The Epistemological Significance of Carroll's Regress

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Abstract. Carroll's Regress is often taken to support two claims in the epistemology of logic: that knowing a logical principle is an instance of knowing how rather than an instance of knowing that, and that access-internalism about our justification for basic logical principles is false. I argue that it supports neither.

1. Carroll's Regress

Lewis Carroll states his Regress in a very short paper (Carroll, 1895), where he suggests that elementary deductive reasoning might not be possible. Thus, consider a simple argument in Modus Ponens, call it (A):

(A) It is day;
If it is day, it is light;
Therefore, it is light.

Suppose that you accept the premises but that you don't quite see why you should accept the conclusion. To improve matters, you are then asked to consider the principle that states the validity of the argument, here the principle of Modus Ponens:

(MP) P, and (if P, then Q), together entail Q.[1]

You accept (MP) and thus add it as a further premise to the original argument:

It is day;
If it is day, it is light;
P, and (if P, then Q), together entail Q;
Therefore, it is light.

However, having done so, you still don't quite see that you should accept the conclusion that it is light.

You are willing to consider a further, longer, principle that states that the original premises, plus the first principle, entail the conclusion – as follows:

It is day;
If it is day, it is light;
If (P and (if P, then Q)), then it must be the case that Q;
[(P and (if P, then Q)) and (if (P and (if P, then Q)) together entail Q)], together entail Q.
Therefore, it is light.

But you still don't quite see why you ought to accept the conclusion. You are happy to accept further such kinds of principles but they bring you no closer to the conclusion.

This procedure of accepting the principle that records the validity of an argument and adding it as a premise to that very argument leads to a regress, which means that the conclusion of that argument can never be accepted. This, roughly, is Carroll's Regress.

Carroll's Regress is open to many interpretations, partly because it is written informally, as a playful dialogue between Achilles and the Tortoise. Also, because Carroll does not offer a solution to it, it is admittedly difficult to interpret what it exactly says, what its target is, and what it aims to establish. However, while it might be difficult to characterise *ab initio* what view the Regress is meant to *refute*, we might say that it targets any view that suggests or requires that we take logical principles or logical rules, *as premises in our reasoning*. So, what goes wrong in the Regress happened right at the start, with the addition of (MP) as a further premise to the original argument.

2. The Epistemological Relevance of the Regress

Carroll's Regress is not overtly epistemological and it has received many interpretations that have nothing to do with epistemology.[2] Yet it has had a profound influence on the epistemology of logic, in particular on the question of how to account for our knowledge of basic logical principles such as (MP). The Regress has been taken to show that whatever knowledge of a logical principle amounts to, it cannot take *a certain form*, if the principle is to guide us in reasoning. If it had *that form*, we would never reach any conclusion – the principle would inevitably end up as a premise in our reasoning. More precisely, it is widely thought that the Regress targets a view of knowing a logical principle that construes it as a *representational, propositional mental state* or *a mental state that is wholly epistemic*, such as, for instance, a belief or a bit of propositional knowledge. Call this view 'logical cognitivism'.

This entry discusses two noteworthy instalments of the claim that Carroll's Regress refutes logical cognitivism:

> The first was initially offered by Gilbert Ryle (1946, 1949), according to whom knowing a logical principle has to be an instance of knowing how rather than knowing that.
>
> The second has been suggested by several contemporary epistemologists of logic (e.g. Paul Boghossian (2001), Patrice Phillie (2006), Richard Fumerton (2015), Pascal Engel (2016)) who have argued that Carroll's Regress poses a threat to the most prominent way of articulating logical cognitivism, namely access-internalism about our justification for basic logical principles.

Both these interpretations suggest that knowing a basic logical principle has to be a non-cognitive or not-fully cognitive state if such a principle is not to end up as a premise in our reasoning. They also both focus on the relation between knowing a principle and actions of reasoning according to it. They thus put the Regress at the intersection of epistemology and the philosophy of mind: the Regress presents us with a sceptic who accepts the premises of a valid argument, accepts the relevant principle (indeed adds it as a premise) but yet does not *move* to accepting the conclusion. This sceptic does not doubt the validity of (MP) but doubts that accepting it brings them any closer to accepting the conclusion. A sceptic about the validity of (MP) would not add it as a premise in their reasoning.

