Norms, Reasons and Reasoning: A Guide Through Lewis Carroll's Regress Argument

(penultimate draft)

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Introduction

It is natural to think that our reasoning is governed by epistemic principles. Roughly, these are principles that tell us what to believe. It is natural, then, to think that there are principles, which in some sense we know or accept, and that we sometimes follow in our reasoning about what to believe. Arguably, aspects of our reasoning are deductive: a standard example of how epistemic principles might govern reasoning about what to believe is that of how logical principles might govern deductive reasoning. Consider for instance the logical principle of Modus Ponens, according to which Q logically follows from both P and if P, then Q. It is thus natural to think that your knowledge or acceptance of this principle governs your reasoning involving Modus Ponens. [1]

This paper concerns the connection between knowing or accepting a logical principle such as Modus Ponens – indeed Modus Ponens will be my case study – and actions of reasoning involving it. What is it to know or accept Modus Ponens? How might we give an account of such knowledge or acceptance in a way that *underwrites* its connection to reasoning using Modus Ponens? Although correct, the idea that there is a connection between knowledge or acceptance of Modus Ponens and reasoning involving Modus Ponens is, as it stands, somewhat vague. To fix ideas, here are three non-exclusive ways in which this idea can be made precise, all of which are common in the literature on the connection of knowledge of logical principles to deductive reasoning:

(I) Knowledge or acceptance of a logical principle explains why a given piece of deductive reasoning is *warranted* or *justified* or *epistemically blameless*.

(II) Knowledge or acceptance of a logical principle provides norms for deductive reasoning or *normative guidance* for action – it is knowledge of what a correct piece of deductive reasoning might or ought to look like.

[1] Gilbert Harman (1986) is sceptical about the idea that we might follow logical principles in reasoning, suggesting that deductive reasoning might not exist (1986: 6) or that ordinary people do not 'employ' deductive logic in reasoning (2009: 334). While I will go with the view that we do sometimes follow logical principles in reasoning, much of the discussion will concern how to characterise them so that they are relevant to deductive reasoning.

(III) Knowledge or acceptance of a logical principle is a kind of *practical knowledge*, it is knowledge about ways to reason deductively. Perhaps it is a kind of know-how, manifested through deductive reasoning.

These three ways of specifying the relation between knowing or accepting logical principles and reasoning will be our guiding thread in discussing some of the challenges that arise for any account of logical knowledge. They will be spelt out in due course.[2]

There is a growing literature on the connection between epistemic principles and reasoning with these principles – and in particular on the connection between logical knowledge and deductive reasoning. There are many competing views of this connection and different philosophers will put different emphasis on (I), (II) and (III). However, discussions of this connection will typically mention the so-called 'Lewis Carroll Regress'.[3] There is near consensus that Lewis Carroll's short dialogue 'What Achilles Said to The Tortoise' shows something important.

It is admittedly very difficult to interpret exactly what Carroll's regress argument says or establishes. Its influence on philosophical logic is nonetheless immense. Furthermore, although the regress explicitly concerns logic, many philosophers think that it establishes a more general truth, about the connection between reasons for action and actions themselves, or about the question of how reasons can be action guiding.[4]

Carroll's regress has been understood as saying something about each of (I), (II) and (III). Given this, and given the unclarity of the dialogue, any characterisation of it will inevitably be provisional: the regress seems to show that knowledge or acceptance of a logical principle cannot take *a certain form*, if such knowledge or acceptance is to connect to reasoning with that principle. If it had *that form*, we could never reason with it; given that we do, its knowledge or acceptance cannot have *that form*. More precisely, the target seems to be an account of accepting or knowing (say) Modus Ponens according to which it is an *intentional propositional mental state*, such as, for instance, a belief or a kind of propositional knowledge. If it were that kind of state, we could never get to reason with Modus Ponens, which we do.

This paper aims to state Carroll's regress as clearly as possible and to show precisely how it might be relevant to discussions of the connection between logical knowledge and reasoning, and, more broadly, to discussions of how epistemic principles may be action-guiding. The paper offers a critical reconstruction of the regress and a critical survey of its main interpretations (I), (II) and (III).

Section I gives a faithful paraphrase of the regress: a close reading is necessary to see why it has been diversely interpreted. Section II discusses some obvious problems with the way Carroll states the regress that will lead, in section III, to a cleaner and more convincing version. A critical discussion of this version will ensue, that follows our three interpretations of the connection between knowledge or acceptance of a logical principle and actions of reasoning with it. Section IV discusses the regress in terms of the epistemic interpretation (I); section V, in terms of the normative interpretation (II); and section VI, in terms of the practical knowledge interpretation (III). The upshot is that none of the three succeeds in refuting the idea that knowing the principle of Modus Ponens is an intentional propositional state – at least not without very substantive and disputable side assumptions.

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[2] I talk of reasoning rather than inference. The notion of inference suggests an automatic, non-intentional, sub-personal process. It does not adequately capture the idea that using a logical principle is an intentional rational action guided by knowledge. See Rumfitt (2011).

[3] See Carroll (1895).

[4] See for instance Blackburn (1995), Broome (2000) and Railton (2006).

I. Carroll's regress argument

The paraphrase (1)-(11) of Carroll's regress, below, follows its structure and wording very closely, with some direct quotations. Unlike my reconstruction, however, the original regress takes the form of a dialogue – between Achilles and the Tortoise. Also, Carroll uses a different type of argument from Modus Ponens, but using it helps make connections with contemporary discussions of the regress.

Thus, consider the following argument in Modus Ponens:

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

(1). The tortoise starts by saying that if (Z) follows logically from (A) and (B), then "[a]ny one who accepts (A) and (B) as true must accept (Z) as true".

(2). She also says that if the argument (A)-(Z) is logically valid, its corresponding conditional (C) – "The Hypothetical" – is logically true:

(C) If (A) and (B), then (Z)

(3). However, she claims that she might accept (A) and (B) but refuse (C) – more precisely she might refuse (C) because she "fail[s]" to "see its truth".

(4). She then claims that in the event of (3) she is under no "logical necessity to accept (Z) as true".

(5). The question is then: what could, now, "force" her "logically" to accept (Z) as true?

(6). Achilles' suggestion is the following: adding first (C) as a premise to the original argument from (A) and (B) to (Z) will make her accept (Z).

(7). Suppose then that the tortoise accepts all of (A), (B) and (C), and adds (C) as a premise to the argument. According to her, she is *still* under no "logical necessity" to accept the conclusion (Z).

