things, the tortoise and the theorem, is one and the same.

construction either objective (the discovery of the theorem), subjective (the death of the prince) or possessive (the square root of four).

Our original question was whether (PI) involved an intensional context and so could not be used as part of a general Leibnizian strategy for the evaluation of reductionist (or other) identifications. The conclusion of the present discussion would, unexpectedly, appear to be ‘It depends’, the dependence being on the syntactical construction one gives to sentences embedded within the operator ‘It makes sense to say that ...’, and also on whether that operator is given a *de dicto* or a *de re* reading. Since this situation does not appear very satisfying – one would prefer a neater solution that definitively ruled intelligibility arguments for anti-reductionism in or out – further analysis of the role of intelligibility is called for.<sup>3</sup>

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