

## Reply to Figdor

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(post-print del autor)

In her helpful response, Carrie Figdor provides answers to the two criticisms raised against her defence of Literalism in my review article. In doing so, she usefully clarifies the argument for the Literalist option she favours. In the same constructive spirit, this brief addition to the discussion makes a further attempt to elucidate the terms of the debate. The focus will be (again) on the objection that Figdor's defence of Literalism is question-begging, and also on the contribution made by the No-Core view.

The first criticism made in my review article was that Figdor's defence of Literalism apparently begs the question that is being asked – namely, whether the proper domain of psychological predicates extends beyond the human case to include, in particular, insects, plants, unicellular organisms and cells themselves. The charge was linked to a weakness of the argument from analogy on which Figdor's argumentative strategy relies. In her response, Figdor states that her use of a version of the argument from analogy plays no more than a supporting role in her positive case for Literalism, for the main work is done by an argument from scientific practice, specifically from scientists' extension of mathematical models to explain data in non-human domains. In this respect, she counters that scientists cannot be rebuked for assuming that, say, fruit flies are doing something cognitive, rather than showing that they are; for this is just what the scientific practice of model extension amounts to.

However, this does not address the original worry, for the charge of begging the question is not addressed to scientists, but to those who like Figdor endorse an argument to the effect that scientific practice alone is a sufficient basis on which to answer the question about the proper domain of psychological predicates. Presumably, while engaged in their model-extending practice, scientists are not intent on finding an answer to this question; rather, their focus is on the model itself and its potential applications. But once the question is raised, as is done by Figdor, the tools for answering it can be scrutinized. In this respect, the argument from scientific practice is an inference to the best explanation, as follows: the scientific practice of model extension vindicates Literalism, because the latter is a simpler (hence, better) semantic account of the fact that different behavioural data in human and non-human targets are explained by the same model. The problem with this argument is that it is successful only if the cognitive status of the non-human targets to which the model is successfully applied is already conceded. It is this that prompts the worry that the crucial question is being begged in endorsing the argument from scientific practice.

Take again the extension of the drift-diffusion model (DDM) of decision-making to fruit flies. As explained by Figdor, what scientists working with the model are interested in is whether it "helps justify the ascription of decision-related component cognitive processes ... to the intended target populations of decision-makers" (47). They do not "aim to show that fruit flies make decisions" (46). The argument from scientific practice takes these facts for granted in

order to draw a semantic conclusion, namely Literalism. Hence, the logical form of the argument is: in their extension of the DDM scientists assume that fruit flies make decisions with a view to explaining some fly behaviour by means of the model, hence Literalism is the best semantic account of scientists' practice (including their linguistic behaviour). Here, the conclusion cannot be that Literalism is best, because it is the view assumed in fact by scientists as part of their practice; that would be a simple repetition of the premiss. Instead, the conclusion must be that Literalism is best, because psychological predicates can indeed be extended beyond the human domain. But to draw that conclusion, considerations of simplicity alone are insufficient – that is, considerations to the effect that Literalism provides a more parsimonious explanation of the behavioural data from human and non-human targets alike. Simplicity works regarding the attribution of particular component processes to the target, but only if cognitive status is assumed; in our example, if fruit flies are assumed to make decisions. It is here that the question whether psychological predicates can be extended to fruit flies is being begged; not by scientists while engaged in their model-extension practice, but by proponents of the argument from scientific practice while addressing the question as to the proper domain of psychological predicates.

In the review article this point was made in connection with the argument from analogy deployed in the book, but it can be used against the argument from scientific practice directly, if the latter is what carries the main weight of Figdor's defence of Literalism. What remains constant throughout is that, if the question is seriously raised whether psychological predicates can be literally extended into the non-human domain, then one cannot just assume that they can be, even though scientists do so as part of their practice. The difference is that scientists are not addressing the question whether psychological predicates can be literally extended into the non-human domain. Importantly though, the question is seriously raised in Figdor's book, for otherwise the discussion of the alternatives to Literalism would not make sense, as the latter deny that psychological predicates can be literally extended into the non-human domain.