(8). Achilles' new suggestion is the following: adding first (D) as a premise to the argument will make her accept (Z) – where (D) is the conditional corresponding to the argument which has the conjunction of (A)-(C) as its antecedent and (Z) as its consequent:

(D) If (A), (B), and (C), then (Z)

(9). However the tortoise thinks that she can accept (A)-(D), and add (D) as a premise to the argument, but *still* not be logically bound to accept (Z).

(10). Achilles' next suggestion is then that this is presumably because she has not yet accepted (E), which is a new corresponding conditional...:

(E) If (A), (B), (C), and (D), then (Z).

....

(11). (Z) will never be accepted by the tortoise.

II. Remarks and repairs

The regress (1)-(11) is problematic: What is going on in step (3) with this idea of "failing to see the truth" of (C)? What does it mean to "force" someone "logically" to accept a conclusion? Why are propositions such as (C) and (D) appealed to in the regress? To see whether the regress can establish anything, it needs to be cleaned up. In this section, I consider four problematic aspects that must be addressed in order to arrive at a clearer version.

(i) Accepting a proposition

The regress is stated in terms of the notion of accepting propositions – or accepting that certain propositions are true, such as (A), (B), (Z), and also (C), (D), (E), etc. This is why, in the introduction, I stated the issue of the connection of logic to reasoning in terms of *accepting* (or knowing) a logical principle.

As used in the regress, accepting is having a *pro-attitude to a proposition* – as the expression "accepting as true" (e.g. in premise (1)) suggests. Perhaps this requires having a belief in, or being in a position to know, that proposition. The regress thus presupposes that accepting is an *epistemic propositional mental attitude*. This presupposition invites the idea that the regress shows something about this type of attitude.[5]

The notion of accepting a proposition is itself ambiguous between a mental *action* and a mental *state*. In Carroll's regress it denotes a mental action: the regress says that *before* accepting (Z) from (A) and (B), the tortoise would have to perform the action of accepting (C) and adding it as a premise to the argument from (A) and (B) to (Z); that is, *before* accepting (Z) she has to perform the action of accepting (C) as a further premise. Thus, more precisely, accepting a proposition is taken to be an *intentional action towards a proposition*, and the regress rests partly on the idea that this action of acceptance has to be performed *temporally/causally prior* to another one, or performed *in order to* perform the other. I elaborate on this shortly.

(ii) Strengthening the original argument by adding the hypothetical as a premise

The *hypothetical* or *corresponding conditional* of an argument is a *material conditional proposition* that has the premises of the argument as antecedent and its conclusion as consequent.[6] *Strengthening an argument* is adding a premise to this argument. Strengthening is done in the regress by adding as a premise a proposition that records the very principle that the argument follows. Strengthening occurs first in step (6) of my statement of the regress, where a *statement* of Modus Ponens, (C), is added to the argument in Modus Ponens from (A) and (B) to (Z). The suggestion here seems to be that such strengthening might somehow help the tortoise, who is not prepared to reason to (Z) from (A) and (B):

> If you do not just accept (Z), having accepted (A) and (B), try strengthening the argument by adding (C) as a premise.

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[5] It is disputed how the notion of acceptance should be construed. For instance, expressivists think that it is not, or not always, a wholly epistemic attitude to a proposition. See for instance Gibbard's account of accepting a system of norms in his (1992). I do not have space here to discuss this issue further.

[6] There is a debate over whether conditionals should be understood as propositions (See Edgington (1995)). It is clear that Carroll takes them to be so.

Given this, you might think that the regress is simply about strengthening: it aims to show that if you do not accept (Z), having accepted (A) and (B), then adding the corresponding conditional as a premise is ill-conceived, because it will lead you to a regress: you will always have to strengthen further.

I do not think that strengthening is key to the regress. It would make the regress fairly straightforward to address. Here is why.[7]

Normally someone adds a premise to an argument if they think that the argument is enthymematic – if they think that a premise is missing, so that the argument is invalid as it stands. So let us work with the suggestion that the premises of argument (A)-(Z) are not sufficient for its conclusion. The tortoise's reluctance to infer (Z) has to do here with her worry that the argument (A)-(Z) is not logically valid and needs an extra premise, and the suggestion is to add (C).

Now, as the tortoise rightly points out in step (2), the following equivalence holds:

(A)-(Z) is logically valid iff (C) is logically true.

Let us examine this equivalence. Either (C) is logically true or it is not. So (other things being equal) either you are in a position to accept (C) as logically true or you are not.

Consider the first disjunct first. If you are in a position to accept (C) as logically true, you are *eo ipso* in a position to reason validly from (A) and (B) to (Z). The reason why (C) is logically true is precisely that (A)-(Z) is logically valid. Thus adding the further premise (C) is redundant, as it will not make the argument any more valid.[8] Thus, it will not licence or enable you to accept a conclusion that you were not already licensed or able to perform. So in this case strengthening is pointless: it gives you nothing extra.

Consider the second disjunct. If you are not in a position to accept (C) as logically true, you are not in a position to validly infer (Z) from (A) and (B). (C) is merely a material conditional that in principle could be true without being logically true. Our ground for regarding it as logically true would be that the argument (A)-(Z) is logically valid. But it is not in this case. You could, if you wish, add (C) as a premise to the argument (A)-(Z) to make it a valid one, but still (C) could not be accepted as logically true – it would be a logically contingent premise. So you might well start worrying about what would entitle you in this case to add (C) as a premise. In particular, you might worry that strengthening (A)-(Z) with (C) might render the resulting argument unsound. You would have a *guarantee* that adding (C) would not render it unsound if (C) were a logical truth. But again, given that (A)-(Z) is invalid, (C) is not a logical truth. So in adding (C) as a premise, the argument's soundness would become contingent on something other than the original premises (A) and (B). So in this case strengthening is not helpful: it will not help you to accept a conclusion that you could not accept otherwise.

If the regress were merely about strengthening as a way of making someone accept the conclusion of an argument that they are not ready to accept, it would not be very worrying. But the fact that

[7] Discussions of enthymematicity and strengthening in Carroll's regress can be found in Ryle (1946 and 1950), Smiley (1995) and Thomson (1960).