This entry discusses both challenges to logical cognitivism: it suggests that they are much harder to make than initially seems and rest on assumptions that are contentious. If so, it might just be wrong to think that that accepting (MP), having accepted the premises of argument A, simply means that we will be stuck with a further premise, as Carroll suggests.

3. Knowing How and Knowing That

Ryle uses Carroll's Regress to reject what he calls the 'prevailing doctrine' (1946: 222) or the 'intellectualist legend' (1946: 228) of intelligent action – of actions for which 'intelligence-predicates' (such as 'intelligent', 'stupid', 'logical', 'illogical'; 'sensible', 'silly', and so on), can be applied. According to this doctrine, to count as intelligent, an action has to be preceded by an intelligent act of thinking, where thinking is construed as considering regulative propositions – normative propositions that 'regulate behavior', that tell you what to do or how to act.

Logical reasoning is for Ryle a canonical example of intelligent action. The prevailing doctrine applied to logic is a kind of logical cognitivism – according to which, to reason from the premises to the conclusion of argument (A), one would first have to consider a regulative, proposition, along the following lines:

(Regulative) If you accept both P and if P, then Q, then you ought to reason to Q.[3]

To reason from A's premises to its conclusion, you would first have to perform the action of considering (Regulative), and then apply it in your reasoning. Ryle thinks of 'considering' a regulative proposition' as effectively the same as adding it as a premise to one's reasoning. This triggers Carroll's Regress. He concludes that knowing (Regulative) cannot be a kind of knowing that if it is to guide us in action: it cannot just be a propositional state. It has to be a kind of knowing how (1946: 227). What this means for Ryle is that knowing (Regulative) is knowing how to reason from certain premises to a certain conclusion, and more precisely it is to possess the skill to do so: a complex disposition to reason from the premises in (A), say, to its conclusion. This avoids the Regress because once the premises have been accepted, the disposition kicks in and one moves seamlessly to the conclusion; no further acceptance of (MP) is required.

Discussion

The distinction between knowing how and knowing that is general and does not only concern the nature of logical knowledge; and most discussions of the distinction do not focus on the case of logic (but see Rumfitt (2011), Hornsby (2011), Pavese (2015) and Besson (2021) for focused discussions). A standard reply to Ryle comes from so-called 'intellectualists' who have argued that knowing how is a species of knowing that (see Stanley and Williamson 2001). If that is the case, then claiming that knowing (MP) is knowing how need not amount to a rejection of logical cognitivism. Of course, the onus is on the intellectualist to show their claim does not preclude knowing how from being suitably practical. For instance, knowing how to ride a bicycle has a tight relation to successful actions of riding bicycles and any account of knowing how has to underwrite this. (I cannot enter into the details of specific accounts here but see Bengson and Moffett (2011) for a survey of these issues.) This is all the more important if we are to address the worry raised by Carroll's Regress, that if knowing (MP) is a propositional state, then (MP) is going to end up as a premise in our reasoning and not lead to action. I say more about this when discussing access-internalism in the next section.

A more targeted reply, that challenges the way Ryle sets up his regress, might dispute his contention that exercising knowledge of a regulative proposition in action requires the *further action* of considering a regulative proposition: we often act on our propositional knowledge and this does not require us to perform the separate action of contemplating that knowledge or 'formulating (in [our] mind[s] or out loud) that proposition or any other relevant proposition'. (Carl Ginet, 1975: 6-7). We can further dispute that manifesting propositional knowledge in action is itself a separate intelligent action: manifesting knowledge is not an action at all, let alone an intelligent one. (See for instance Stanley (2011), Fridland (2014) and Besson (forthcoming) for discussion).

Finally, one might also worry that Ryle's positive account would not be apt to explain how knowledge of basic logical principles are manifested in action. For instance, Besson (2012, 2021, forthcoming) argues that dispositions are ill-suited to articulate what constitutes knowing a logical principle. In particular, they cannot explain that knowledge of, say, (MP) is not only deployed in reasoning according to patterns such as (A), but is also deployed in various types of change in view (see Harman 1986), when, for instance, rather than drawing a conclusion from a set of premises, one instead revises their views.

