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Making Rules Explicit and Following Them *

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Let us begin with a little story about logic in Ancient Greece.[1] In *Lesser Hippias*, Socrates is arguing with the eponymous Sophist over his claim that Achilles is better than Odysseus, although the latter is the 'wiliest', in the sense that he lies intentionally, something that Achilles is incapable of. At the conclusion of the dialogue, Socrates will eventually make Hippias concede that someone who does evil intentionally is better than someone who does it unintentionally, and thus that Odysseus, who, as opposed to Achilles, tells falsehoods intentionally, is the better of the two. Towards the middle of the dialogue, at 366c-369b, Socrates is merely trying to elicit from Hippias that the same person can either tell the truth or tell lies, so that, eventually, Hippias will have to concede that Achilles, if he is truthful, also tells lies, and Odysseus, if he tells lies, is also truthful. To do so, Socrates argues for a first case asking Hippias, who was in his days reputed mathematician, if he is experienced at arithmetic and, if so, if he would have 'the most power' at telling the truth about ordinary arithmetical calculations. Upon securing Hippias' agreement, Socrates gets him to agree further that, given his ability to tell the truth, he would be equally able to tell arithmetical lies consistently, while an incompetent arithmetician would simply state arithmetical falsehoods unintentionally. Hippias has then to concede that the same person, namely himself, has "the most power to lie" and "to tell the truth about calculations". The dialogue

*We would like to thank Crispin Wright for conversations on the topic of this paper.

[1] This 'story' is taken from (Marion & Rückert unpublished).

then goes with Socrates making the same point, in the same manner, about geometry and astronomy. Having thus secured Hippias' consent to three cases, Socrates then introduces the universal proposition, immediately asking for a counterexample:

> SOCRATES: Come then, Hippias. Examine all the sciences similarly. Is there any that's different from these, or are they all like this? [...]
>
> [...] tell me, in accordance with what you and I have agreed upon, if you find any case in which one person is truthful and another (distinct, not the same) person is a liar. Look for one in whatever sort of wisdom or villainy you like, or whatever you want to call it; but you will not find it, my friend, for none exists. So tell me!
>
> HIPPIAS: But I can't, Socrates: at least, not offhand.
>
> SOCRATES: And you never will, I think. [...][2]

Unable to provide a counterexample, Hippias has to concede to Socrates, who is thus in a position to infer to the conclusion he was after:

> [...] But if what I say is true, you will remember what follows from our argument.
>
> [...]
>
> SOCRATES: [...]You realize that you said that Achilles was truthful, whereas Odysseus was a liar and wily?
>
> HIPPIAS: Yes.
>
> SOCRATES: You are now aware, then, that the same person has been discovered to be a liar and truthful, so that if Odysseus was a liar, he also becomes truthful, and if Achilles was truthful, he also became a liar and these two men are not different from one another, nor opposite but similar.

Aristotle knew this dialogue, which he explicitly mentioned in his *Metaphysics*, Δ, 29, $1025^{a}6$-13, and he made explicit the dialectical rule that Socrates followed at *Topics*, Θ, 2, $157^{a}34$-$157^{b}2$:

[2] Translations are from Plato, *Complete works*, J. M. Cooper & D.S. Hutchinson (eds.), Indianapolis IN, Hackett, 1997.

> When it happens that, after you have induced from many cases, someone does not grant the universal, then it is your right to ask him for an objection. However, when you have not stated that it does hold of some cases, you have no right to ask 'of which cases does it not hold?' For you must previously carry out an induction to ask for an objection in this way.[3]

This rule can be analysed in terms of a game or interaction semantics.[4] For this we first note that it involves an universal affirmative proposition, of the form 'B belongs to all A' or 'All A are B', established first by *apagogê*, i.e., induction. Aristotle gave a meaning explanation of the universal quantifier in *Prior Analytics*, A, 2, 24^b28-29:

> We use the expression 'predicated of every' when none of the subject can be taken of which the other term cannot be said.[5]

To introduce a bit of type-theoretical notation, we write the universal affirmative $\Pi^+(A, B)$. As stated, it is to be asserted only if no A can be taken which is not B, which means that no c of type A or '$c : A$' can be found for which it is not the case that $B(c)$. And the dialectical rule states that, in a dialectical bout, if the proponent puts forward $\Pi^+(A, B)$ on the basis of having argued it for a number of cases (usually between two and five), then the opponent should either concede the generalization or challenge it by putting forward a possible counterexample, namely a $c : A$ which is not a B. So, keeping to the type-theoretical language, we could give the following:

Opponent	Proponent
	$a : A$ is B
	$b : A$ is B
	$c : A$ is B
	$\vdots$
	$\Pi^+(A, B)$
$d : A$ is not B	

[3] See also *Topics*, Θ, 8, 160^b1-6. We are using here Robin Smith's translation of *Topics Books I and VIII* (Oxford, Clarendon Press, 1997).

[4] See (Marion & Rückert unpublished) for a detailed presentation.

[5] We are using here Robin Smith's translation of Aristotle's *Prior Analytics* (Oxford, Clarendon Press, 1989).

The game would then go on with the players debating if d is really a counterexample or not. If the proponent does not wish to concede that d is a counterexample, then he must either argue that d is not of type A or argue that d is, contrary to his opponent's claim, a B.