[8] This is making the standard assumption that logical consequence is monotonic: if an argument is logically valid, adding further premises will not make it invalid. Notice here that there are non-monotonic characterisations of logical consequences but I do not think that they are relevant to Carroll's concerns.

philosophers have worried about it suggests that they must have seen something more challenging in it.[9]

It is easy to restate the regress in a way that does not appeal to the idea of strengthening. You can generate a regress simply with the idea that, once you have accepted (A) and (B), *something else* has to *happen* before you accept (Z), and that thing is accepting (C). Accepting (C), however, does not also require you to add it as a premise to your argument. This brings us back to the notion of accepting a proposition as a mental action, already considered above. This notion is sufficient to generate the regress – as follows:

> Accepting (Z) (having previously accepted (A) and (B)) is an intentional action towards a proposition.
> This action requires first the intentional action of accepting (C).
> This latter action too requires the prior action of accepting another proposition, etc.
> Thus infinitely many propositions will have to be accepted before accepting (Z).
> (Z) will never be accepted.

If accepting a proposition is an intentional action that requires first accepting another proposition in order to be performed, then we will get a regress – a regress of actions of accepting propositions.

This is an interpretation of Carroll's regress that some philosophers have found attractive, notably Gilbert Ryle. One of Ryle's own famous regresses goes along the same lines:

> 'If the intelligence exhibited in any act, practical or theoretical, is to be credited to the occurrence of some ulterior act of intelligently considering regulative propositions, no intelligent act, practical or otherwise, could ever begin[.]'[10]

In fact, Ryle takes Carroll's regress as a special case of his own: the view that prior to reasoning from (A) and (B) to (Z), or accepting the conclusion (Z), you have first to accept (and indeed "consider") the truth of its corresponding conditional, leads to regress. So Ryle's regress too requires that certain *intentional mental actions* (separate from that of accepting the premise(s)) are performed before performing any kind of deductive reasoning.

Why think that any such action is required prior to doing any deductive reasoning? Recall that accepting a proposition is ambiguous between a mental action and a mental state. Let us think of the regress in terms of the latter. We could block it by arguing as follows: it may be the case that in order to accept (Z), having previously accepted (A) and (B), you have to know or have at some point have accepted (C), but that does not mean that (at the time of the reasoning) you have to perform the action of (again) accepting (C) in order to accept (Z). More generally, you might think that you can manifest in action your state of acceptance of a proposition without having to – *explicitly or consciously* – consider or accept that proposition prior to performing the action.[11]

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[9] I return to a related issue in section IV, when I discuss the revised version of the regress in connection with interpretation (I). The issue will concern whether there is any sort of non-circular justification for logical principles.
[10] Ryle (1946 : 223).
[11] See Ginet (1975) for a good discussion.

So it seems that understood as a regress of mental actions, the regress forces on us an implausible reading of the role that accepting a proposition might play in deductive reasoning. [12] This point can be sharpened if we think in terms of knowledge rather than acceptance. Suppose you know Modus Ponens, and suppose you manifest knowledge of Modus Ponens in reasoning. It would be absurd to suggest that in order to manifest your knowledge you have to perform the action of explicitly considering whatever it is that you know.

It thus seems that we can block the regress as conceived as a regress about mental actions: either specifically as actions of adding premises (e.g. accepting (C) *as a further premise*) or generally as actions of accepting propositions (e.g. simply accepting (C)). However, as we shall see shortly, a version of the regress can still be generated, even if we understand accepting a proposition as a mental state.

(iii) Being under "logical necessity" or "forced" "logically" to accept (Z)

What does it mean to be under logical necessity or forced logically to accept a conclusion? At some point in the original dialogue, Achilles says that if the tortoise persists in refusing to accept (Z) "logic will take [her] by the throat!". What kind of logical necessity is Carroll alluding to here?

Obviously, the necessity here is not *logical necessity* – as in: 'if the premises are true, the conclusion *must be* true', for logical necessity does not, as such, concern the actions one ought to perform. Logical necessity (if there is any) is just a logical fact that does not say anything about what anybody should do. Still, the regress presupposes that some sort of normative requirement or 'ought' comes from having accepted both the premises of an argument and a statement of the logical principle that governs it. Why think that?

With this question in mind, it is time to address a substantive issue that has generated much confusion. Consider (C). (C) simply states a logical fact, and does not say anything about what anybody might do: logic, logical systems, logical principles, logical propositions, logical facts are not about us. We can *derive* from such facts conceptions about what we are or are not rationally permitted to do. We may seek to apply these facts to us, and our actions. But the brute logical facts say nothing about us. If we are interested in the relation of logical knowledge to action, we are interested in knowledge not merely of the brute logical facts but of something like epistemic principles.

In the introduction, I talked about the relation between accepting or knowing a logical principle, such as Modus Ponens, and reasoning according to it. Carroll's regress is stated in terms of accepting (C) and reasoning to (Z). Is (C) the logical principle of Modus Ponens? In (ii), I referred to (C) as a conditional proposition stating (an instance of) the principle of Modus Ponens, and so it is not identical to it. So we have two things here: (C) and Modus Ponens. I have now also alluded to some sort of epistemic principle that (roughly) connects Modus Ponens to us, and so is also not identical to it. So we now have three things: the corresponding conditional (C), the logical principle of Modus Ponens, and the epistemic principle of Modus Ponens.

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[12] Notice that to address the question of what needs to be accepted or known to draw a conclusion from a set of premises, there is no need to think that the premises themselves are accepted or known – they could merely be supposed or assumed for *reductio*. In philosophical discussions of logic, it is still too often presupposed that the premises are things that are believed, accepted or known. (This view was of course held by Frege (1879), but it is also, and more relevantly, present in for instance Ryle (1950)). Here I go along with this idea that the premises are accepted or believed, in order to connect our discussion of Modus Ponens to that of epistemic principles – principles about what to *believe*.

The logical principle of Modus Ponendo Ponens is typically expressed through the following schema:

$$\text{(MPP)}\quad \frac{P \qquad P \rightarrow Q}{Q}$$

The horizontal line roughly means 'therefore'. A possible natural language substitution instance of (MPP) is (A)-(Z). For reasons explained in (ii), you can capture the logical validity of this principle by saying that the hypothetical is logically true:

$$\text{(Hypothetical)}\quad (P \,\&\, (P \rightarrow Q)) \rightarrow Q$$

A natural language substitution instance of (Hypothetical) is (C).

Prima facie, neither (MPP) nor (Hypothetical) says anything about us – they have zero normative or otherwise action-related content. We thus need to find the right bridge between (MPP) and us: to derive from (MPP) a principle that is relevant to our action of reasoning with (MPP). (MPP) is a logical principle but not an epistemic principle or a principle of *reasoning*, if the latter is a principle about us.[13]

In what follows, I will adopt the following policy. I will keep using the phrase 'knowing or accepting the principle of Modus Ponens' but it will have to be borne in mind that the relation between that principle and (MPP) or (Hypothetical) is not identity; Modus Ponens here is a principle that encodes something about our actions of reasoning – or some kind of epistemic principle.