4. Access-internalism

Access-internalism is the view that what justifies you in believing a proposition P is cognitively accessible to you: you can in principle always find out what justifies your belief, either because it is directly manifest to you or by attending to it or through reflection (e.g. reasoning, recollection or introspection). Access-externalists reject this claim: what justifies you in believing P need not be cognitively accessible to you. A prominent access-internalist view in the epistemology of logic, that I'll use as a foil, is so-called 'rational insight', according to which your belief in (MP) is a basic belief that is justified through a direct apprehension by the intellect of its validity (see e.g. Bonjour 1985: 26-30).

There lies the Carrollian worry according to some. If you are to be justified in reasoning along the lines of (A), then, according to rational insight, you need to be justified in believing (MP). If this is done through a rational insight into (MP)'s validity, you have to *explicitly represent (MP), as a belief*. But, so it is argued, such explicit representing amounts to adding (MP) as a premise to your reasoning – it confers to (MP) the same status as that of your original premises –, something that generates Carroll's Regress. Here is an illustrative quote:

> [A]t some point it must be possible to use a rule in reasoning in order to arrive at a justified conclusion, without this use needing to be supported by some knowledge about the rule one is relying on. It must be possible simply to move between the thoughts in a way that generates justified belief, without this movement being grounded in the thinker's *justified belief about the rule of reasoning*' (Paul Boghossian 2001: 26-27; my italics) … [N]o richer warrant – nothing that would count as a phenomenologically appreciable belief about the rule, for example – could so much as be coherent. (2001: 31)

What we need instead is a view of knowledge of logical principles that does not require these to be explicitly represented. A popular move has been to embrace a kind of inferentialism, whereby a disposition to reason according to principle such as (MP) is justified because (MP) partly grounds our understanding of 'if, then' or of material implication (see Boghossian 1996 and Peacocke 1992 for representative proposals). One is thus justified in reasoning according to (MP) even if one has no explicit representation of the principle because this is what grounds our understanding of the logical constant. This puts the account of justification for logical principles, much closer to externalism. (But see Boghossian 2001, who frames the position as internalist in a 'deflationary' way.)

Discussion

Unlike in Ryle's case, the argument against logical cognitivism here does not suggest that we have a regress of actions of considering further principles. Rather, if the principle is so much as believed, then it cannot help one move to a conclusion and one is stuck. One way of articulating this view is in terms reminiscent of the so-called 'Humean theory of motivation', which roughly says that cognitive states, such as beliefs and propositional knowledge, cannot motivate on their own, while pro-attitudes, desires, conative states or dispositions, can.[4] Given this theory, no propositional state can ever help move one from premises to conclusion; such states are simply not apt to do so.

But this kind of view of explicit representation can be challenged. Some have in general challenged the Humean theory of motivation (see e.g. Thomas Nagel 1970). Others have argued that treating explicitly representing a logical principle as though it seals it from exercising influence or motivation is akin to treating explicit representation as a kind of quotation – as having the same effect as the quotation marks in '"Cicero" has five letters' which stop 'Cicero' from referring to Cicero. Ori Simchen (2001) has argued that this view of explicit representation, while at work in many discussions of Carroll's Regress, is completely unwarranted. There is no fundamental incompatibility between explicitly representing a principle and acting on that principle: representing can indeed help enable action. (See also Besson forthcoming).

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Notes

[1] I state (MP) in a lightly regimented manner, using a mixture of English and logical notation. (MP) is not a principle that is discussed by logicians or that you will find in logic textbooks. But I hope that it is recognisable enough for the purpose of this informal discussion.
[2] It is in fact doubtful that Carroll was concerned with epistemological matters. Other mainstream interpretations see Carroll's Regress as concerning the metaphysical grounding of logical principles, their normativity, the need for a distinction between logic and metalogic, just to name a few. See Besson (forthcoming) for a survey.
[3] While Ryle would definitely use 'ought' here or an equivalent (see 1946: 231), how exactly to tie facts of validity to normative facts is a much debated question. See MacFarlane (2004) for a canonical discussion.
[4] See Hume (1982: 458): 'Reason can never either prevent or produce any action or affection.'