

## BOOK REVIEW

*Reflective equilibrium and the principles of logical analysis: Understanding the laws of logic.*  
EDITED BY JAROSLAV PEREGRIN AND VLADIMÍR SVOBODA (New York: Routledge,  
2017. Pp. 178. Price £130.)

The notion of logical form is at play in numerous philosophical debates. Despite often being taken as uncontroversial, many questions about it are far from settled. What is its ontological status? How can we gain knowledge of it? What is its role? What makes a logical form adequate for a given natural language expression? Does each natural language expression have a unique adequate logical form? In *Reflective Equilibrium and the Principles of Logical Analysis*, Peregrin and Svoboda address all of these questions while endorsing and developing the linguistic conception of logical form, according to which logical form is implicit in our linguistic practices and the only way to gain knowledge of it is by observing them.

In the first four chapters, the authors lay down the basic components of their view. One of the most striking claims of this part of the book concerns the definition of ‘correct argument’. According to it, a correct argument should not be defined as one that preserves truth, for truth is too enigmatic a notion and, in fact, should be seen as a theoretical by-product of our argumentative practices. Instead, a correct argument is characterised as an argument where the step from premises to conclusion is a generally acceptable move in ordinary argumentation.

The authors hold that there are correct arguments that are not logically correct—i.e., analytically and status quo correct arguments—even though there are no sharp borders between them. What makes logically correct arguments special is that their being acceptable moves in argumentation is merely due to the logical expressions they contain. Another way of putting it is in terms of forms: formally correct arguments are arguments whose forms are valid (where a form is valid if, and only if, all of its instances are correct) and logically correct arguments are a special case of formally correct ones, namely, those that are formally correct with respect to their logical form.

But what is the logical form of a natural language statement? According to Peregrin and Svoboda, logical forms are tools with which we can make

the logical steps of our argumentative practices explicit. The authors see argumentation as a social activity, knowledge of which is just linguistic knowledge. They conclude that the only means we have to access logical forms is the observation of the inferential relations that sentences (i.e., public linguistic entities) bear to one another. In particular, logical forms are not abstract objects of which the logician has a priori knowledge. More precisely, the logical form of a natural language statement is what results from abstracting from it—i.e., replacing all its extra-logical expressions by parameters of the proper grammatical categories—and regimenting it—i.e., replacing its logical parts by logical constants. Thus which is the logical form of a statement depends on various factors: the boundary between logical and extra-logical expressions, the choice of grammatical theory and the depth and focus of our analysis. Given that all of these questions appear to admit of more than one answer, this leads the authors to the acceptance of pluralism with respect to logical form. I believe this is a point which would have benefitted from a more meticulous treatment. While the dependency on depth and focus can easily lead to a genuine pluralism, when it comes to the dependency on the logical/extra-logical distinction, it is only pointed out that its dividing line is fuzzy, which in itself does not lead to pluralism (one would need to further endorse a view according to which ‘logical’ and ‘extra-logical’ can be sharpened in multiple acceptable ways). Moreover, it is unclear whether the dependency on the choice of grammatical categorisation results in pluralism, for the authors are silent about pluralism with respect to grammar.

One of the main positive proposals of the book concerns the question of what makes a logical form adequate (ch. 5). Given a certain logical framework (thus from an internal perspective) and a restriction to the relevant fragment of natural language, the authors propose four desiderata (let  $\varphi$  be a logical form and  $S$  be a natural language sentence):

- a) *Reliability*: If an argument form in which  $\varphi$  occurs as a premise or as the conclusion is valid, then all the natural language instances of that form in which  $S$  appears as a natural language instance of  $\varphi$  are intuitively correct.
- b) *Ambition*:  $\varphi$  is more adequate for  $S$  the more intuitively correct natural language arguments there are such that  $S$  occurs as one of their premises or as their conclusion and they (the arguments) are instances of valid argument forms in which  $\varphi$  appears as the formalisation of  $S$ .
- c) *Transparency*: Other things being equal, the grammatical structure of a logical form must resemble that of their natural language instances.
- d) *Parsimony*: Other things being equal, logical forms must be parsimonious with respect to the number of occurrences of logical symbols.

Admittedly, the proposed criteria may pull in different directions sometimes and trade-offs between different formalisations are not always easily assessed. More important, however, is the fact that we can only evaluate the

formalisation of a sentence in the context of an argument by assuming the adequacy of the formalisations of the other sentences in it. As a result, the authors adhere to a form of holism—we can only ever test a collection of formalisations taken together—and propose that we bootstrap our way out of the difficulties imposed by the holist picture: start from simple statements to gain security in your choices and move on to more complex ones; if a formalisation does not fulfil the desiderata above, consider whether you can fix things via syntactic re-categorisation. Alternatively, consider whether you need to reject the formalisation of the initial sentences. As a last resort, reconsider the choice of formal framework altogether (adopting thus an external perspective).

In Chapter 6, the authors argue against an alternative criterion: the semantic one, according to which a logical form is adequate if it preserves meaning (understood as truth-conditions).

An interesting consequence of the views endorsed so far appears to be that logical and grammatical forms go hand in hand. The former is a simplified kind of grammatical form (the one that results from taking logical inferences as the only relevant data, rather than, more generally, analytic ones). This receives support from the fact that the methodology endorsed coincides with the one employed by formal semanticists in their search for compositional grammatical meaning. The authors occasionally claim that logical and grammatical form may come apart. However, it seems that they can only ever diverge with respect to the analysis' depth and focus. If correct, the book should have addressed this result in more detail, since it is a controversial stance (see Iacona (2018) for arguments against such a conflation).

Chapters 7 and 8 turn to the role of logic. It is argued that logic should be understood as the (provisional) result of a reflective equilibrium, according to which even though formalisation is a matter of description, what results from it fixes and clarifies rules of argumentation which have, subsequently, a certain degree of normative force. This view is defended against the objection that in order for the process towards reflective equilibrium to start, we would need to have a logic operating in the background, but this is precisely what we are hoping to find by engaging in such a process (Shapiro 2000). The authors' response is interesting: natural language contains something like a logic even before we start formalising it; this pseudo-logic transcends the process towards the reflective equilibrium and it is too complex and messy to admit of a definite formal reconstruction.

Finally, after discussing the question of what is a logically incorrect argument (ch. 9), they close the book by proposing a technique of visual representation of inferential relations as maps (chs. 10–11). These maps are presented as useful tools with which to model the holistic viewpoint. For instance, they allow us to compare (fragments of) different languages as wholes.

Overall, I think this monograph is an important addition to the literature. It brings together in a systematic way answers to various questions revolving

around the notion of logical form, thereby making a substantial case for the linguistic conception. It will be of special interest to anyone who, being sympathetic with this view, is looking for a detailed and encompassing account thereof.

## REFERENCES

- Iacona, A. (2018) *Logical Form: Between Logic and Natural Language*, Switzerland: Springer.  
Shapiro, S. (2000) 'The Status of Logic', in P. Boghossian and C. Peacocke (eds.) *New Essays on the a Priori*, 333–38. Oxford: Oxford University Press.

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