Returning to the normative issue, logical necessity applies to (MPP) and (Hypothetical): the former is necessarily truth-preserving and the latter is necessarily true. However, it need not apply to the principle of Modus Ponens. Presumably, this principle is normative in some sense, and presumably this normativity ultimately derives from facts of logical necessity. Carroll's suggestion seems to be that this normativity is that of obligation: having accepted (A) and (B) you ought to accept (C). This proposal will be discussed in detail in section V. In general, the challenges now are to explain what the principle of Modus Ponens is, how it relates to (MPP) and what constitutes knowing it.

(iv) Can step (3) be true?

Step (3) of my reconstruction of Carroll's regress requires the following situation to be possible:

> You accept (A).
> You accept (B).
> You do not accept (C) because you "fail to see its truth".
> You do not accept (Z).

Two questions come to mind: can someone in such a scenario really count as *fully understanding* all of (A), (B), (C) and (Z)? If so, can they be said to be *fully rational*? To address them, it is instructive to look at Ryle's famous 'reluctant pupil' example:

> 'A pupil fails to follow an argument. He understands the premises and he understands the conclusion. But he *fails to see* that the conclusion follows from the premises. The teacher... tells him that there is an ulterior proposition which he has not considered, namely, that if the premises are true, the conclusion is true. The pupil understands and dutifully recites it

[13] See Harman (1986) for similar considerations.

> alongside the premises, and still *fails to see* that the conclusion follows from the premises even when accompanied by the assertion that these premises entail this conclusion. So a second hypothetical proposition is added to his store; namely that the conclusion is true if the premises are true as well as the first hypothetical proposition that if the premises are true the conclusion is true. And still the pupil fails to see. And so on for ever. He accepts the rules in theory but this does not *force* him to apply them *in practice*.'[14]

You might think that this pupil is not just 'reluctant' but really not that smart or that the teacher is not very good. Why should you grant this pupil understanding of all the relevant propositions? It does not seem we should. But if so, we might equally be inclined to reject step (3) of the regress.[15]

Ryle's version of the regress is instructive because it conflates two different things that are also mixed up in Carroll's regress: initially Ryle talks about the idea of failing *to see that something follows from something else*. But in the last sentence, he talks about the idea of failing *to reason in practice*. In the same way, Carroll mixes up talk of accepting propositions as true and that of reasoning from a set of premises to a conclusion. Concerning the idea of failing *to see*, the situation in which you accept (A) and (B) and indeed (C), but fail to see that (Z) follows, is one where we should simply say that you are not rational or not understanding everything. But we should worry about the regress only if it clearly involves rational thinkers who understand what they are asked to consider. So the heart of the matter must rather concern the idea of failing *to infer in practice*, which is compatible with the agent being fully rational. This idea is key to my reformulation of the regress below.

III. Carroll's regress redux

This section offers a new version of Carroll's regress.

This new version – Carroll's regress redux – does not involve the notion of strengthening. It is stated in terms of knowledge rather than accepting, thus removing any suggestion that we are dealing with a regress of intentional mental actions. This move to knowledge is not uncontroversial, but it will make it easier to connect the regress to interpretations (I), (II) and (III) of the relation of knowing a logical principle to reasoning with that principle. I have also eliminated the idea that accepting the premises ought to involve any kind of action, by simply saying that the premises are believed.

Carroll's regress redux is stated in terms not of (C) but of 'the principle of Modus Ponens'. I am thereby following the policy implemented in section II(iii) to label as 'the principle of Modus Ponens' the epistemic principle derived from (MPP), which is in some sense (and unlike (C)) about us and might 'makes us infer in practice'. At this point, it is left open how this principle might be stated – all we know is that it is neither (Hypothetical) nor (MPP). It is however made clear that this principle is a *proposition*. This is apt, if the regress is to be taken to show something about intentional propositional states. In this version, I thus speak of 'propositional knowledge of the epistemic principle of Modus Ponens' rather than of 'acceptance of (C)'.

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[14] Ryle (1946): 216. My italics throughout. Notice that Ryle uses the same normative tone as Carroll: the theory does not *force* you to make an inference, just as accepting (C) does not *force* you (by taking you by the throat) to accept (Z).

[15] Black (1970) and Stroud (1976) both reject step (3) on the grounds that the tortoise simply does not understand the propositions she is considering; see also Wisdom (1974) for a good discussion.

Carroll's regress redux is also purged of the notion of 'logical necessity', appealing rather to some more standard normative notion of rational obligation, i.e. that of *ought*, which of course is open to interpretation.

Finally, I have stated clearly that the issue is about how to reason in practice rather than about seeing that something follows from something else.

Here then is Carroll's regress redux:

(21). If (Z) follows logically from (A) and (B), then if you believe (A) and (B), you ought – other things being equal – to reason ("in practice") to (Z) or come to believe (Z).

(22). It is rationally possible for you believe (A) and (B) and – other things being equal – for you not to reason ("in practice") to (Z).

(23). What, then, beyond (A) and (B), might make you reason to (Z)?

(24). It might be suggested that what makes you reason to (Z) is your propositional knowledge of the principle of Modus Ponens.

(25). This cannot be right, because your propositional knowledge of the principle of Modus Ponens would leave unexplained your reasoning from (A) and (B) to (Z).

(26). Moreover, appealing to any further bit of propositional knowledge of the principle of Modus Ponens would *still* leave unexplained your reasoning to (Z).

(27). But you do reason to (Z).

(28). So it cannot be your propositional knowledge of the principle of Modus Ponens which explains your reasoning to (Z).

Further clarifications, in particular of the notions of *making someone reason* and *explanation* will be provided below.

The crucial question now is why is (24) false and (25) true? Why cannot it be your propositional knowledge of the principle of Modus Ponens that makes you reason to (Z)?

To address this issue systematically, I now go back to the three interpretations of the relation of logical knowledge to actions of reasoning given in the introduction. My aim is to assess whether any of these gives us grounds for saying that Carroll's regress redux is a genuinely threatening regress. More precisely, it will be to assess whether on any of these interpretations step (25) is true.

IV. Carroll's regress redux as a regress about justification

According to the epistemic interpretation of the relation of knowing a logical principle to reasoning with that principle, your knowledge *explains* why you are justified or warranted or epistemically blameless in reasoning with that principle.