To make the point the review article introduced a distinction between general cognitive status and particular cognitive processes. In addition, at several places the article talks about the category of the cognitive. This may mislead the reader into thinking that what is at stake is the question "What is cognition?", understood as a more basic question without answering which questions about particular cognitive processes (say, decision) cannot be answered. But this is not how talk of general cognitive status and of the category of the cognitive was meant in the review. Instead, it was meant, and must be read, as shorthand for a long list of particular cognitive processes, including decision and anticipation, to name two of Figdor's examples. So, when it is maintained that in the argument from scientific practice the general cognitive status of, say, fruit flies is assumed, this is tantamount to the claim that what is assumed is their status as decision makers. This is not objectionable, for it is acknowledged to be part of the premiss of the argument. Unfortunately, it is what prompts the worry that a question-begging move is taking place when addressing the question raised by Figdor in the book, as reiterated above.

The second criticism made in the review article was that Figdor's book failed to consider and rebut an alternative to Literalism, i.e. the No-Core view. The point was made under the impression that Literalism was a form of Essentialism, to which the No-Core view was proposed as an alternative. In her response, Figdor has stated that she rejects Essentialism, while claiming that the No-Core view is compatible with Literalism. In view of this, our stances

should be more congenial than portrayed by the review. However, Figdor wonders whether the No-Core view is in fact a version of one of the alternatives to Literalism, namely the Exsanguinated-Properties variant of the Technical view. The remainder of this reply rejects this interpretation of the No-Core view.

According to the Exsanguinated Properties view, in the non-human domain psychological predicates pick out attenuated or deflated, rather than full-blooded, cognitive properties. By contrast, according to the No-Core view, psychological predicates pick out the same properties in human and non-human domains. What is distinctive of the No-Core view, against Essentialism, is that psychological categorization is not a matter of satisfying a set of necessary and sufficient conditions, but rather a matter of satisfying some of an open-ended pool of features, though not all the features nor always the same. Figdor endorses this view of psychological categorization in her response. However, in so far as the No-Core view is claimed to entail that only human targets provide typical instantiations of psychological properties, by contrast with such non-human targets as insects, plants, bacteria and cells, Figdor wonders whether the No-Core view is in fact a version of the Exsanguinated Properties view.

However, talk of typical vs. non-typical instantiations of a property does not equal talk of full-blooded vs. attenuated or lesser properties. Consider a different example. There are many kinds of fruit, in size, shape, colour, culinary use and so on. According to people's judgements, some are typical instances of the fruit category, whilst others are not. Typical instances satisfy all of a set of features, whereas non-typical instances fail to satisfy some feature(s) or other from the set, while satisfying some. Let us assume for argument's sake that apples are typical fruits. Then, typical fruits are sweet, whereas blackcurrants are sharp; and typical fruits are eaten as dessert, whereas cucumbers are not. Still, blackcurrants and cucumbers qualify as fruits, for they satisfy other features from the set satisfied by typical fruits. These differences are captured by saying that blackcurrants and cucumbers are not typical fruits, while apples are; not by saying that the former, unlike the latter, are lesser fruits. Hence, talk of typical vs. non-typical fruits is not talk of full-blooded vs. attenuated or lesser fruits.

Similarly with psychological predicates, which according to the No-Core view can be literally applied to human and non-humans alike, despite differences in typicality. For, in so far as membership of a psychological category is a matter of satisfying some feature or other from an open-ended pool, human instantiations of some psychological property can count as typical, without this entailing that non-human instantiations count as lesser versions of the property.

Note then that the claim that only human instantiations of psychological properties are typical (by comparison with instantiations by such non-human targets as insects, plants, bacteria and cells) does not oppose the claim that psychological predicates can be literally applied in human and non-human domains alike. On the contrary, it shows a way in which the human standard can be used to understand the proper domain of psychological predicates, while preserving some differences among the entities to which the predicates can be properly applied. In so far as these differences are reflected in lay people's judgements of typicality, they are data for a semantic account of psychological terms, in addition to the data derived from scientific practice. That the No-Core view accommodates both sets of data must be held to its credit. For this reason, the conclusion is that the No-Core view provides a plausible Literalist answer to the question about the proper domain of psychological predicates.

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