grouping and figure-ground organization. *Psychological Bulletin: American Psychological Association* 138: 1172–217.

Walton, K. 1970. Categories of art. *Philosophical Review* 79: 334–67.

Is inferentialism circular?

JAROSLAV PEREGRIN

Consider the argument:

> Inferences are moves from *meaningful* statements to *meaningful* statements. Hence the meanings cannot be inferential roles.

Variations on this argument resonate throughout discussions about inferentialism and some of its opponents even think it a *knock-down* argument against inferentialism. However, as far as I can see, the argument is obviously flawed.

Possibly the most recent version of this argument was presented by Zangwill (2015):

> When we should infer in accordance with the introduction and elimination rules, it is because we are thinking in terms of conjunction or disjunction. We are not thinking in those terms because those rules apply. Inferentialism gets the direction of explanation the wrong way round. And it is not that there is an identity or a two-way mutual dependence. There is a one-way dependence of the inferential norms on the thoughts we have. (518–9)

But as I have already pointed out, other variants of the same argument have become commonplace.[1] Thus, for example, Boghossian (2014):

> One consequence of emphasizing the Taking Condition on inference is that it draws our attention to something that should have been obvious, but that is often lost sight of, including by me ...: and that is that reasoning is an operation on thought contents and not on symbols (that have content). That immediately implies that the usual ways of

1 Even the arch-argument against inferentialism, the argument of Prior 1960 featuring the (in)famous connective *tonk*, is at bottom of the same kind. Though at first it might seem that Prior's point is simply that using an inferential pattern we can introduce a 'destructive' connective (to which Belnap (1962) replied by providing an inferential characterization of those in ferential patterns that do not do this), Prior's follow-up paper (1964) makes it clear that the author's deeper point is that we cannot characterize a connective inferentially unless the connective already has its meaning. For other variants of the argument see, e.g. Fodor 2004 or Hattiangadi 2006.

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> presenting programs of 'inferential role semantics' are confused—a logical constant's role in inference must be explained by its content; its content cannot be explained by its role in inference. (17)

In what follows I will try to show why, as far as I can see, arguments of this kind entirely miss their target.

Suppose that you and I decide to play chess. We take the pieces, put them on the chessboard and move them. When moving a piece I move it as I do because it is, say, a rook and because I know that the rook can move in a certain way and that by such moves I may be enabled to threaten my opponent's king. Hence one of the reasons why I make the move I do is because it is, for me, not just a piece of wood, but a *rook*. In this sense, I do not move pieces of wood, but rather, pawns, bishops, rooks, etc.

On the other hand, it would obviously be foolish to say that the pieces of wood must be pawns, bishops, rooks, etc. *prior* to the establishment of the *rules* of chess. *Being a rook* in essence is nothing else than *being subordinated to the rules of chess in a particular way*. It is a role that is conferred on an item by the rules. The roles are not antecedent to the rules (and neither are the rules antecedent to the roles); the rules and the roles are two sides of the self-same coin.

All of this seems to be *de rigueur*. (It presupposes that we distinguish between the rules and the moves that we make within the framework of the rules, but how could we not? The rules and the rule-governed moves are two very different items!) The rules confer the roles and we use the pieces in their roles to hatch plots against our opponent. Rules and roles are interdependent and arise simultaneously; and they are both presupposed by the moves.

Now consider inference. Here again we have rules. For example, there is a rule that we can infer A from $A \wedge B$, but not from $A \vee B$. Just like in chess, the rules confer certain roles on the items which we manipulate in accordance with them. The role of conjunction is different from that of disjunction. And again, like in chess, we make our moves, or draw our concrete inferences, because the items are, for us, not mere kinds of sounds or scribbles on paper, but rather *conjunctions*, *disjunctions*, etc. And just like in the case of chess, there is nothing even remotely mysterious about this.

However, as we indicated above, discussions about inferentialism indicate that many philosophers think very differently. In particular, they think that the fact that *inferential moves* presuppose meaningful symbols implies that the meanings must be in play before the *rules*. How is it possible to make sense of the objections quoted above in the light of the fact that what they object to is really not controversial?

In Boghossian's case, the problem seems to be a conflation of inferential rules and inferences carried out according to the rules. There is no contradiction between the fact that the inferences presuppose content and that the content is conferred by the rules. These two facts just boil down to the trivial 'a rule-governed move presupposes rules that govern it'. One possible

diagnosis: Boghossian is failing to distinguish between inferences and rules of inference. But then he would need to explain why this is not simply a conceptual confusion. Another possible diagnosis: Boghossian thinks there are no rules of inference, that everything that there is are inferences. But then we need to know why he thinks that it is not the case that it is correct to infer A from $A \wedge B$, but not from $A \vee B$ – for this would seem to be an obvious fact.

In the case of Zangwill, the situation is slightly different. In a passage immediately preceding the one quoted above he says:

> The introduction and elimination rules are supposed to be norms for inference. If so, then, like all norms, there must be something in virtue of which they hold. The trouble is that it is clear what these norms hold in virtue of.