Given this epistemic interpretation, the worry expressed in (25) may be the following: you do not think that you are, or can be, justified in reasoning from (A) and (B) to (Z). This is because you do not think that you are in a position to know the principle of Modus Ponens or that you are even justified in believing it. This claim to knowledge, or to any kind of justification, in premise (24) is unjustified, and so the reasoning from (A) and (B) to (Z) is 'left unexplained' in that it is left unwarranted.

This worry can also be construed as one of circularity, or of so-called "rule circularity",[16] which can informally be stated as follows:

> Suppose that you know both that P, and that if P, then Q.
>
> I tell you that, given this, you are justified in reasoning to Q.
>
> You ask: how do you know that I am justified in reasoning to Q?
>
> I say: because P, and if P, then Q together entail Q.
>
> You ask: how do you know that P, and if P, then Q together entail Q?
>
> I say that since the argument from P and if P, then Q to Q follows (MPP), and any argument in (MPP) is valid, the argument from P and if P, then Q to Q is valid.
>
> Then you ask: but how do you know that this argument you have just given me is valid? After all that is just another argument of the form of (MPP).

In trying to justify reasoning in (MPP) you are appealing to the principle (MPP), which is itself justified using (MPP), etc.[17] Thus you can never be justified in reasoning according to (MPP): there is no end to the process of justification for your reasoning. But justification has to come to an end, on pain of scepticism.[18]

Many philosophers have interpreted Carroll's regress as a regress about the justification for logical principles, to the effect that since logical principles can never be justified, we can never be warranted in reasoning with them.[19] It challenges us to come up with such a justification.

It is impossible to do justice to this challenge here, as there is a vast literature on this topic, only some of which is concerned with Carroll's regress. I shall confine myself to showing how the issue of justifying deductive principles may be thought to interact with the claim that knowing a logical principle cannot be an intentional propositional state. To this end it is instructive to consider Patrice Phillie's statement of what he takes Carroll's regress to be about (2006: 186):

> 'There is an infinite regress of necessary warrants. That is a point deserving emphasis: what Carroll's regress suggests is not, as it is often assumed, that the mind cannot move – the mind *does* move, we have no problem to effectively draw simple inferences. It's rather about the *ground* of the move, about whether (or how) logic can *make* the mind move.'

Phillie's last sentence suggests that he takes the two following questions to be the same:

> (*) What is it that *justifies (grounds)* the mind in moving?
> (**) What is it that *makes* the mind move?

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[16] See Boghossian (2000 and 2001) for helpful discussions of rule circularity.
[17] I here use (MPP) but the argument can easily be restated in terms of the principle of Modus Ponens.
[18] Notice here that this interpretation of Carroll's Regress redux echoes Carroll's initial statement of the regress in terms of strengthening by adding a statement of Modus Ponens as a premise. (See again II(ii)). If his aim in strengthening was to provide a justification for the reasoning (A)-(Z), this of course failed. In this context strengthening is a special case of circularity in justification.
[19] See, *inter multa alia*, Boghossian (2000), Enoch and Schechter (2006), Phillie (2006), Wright (2001), for discussions

Notice that this conflation is also invited by some of the wording of Carroll's regress redux in terms of 'making you reason'. However, distinguishing between these two questions is crucial to a clear treatment of the issue of whether knowing a logical principle is being in a propositional state.

Many commentators think that the regress is both about justification and about showing that propositional states do not relate properly to action – to "making the mind move". If they thought that it was *simply* about justification for action, they would not think that it is about how propositional states relate to action: there is nothing odd about an action being justified but not (ever) engaged in. The question of justification is orthogonal to that of intentional propositional states – the latter but not the former directly relates to the question of "making the mind move", i.e. actions of reasoning.

Let me spell this out a little. Suppose that, as stated in (*), the regress challenges us to find a justification for (MPP) and ultimately for the epistemic principle of Modus Ponens. There is a plethora of options open to philosophers here: perhaps logical principles are self-justified, like axioms or implicit definitions;[20] perhaps they are justified empirically or through pure reason; or pragmatically, or in terms of some evolutionary story;[21] or circularly or inferentially, for instance through some coherentist notion;[22] or through rationality or understanding;[23] or externally through some reliabilist notion, or internally through some notion of epistemic responsibility.[24] These are all (in some cases non-exclusive) live options that are currently debated.

There may indeed be a good account of justification for logical principles. So if the challenge is simply to find one, then pick your favourite, and that is that, as it were. But whatever you do here, it is hard to see anything yet that would *require* knowing the principle of Modus Ponens to be a non-propositional state. You would perhaps have to bring in (**): this business about making the mind move, which takes way beyond questions of justification as standardly conceived. The suggestion would be that an answer to (**) could not be given in terms of intentional propositional states.[25]

We are faced with two problems: first, the conflation of (*) and (**); second, the presupposition that propositional states cannot make the mind move. I have argued that (*) and (**) ought to be treated as different questions, and I shall challenge this second substantive presupposition in the penultimate section.

Concerning (*), the question of justification proper, we have some options to make the claim to knowledge in step (24) true so that we can reject step (25). It is not at all hopeless. Suppose now that Carroll's regress redux, in its epistemic interpretation, can be answered – that (*) can be answered. You might still think that the epistemic interpretation of Carroll's regress redux does not fully capture the strength of the regress, because it leaves (**) hanging. More precisely, you might think that this notion of 'making you reason' that is in place in the regress, which was my way of recapturing Carroll's notion of logical necessity, is not captured by an epistemic interpretation – it leaves something out. Indeed, even if your justification for Modus Ponens warranted you in using Modus

[20] See Boghossian (1996) for the claim that they are implicit definitions.
[21] See Enoch and Schechter (2006) for such an evolutionary account.
[22] See Goodman (1954, ch. III) for a famous coherentist account of the justification of logic.
[23] See Phillie (2006: 200ff).
[24] Some philosophers think that Carroll shows that internalism about logical knowledge is false: being justified in reasoning according to Modus Ponens does not require you to know that (MPP) is valid. A more externalist story has to be told. See Phillie (2006), Boghossian (2001), and Wright (2001) for discussions.
[25] You might think that if knowing Modus Ponens were a propositional state, being justified in reasoning with Modus Ponens would require you to have explicit justification that (MPP) is valid, say. But of course, propositional states can be implicit and need not be explicitly considered in action. See section II on acceptance as a mental event.

Ponens in reasoning, it would not explain why that should make you reason to (Z) once you have accepted (A) and (B). The next two interpretations of the relation of knowledge to action address this worry.

V. Carroll's regess redux as a regress about normative guidance

According to the normative interpretation of the relation of knowing a logical principle to reasoning with that principle, your knowledge of a logical principle provides you with norms for deductive reasoning or *normative guidance* for action.

Given this interpretation, the worry expressed in step (25) can be seen to be the following. The suggestion in step (21) was that you *ought* to reason to (Z) from (A) and (B): you are rationally obliged to conclude (Z).[26] This talk of normative obligation was meant to capture Carroll's talk of 'logical necessity' and logic 'taking you by the throat'.[27] The problem with this appears to be that once you have accepted (A) and (B), you may in fact be under no normative obligation to accept (Z), as stated in (22). It is then your knowledge of something normative that makes you reason. This cannot be the same as your knowledge of (Hypothetical) because logical facts are not normative. So the suggestion in step (24) is that it is your propositional knowledge of the principle of Modus Ponens that makes you reason. This is rejected in (25) as inadequate. But why would appealing to this sort of knowledge leave your reasoning 'unexplained'?

One explanation could be that no propositional state can capture the relevant notion of rational obligation: propositions or propositional states have no normative force. This can be further elaborated as follows. What we need to 'explain' your reasoning is a *rule*, where a rule is not a proposition. Propositions are simply the wrong kind of item. An idea that has some currency in the philosophy of logic is that logical rules are *imperatives or commands*. An application of such a rule could in our case be as follows:

(α) From your beliefs (A) and (B), (other things being equal) reason to (Z)![28]

The thought here is that something like (α) encodes a kind of prescription – it prescribes a certain type of behaviour – and that it is knowledge of such prescriptions that makes you reason from (A) and (B) to (Z). So it is something derived from (α) that should count as the Principle of Modus Ponens, the epistemic principle that we are looking for.[29]

The moral from Carroll's regress redux would then be that your knowledge of at least some logical principles is non-propositional because it is knowledge of rules; this is why step (25) is false. This would also fit the idea that what we are looking for is an answer to (**) of the last section: the rule is the imperative that makes the mind move.

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[26] This idea that the conclusion somehow forces itself on us is actually surprisingly widespread. See for instance Wisdom (1974) and Phillie (2006, *peri passu*).

[27] See Stroud (1979) for a good discussion of how this 'must' cannot really be made sense of in Carroll's dialogue.

[28] The clause 'other things being equal' here is meant to take care of cases where there are obvious overriding considerations that should make you not reason to (Z), for instance if (Z) is a contradiction or irrational or somehow blameworthy.

[29] Ryle sometimes seems to think that regulative propositions – propositions about how to act – are imperatives, (See the 'Knowing How and Knowing That' chapter in his (1949)). See also Wittgenstein (1956) for the idea that rules are commands.

I think however that the proposal in (α) is incorrect.[30] To see why, let us take a step back and think of the sort of normative requirement that should be in place here. It is simply assumed in both Carroll's regress and Carroll's regress redux (and in a natural reading of (**)) that you are rationally obliged to accept (Z) once you have accepted (A) and (B). But why think that such an obligation exists?

Here is a thought. If you accept (A) and (B) and then fall asleep, or have zero interest in reasoning to (Z), decide to give up a premise instead of reasoning to (Z), decide that you will from now on never reason according to Modus Ponens because you believe that if do you will go to hell, etc., you do not seem to have violated any rational obligation.

Here is another thought. The notion that you ought to reason to (Z) once you have accepted (A) and (B) might be reinforced by the fact that we are working in a setting in which the premises are themselves believed, known or accepted. This makes it natural to think that you ought to reason to the conclusion – especially if you endorse (the meta-norm) that you ought to value knowledge and so, other things being equal, increase your body of knowledge. But Modus Ponens can be used in all sorts of contexts, when the premises are not believed (or indeed are known to be false, for *reductio*). The notion of obligation seems hostage to the epistemic status of the particular premises that we are considering. But this should not be the case when we are formulating general epistemic principles.

I suggest that the rational norm in place when you have accepted (A) and (B) is a *permissive norm*, according to which you are rationally *permitted* to reason to (Z). If any normativity should be derived from the validity of (MPP), it may not be that of obligation, but that of permission. Obviously, different logical facts give rise to different norms: the fact that not (P & not P) gives rise to it being not rationally permitted to believe P and not P. But it is unclear why norms governing your reasoning could not be permissive.[31] It is natural to think that, so far as logic goes, because (MPP) is valid, you are always permitted to reason to (Z) from (A) and (B). While it is true that if (A) and (B) are true, (Z) *must be true*, that of course does not entail that if (A) and (B) are accepted, (Z) *must be accepted*; that would simply be conflating two different kinds of 'must'.

So it appears that from the start we have been operating with the wrong kind of normative requirement, which was invited by Carroll's talk of 'logical necessity' and 'logic taking you by the throat'. If this is correct, the normative tone throughout Carroll's regress redux is wrong. It should be permissive rather than obligatory. We might thus reformulate the regress as follows:

Carroll's regress argument redux redux

(21*). If (Z) follows logically from (A) and (B), then if you believe (A) and (B), other things being equal, you are *rationally permitted* to reason ("in practice") to (Z) or to come to believe (Z).

(22*). It is rationally possible for you believe (A) and (B) and – other things being equal – for you not to reason ("in practice") to (Z).

(23*). What, beyond (A) and (B), might rationally permit you to reason to (Z)?

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[30] See Boghossian (2008: 475ff) for a defence of the view that imperatives are not suitably normative since they are merely commands or instructions. I do not have the space to discuss his view here.

[31] You might think that the fact that (MPP) is logically valid entails that it is not rationally permitted to believe all of: P, if P, then Q and not-Q. I take it that the permission to infer Q from P, and if P, then Q, is a different norm from the obligation of not believing all of P, if P, then Q and not-Q.

(24*). It might be suggested that what rationally permits you to reason to (Z) is your propositional knowledge of the principle of Modus Ponens.

(25*). This cannot be right, because your propositional knowledge of the principle of Modus Ponens would leave unexplained why you are rationally permitted to reason to (Z) from (A) and (B).

…

But this regress is wholly unpersuasive: why think that (25*) is correct or that (24*) is false? You are rationally permitted to reason to (Z) from (A) and (B) because you know the principle of Modus Ponens. We can suppose that the relevant instance of this this principle is:

> (β) From your beliefs (A) and (B), (other things being equal) you are rationally permitted to reason to (Z).

Given (β), we have a good explanation of why you are rationally permitted to reason to (Z) from (A) and (B). Also, generally, it should be obvious that there are permissive principles and that these principles can be propositions, just like (β) is.[32] Given this, I do not see why propositional states would be inadequate as knowledge of permissive rules.