This indicates that his employment of the problematic argument is urged by his conviction that it is only when we already have 'conjunction or disjunction' that we can give the inferential rules their force. But it is not clear why this should be so. In chess, we do not have the pawns, rooks and bishops *before* we set up the rules; we constitute them by setting up the rules. (Why do we set up the rules in the way we do and not otherwise? Well obviously because it has turned out that this particular set up provides for an exciting and exhilarating game.) Similarly for inference: the content of the expressions is not here before the rules, it is constituted by the rules. (And again, we have set up the rules the way we have because it has turned out that this very set up provides for an extremely useful and productive 'game' – our game, as Brandom 1994, would put it, of giving and asking for reasons.).[2]

It is true indeed that 'when we should infer in accordance with the introduction and elimination rules, it is because we are thinking in terms of conjunction or disjunction'. But why should we think that 'we are not thinking in those terms because those rules apply'? An item such as '$\wedge$' counts as a conjunction because it is correct to infer A from $A \wedge B$, hence it would seem that it *is* a conjunction 'because those rules apply'. Hence the claim

2 Warren (2015) claims that 'unrestricted inferentialism', *viz.* the idea that 'the meanings of logical constants like "and" ($\wedge$), "if" ($\rightarrow$), and "not" ($\neg$) are fully determined and explained by the inference rules according to which they are used', 'is ridiculous' (6) and it has been 'rejected by every single philosopher post-Carnap' (5). It is, according to him, 'because of putative counterexamples like A.N. Prior's tonk connective', for 'with the tonk rules in hand, we can conclude that Saul Kripke was born before Plato from $2+2=4$' (1). I do not see how changing our mind about the workings of inferential rules could save us from unwanted inferences in natural language. Fortunately, we do not have anything like *tonk* in our languages – not by chance, but simply because a language with such a connective would not be able to serve us as our current languages do. Imagine a rule which could be added to chess, and which states that whoever first moves a rook wins. There is no reason to deny that such a version of chess would be in keeping with rules conferring roles on the pieces (with rooks transformed into something like 'winrooks'), but at the same time it is no surprise that such a version, though theoretically entirely possible, is not really encountered.

that 'there is a one-way dependence of the inferential norms on the thoughts we have' is just unwarranted – the norms and the roles they confer – viz. the concepts such as *conjunction*, *disjunction*, etc. – are two sides of the same coin.

To avoid some further possible misunderstandings, let me add some clarifications.

First, I do not claim to have shown here that language works like chess or to what extent it does, and to what it does not. (I think it does to a remarkable extent, but this is not the subject of the present paper; I discussed this at length elsewhere. See Peregrin 2014: esp. Section 5.5.) The sole point of invoking the chess metaphor is to show that the argument presented at the beginning of the article is a *non sequitur* – the fact that we infer meaningful statements from meaningful statements does not entail that meaning is independent of the rules of inference, just like the fact that in chess we move pawns, rooks or bishops does not entail that pawns, rooks or bishops are independent of the rules of chess.

Second, roles such as *conjunction* and *disjunction* are conferred on linguistic items by the *rules* of reasoning, not by their users drawing the inferences as a matter of fact – an item's being a conjunction does not mean that its users always infer A from $A \wedge B$ and do not infer $A \wedge B$ from A; it simply means that they take these inferences to be *correct*. This provides for an all-important distinction between what can be called *normative* and *causal* inferentialism – the former is the Brandomian kind I invoke here, while what used to be called 'inferential role semantics' in the nineties by Boghossian (1993), Peacocke (1992) and others is arguably of the latter kind. Not distinguishing between the two kinds is both pernicious and, unfortunately, perennial (see Peregrin 2014: Section 1.4).

Third, it is certainly not the case that the rules of reasoning would come into being by being stipulated. This may make for a substantial difference between the rules of reasoning (or, for that matter, of language in general) and those of chess (though I do not have a clear idea how the rules of chess in fact came into being). Reasoning as a collective activity developed spontaneously and its rules were only later made explicit. But this does not mean that the rules did not exist before they were made explicit – they existed in terms of the participants of the practices taking the doings of one another for correct or incorrect, in terms of what can be called their *normative attitudes*.

Fourth, this indicates that though, as we said, inferences presuppose inferential rules, historically it is certainly not so that we established fully-fledged rules before we started to draw inferences – a lot of bootstrapping must have been taking place. The rules were, as already pointed out, not established stipulatively; they must have developed from rudimentary normative attitudes the proto-reasoners assumed to each other's proto-reasonings, thus instigating the rules and, at the same time, prodding the proto-reasonings in the direction of reasonings in the fully-fledged sense.

All in all, the argument cited at the start of this article, as it stands, is simply a *non sequitur*.

Funding

This work was supported by research project 'Excellency of University of Hradec Králové'.

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References

Belnap, N. 1962. Tonk, Plonk and Plink. *Analysis* 22: 130–4.

Boghossian, P. 2014. What is inference? *Philosophical Studies* 169: 1–18.

Boghossian, P.A. 1993. Does an inferential role semantics rest upon a mistake? *Mind & Language* 8: 27–40.

Brandom, R. 1994. *Making It Explicit*. Cambridge, MA: Harvard University Press.

Fodor, J. 2004. Having concepts: a brief refutation of the twentieth century. *Mind & Language* 19: 29–47.

Hattiangadi, A. 2006. Is meaning normative? *Mind & Language* 21: 220–40.

Peacocke, C. 1992. *A Study of Concepts*. Cambridge, MA: MIT Press.

Peregrin, J. 2014. *Inferentialism: Why Rules Matter*. Basingstoke: Palgrave Macmillan.

Prior, A.N. 1960. Runabout inference ticket. *Analysis* 21: 38–9.

Prior, A.N.1964. Conjunction and contonktion revisited. *Analysis* 24: 191–5.

Warren, J. 2015. Talking with tonkers. *Philosophers' Imprint* 15.

Zangwill, N. 2015. Logic as metaphysics. *Journal of Philosophy* 112: 517–50.

Shrieking in the face of vengeance

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Paraconsistent dialetheism is the view that some contradictions are true and that the inference rule *ex falso quod libet* (a.k.a. explosion) is invalid. *Ex falso* is the rule that any sentence is a logical consequence of a

Analysis Vol 78 | Number 3 | July 2018 | pp. 454–463 doi:10.1093/analys/anx163