So once we understand the right sort of norm for action which knowledge of the principle of Modus Ponens provides, the threat posed by Carroll's regress disappears because the latter works with the wrong kind of normativity. The norm of action captured in (α), just like (**), which it aims to address, is fundamentally misguided. If you think that (**) is still left hanging, however, the next section addresses Carroll's regress redux afresh and offers a new take on it.

VI. Carroll's regess redux as a regress about practical knowledge

According to the practical knowledge interpretation of the relation of accepting a logical principle to reasoning with that principle, your knowledge is a kind of practical knowledge about how to perform certain actions of reasoning.

Given this interpretation, the point of Carroll's regress redux is the following. An explanation of what makes you reason from (A) and (B) to (Z) has to be given in terms of your *practical knowledge* of Modus Ponens, but propositional knowledge of the principle of Modus Ponens is not practical but *theoretical*. So the problem is that if knowing the principle of Modus Ponens were propositional, you would never reason to (Z): adding propositional knowledge of Modus Ponens to your propositional knowledge (say) of (A) and (B) just amounts to piling up bits of theoretical knowledge. Theoretical knowledge lacks the sort of practicality to make you reason to (Z), it "leaves unexplained" why you reason ("in practice"), and so, if knowing the principle of Modus Ponens is propositional, you will never act. But you do act and so it cannot be propositional.

Now you might wonder why theoretical knowledge has to be inert or not practical. Consider (β): knowing (β) is knowing a proposition, but it also seems practical – (β) is a proposition that states which actions are rationally permitted for you in a given setting. Why isn't that practical in the required sense? It is beyond the scope of this paper to give a definition of practical knowledge or

[32] See Boghossian 2008: 475.

survey all the different ways in which philosophers think of it. So let me address the issue genetically, by going back to its roots.

This idea that, because of Carroll's regress, knowing Modus Ponens is having practical knowledge, and so cannot be propositional, is defended by Gilbert Ryle. As Ryle puts it, knowing the "hypothetical" – i.e. (C) – is like being in possession of a railway ticket: you can have one and never use it; having one does not "make you travel" (See Ryle 1950). Thus what we need to reason from (A) and (B) to (Z) is a bit of practical knowledge, a bit of knowledge that makes you travel. In particular, according to him, knowing the principle of Modus Ponens is having a bit of *knowledge how*, where knowledge how isn't propositional:

> 'Knowing [the principle of Modus Ponens] is not a case of knowing an extra fact or truth; it is knowing how to move from acknowledging some facts to acknowledging others. Knowing a rule of inference is not possessing a bit of extra information but being able to perform an intelligent operation. Knowing a rule is knowing how.'[33]

The thought is that (25) is true because knowing a proposition, including (β), is always merely having a bit of extra 'information'.

What is knowing how for Ryle? Roughly, knowing how consists in having certain skills or capacities: knowing how to φ requires having the skills to φ, which he in turn analyses as a multi-track disposition to φ. And since having propositional knowledge does not require having skills, propositional knowledge is not a case of knowing how: in this sense it is theoretical.[34]

With this talk of dispositions, Ryle also means to recapture the normative undertone of Carroll's regress: that you *ought to* reason to the conclusion once you have accepted the premises or that logic will take you "by the throat". If knowing Modus Ponens is really a disposition to infer Q given that you believe P and if P, then Q, then, given that you believe (A) and (B), you are made to reason – made to travel – to (Z). With dispositions, given the relevant manifestation conditions (accepting both (A) and (B)), reasoning to (Z) is guaranteed – reasoning to (Z) is a kind of automatism, the simple manifestation of a disposition.[35] And so dispositions also help answering (**) of section (IV) about what it is that makes the mind move. Thus Rylean knowing how seems to be able to provide an account of why (25) is false – if knowing Modus Ponens is knowing how in the Rylean sense, we have a way out of the regress: we have an explanation of what makes you reach (Z).

The picture Ryle offers of propositional states as inherently theoretical and completely isolated from action is a familiar one. It is the *Humean* picture of the mind, according to which mental states such as knowledge, acceptance, belief of facts or propositions, are *inert, static, contemplative, isolated from action, not motivational, not practical*... until brought into play by something else, something dynamic, that sets the agent into motion: desires, volitions, inclinations, and, why not, dispositions.[36]

In short, the argument offered by Ryle against the suggestion made in step (24) is this:

(i) Knowing Modus Ponens is practical knowledge: it makes you reason.

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[33] See Ryle 1946: 216-217.

[34] There is currently a lively debate around the question of whether knowing how is in fact propositional. See *inter alia* Stanley and Williamson (2001).

[35] Being brutally causal, dispositions are typically not thought to be apt to capture any kind of normativity. See Kripke (1982): 37ff. for a famous discussion of this issue in the context of following a rule.

[36] See *inter multa alia* Hume (1982): 458: 'Reason can never either prevent or produce any action or affection.'

(ii) Propositional knowledge is theoretical (i.e. nonpractical): it cannot make you reason.
(iii) So knowing Modus Ponens is not propositional.

I shall first challenge (ii) that propositional knowledge is somehow isolated from action, and then challenge (i) by arguing that knowing MP is not what *makes* you reason.

Concerning (ii), the previous section concluded that Carroll was operating with the wrong kind of normativity, obligation rather than permission. If so, appealing to dispositions to guarantee action – to guarantee reasoning to (Z) from believing (A) and (B) – is off the mark. We should not conflate the idea of something *making* you infer in practice with that of *forcing* or *necessitating* you to reason in practice. We should understand it in terms of permission rather than obligation. It is also in this spirit that we should understand question (**): we should not understand 'makes the mind move' as 'forces' or 'necessitates the mind to move' but as 'enables' or 'occasions' or 'prompts the mind to move'. [37] If so, we have a consideration *ad hominem* against Ryle: if he meant to capture some kind of epistemic obligation to reason by identifying knowing Modus Ponens with some kind of disposition, he is off track, just as Carroll was. [38]

It may be the case that a bit of propositional knowledge does not automatically necessitate any action of yours: you need to have the relevant desires, interests, dispositions, intentions, etc. In this sense there is perhaps *no automatic connection* between propositional knowledge and action, and so there might not be any automatic connection between knowing (β), say, and reasoning to (Z) from (A) and (B). So Ryle may well be right that propositional knowledge does not make you act. Be that as it may, we should not think of knowing Modus Ponens as making you act in this automatic way. Again, even when other things are equal, there are all sorts of actions you might perform once you believe (A) and (B) which are not reasoning to (Z).

Concerning (ii), if propositional knowledge does not make you act in the sense of obligation or automatism, is it then not practical? Is that the only way for propositional knowledge to be practical? Again, a thorough discussion of this issue is beyond the scope of this paper, but here is a way in which you might think that propositional knowledge is practical – suitably related to action.

Consider (β) again. (β) is a principle about action. Insofar as we can make a distinction between practical and theoretical propositions, this is a practical proposition. Does this make knowledge of this proposition practical? Well, it might be thought that it is practical in the sense that its subject matter is practical, but that real practicality is about motivating you to act. So could knowing (β) motivate you to act? Yes, in the following way: knowing (β) gives you a reason to act in a certain way in certain circumstances, and reasons can be motivating. Propositions naturally connect with reasons. In particular, it is natural to think that your propositional knowledge of the principle of Modus Ponens, e.g. (β), gives you a reason to reason according to (MPP). A good way to think of reasons in this context is as normative reasons that are non-binding, i.e., defeasible. They are considerations that have genuine weight, and might have some influence on what you do, but that can be overridden by other considerations (e.g. your belief that you will go to hell if you use that principle in reasoning). Thus you might think that knowing the principle of Modus Ponens gives you a *pro tanto* reason to reason according to (MPP). If so, this account offers a good picture of how propositional knowledge of logical principles is practical.[39]

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[37] Notice here that 'made' is suitably ambiguous: 'Charlie made me redo my cartoon' is ambiguous between 'Charlie forced me/obliged me to redo my cartoon' and 'Charlie prompted/led me to redo my cartoon'.
[38] See Besson (2012) for a more detailed version of this argument, which also considers different specific accounts of dispositions.
[39] I defend this view in my (2012). See Kagan (1989: 17ff.) for an excellent discussion of *pro tanto* reasons.

The upshot of the considerations put forward in this section is the following: it is perhaps true that propositional knowledge does not make you do things, in the sense that it does not necessitate any of your actions. But equally, if Carroll's regress asks us to think of knowledge of the principle of Modus Ponens as something that necessitates action, it is misguided. This does not mean that propositional knowledge has no interesting relation to action. It does. Knowing something like (β) is practical in the required sense because it gives you a reason to perform certain actions in certain circumstances. [40]

We thus find ourselves where we were at the end of section V. The claim that propositional knowledge is not practical ultimately rests on a misunderstanding of the normative situation: we are not looking for knowledge that necessitates action; we are rather looking for knowledge that permits it. Again we should replace steps (24) & (25) of Carroll's regress redux with steps (24*) and (25*) of Carroll's regress redux redux. And again, this regress does not ever get started.

VII. Concluding Remarks

At the end of the introduction, I stated that none of the interpretations of Carroll's regress succeeded in showing that knowing a logical principle is not an intentional propositional mental state, at least not without very substantive assumptions. What are they, then?

The first one is of course the assumption that if you accept some premises, you *ought* to reason to the conclusion. Call it the 'normative assumption'. Indeed, the key issue in discussing Carroll's regress was to try to get clear about the normative undertone of the regress, which starts with these notions of 'logical necessity', of 'forcing' you to infer, of logic 'taking you by the throat'. I tried to elucidate this in terms of a more standard normative notion, that you have some rational obligation – you 'ought' – to reason to Q once you have accepted P and if P, then Q. I then also addressed the cognate idea that knowledge of logical principles is what 'makes the mind move', as in 'necessitates the mind to move', which was stated in (**). These normative notions were further elaborated as the ideas that logical principles might be imperatives or that knowing such principles might be having a set of dispositions to reason.

I hope to have shown that these are all misguided ways of stating the relation of knowing a logical principle to reasoning with that principle. Once we strip (any version of) Carroll's regress of this cluster of normative notions, that is, once we arrive at Carroll's regress redux redux, it is hard to see any worrying regress coming our way. Working with the right normative notions opens up space for a view according to which knowing a logical principle is being in a propositional state. Propositional knowledge can be practical and it can have normative force.

The other substantive contentious assumption is that propositional states are isolated from action – it is the Humean picture of the mind whereby no propositional state can be suitably motivational. This is a big topic and I am aware that I have not addressed it thoroughly in this brief survey. But I hope to have done two things: first, to have showed that there are ways in which propositional states might not be isolated from actions, because they connect with motivational reasons; second, to have showed that defending Carroll's regress will require a substantive investigation, and justification, of the Humean picture of the mind.

[40] One looming problem here is one of bootstrapping—if we took P and if, P then Q to automatically give you a reason to infer Q. See Bratman (1999): 23–27, and Broome (2001), for classic discussions of reasons and bootstrapping.

It might be felt that, with this talk of *pro tanto* reasons, I have merely relocated Carroll's regress to the sphere of practical reasons (reasons to act) rather than theoretical reasons (reasons to believe). But I am sceptical about this contrast: our case is about having a reason to reason from a bunch of premises to a conclusion. That, if anything, is a practical matter. It is thus doubtful that there is a clear divide between the practical and the theoretical. In his discussion of Carroll's regress as about 'practical knowledge', Simon Blackburn contrasts a practical regress about the 'movement of the will' and a theoretical regress (Carroll's regress) about the 'movement of the mind'.[41] Insofar as there is a good contrast here, you might think that Carroll's regress falls in the former category. But in fact, this contrast is another manifestation of the Humean picture of the mind: the will *versus* the mind. Blackburn takes the practical interpretation of Carroll's regress to show that 'there is always something else, something that is not under the control of fact or reason, which has to be given as a brute extra, if deliberation is ever to end by determining the will. This is of course, a Humean conclusion.' (1996: 664). This Humean conclusion has very much been an undefended premise in discussions of Carroll's regress. A premise that has licensed this idea that we need 'something else' between the mind – the world of reasons and deliberations – and action.[42]

[41] See Blackburn (1995).

[42] Many thanks to the following audiences for useful discussions on topics related to this paper: The Knowing How Meisterkurs with Jason Stanley at the Humbolt Institute of Philosophy (July 2012); The Mind, World and Action Summer Course, IUC, Dubrovnik (August 2012); The University of Sussex Philosophy Society (February 2013); The Departmental Philosophy Seminar at the University of Kent (March 2013); The Philosophy Research Seminar at the University of Birmingham (April 2013); The Inference – Semantic and Epistemological Aspects Conference at the Institute of Philosophy, London (March 2015); The Truth & Logical Consequence Workshop at the University of Nottingham (June 2015). Special thanks to Paul Boghossian, Andrew Hudson, Daniel Star, Adam Swift and an anonymous referee for this volume.

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