The point of telling this story is that it provides an historical example of 'making explicit' a rule which was implicitly followed by Socrates, Hippias, and, presumably, others before Aristotle wrote his *Topics*. An argument can be made that, *qua* inference rules, Aristotle's own syllogistic rules in *Prior Analytics* and the Stoics' 'indemonstrables' were, likewise, rules made explicit that were first implicit in the practice of dialectical bouts.[6] The above story thus exemplifies the idea that some *rules (including rules of inference) are followed before they are made explicit*, so it might be useful to reflect upon examples of this sort from the 'inferentialist' point of view set forth by Robert Brandom.[7] In this paper, we shall limit ourselves to two points. First, we wish to show how the above story involves a philosophical lesson also found in Lewis Carroll's 'paradox of inference',[8] and, secondly, we will argue how this point is related to Wittgenstein's well-known 'rule-following argument'. In our discussion, we will offer criticisms of Pascal Engel's views on Carroll's paradox. He has not only been a tireless promoter of analytic philosophy within the French-speaking world, he has also made significant contributions to it, in particular on the topic of Carroll's paradox.[9] Analytic philosophy certainly shares the interactive spirit of the origins of philosophy and logic in Ancient Greece, exemplified above, so it is only a fitting tribute to Pascal that we controvert his claims. There is at all events no greater homage than to consider someone's ideas worthy of serious discussion, and we are very glad to have this opportunity to celebrate Pascal's contribution to philosophy.

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That some rules are followed prior to being made explicit sounds like a platitude. Why would it be so? Possibly because the contrary claim, namely that can only be said to follow a rule once it has been explicitly stated, would

[6] For more on dialectic in this context, see (Castelnérac & Marion 2009) and (Castelnérac & Marion 2013).

[7] See (Brandom 1983), (Brandom 1994), (Brandom 2000). See also, for an explanation of the meaning of 'inferentialism' in the context of interaction semantics, the first part of (Marion 2012).

[8] (Carroll 1895).

[9] Pascal Engel has published extensively on Carroll's paradox of inference. For this paper, we consulted mainly (Engel 1998), (Engel 2005), (Engel 2007), (Engel 2009).

sound rather odd. Indeed, this would mean, to put it crudely, that no one ever followed, say, the disjunctive syllogism *before* a Stoic logician first stated the rule. To keep with examples from Ancient Greece, Sextus Empiricus' account of Chrysippus' dog, would make no sense at all:

> And according to Chrysippus, who shows special interest in irrational animals, the dog he shares in the far-famed "Dialectic". This person, at any rate, declares that the dog makes use of the fifth complex indemonstrable syllogism, when, on arriving at a spot where three ways meet, after smelling at the two roads by which the quarry did not pass, he rushes off at once by the third without stopping to smell. For, says the old writer, the dog implicitly reasons thus: "the creature went either by this road, or by that, or by the other: but it did not go by this road or by that: therefore he went by the other."[10]

Still, the idea has been expressed at times, e.g., by Richard Robinson in his study of *Plato's Earlier Dialectic*, when he argued that Plato was not aware of the distinction between what he calls an 'indirect refutation' (his expression for *reductio ad absurdum*) and a 'direct refutation' of the form 'A, therefore B', which would indeed directly refute $\neg B$. Answering the objection that the distinction is too obvious for Plato not to realize it, he wrote:

> This belief is destructive of any true history of human thought, and ought to be abandoned. Evidently there must have been a time when the human race, or its immediate ancestor, possessed no logical proposition at all, true or false. Nor is there any necessity that logical propositions, when they did arise, should at once be those which seem obvious to us. Nor did logical propositions in any scope and abstractness arise with Socrates or with the early Plato, but [...] with the later Plato and his pupil Aristotle. The history of thought cannot succeed if we assume from the beginning that some idea or other is innate and necessary to any human mind.[11]

Setting aside Robinson's argument from the history of thought, we note that the above example from *Lesser Hippias* has shown that, although no explicit rule had been stated, Socrates and Plato already knew how to argue for an

[10] Sextus Empiricus, *Outlines of Pyrrhonism*, I, 69.
[11] (Robinson 1953, 28-29).

universal affirmative proposition. It is rather easy to find instances of disjunctive syllogism or *Modus Ponens* or simply instantiations of game-semantic rules for logical connectives in Plato's dialogues.

Therefore, although it might be true that no "logical propositions in any scope and abstractness" arose with Socrates or (the early) Plato, it does not follow that they did not make any of the relevant inferences, i.e., that they not follow any of the corresponding rules. What seems wrong in Robinson's claim is thus that, in order to be able to follow a rule at all or at least to be recognized as having followed a rule, one needs to entertain an explicit statement of it, i.e., a 'logical proposition' or, more appropriately put, a logical truth. In the language of Wittgenstein's *Philosophical Investigations* §219, it would not be possible to follow a rule "blindly". We will discuss this point later on, but for the moment we would like to point out how Robinson's claim involves a difficulty raised by Lewis Carroll's notorious paradox of inference.[12]

Recall that in his 'What the Tortoise said to Achilles', Carroll describes an imaginary discussion involving a challenge issued by the Tortoise to Achilles. The Tortoise takes three propositions from Euclid:

> (*A*) Things that are equal to the same are equal to each other
>
> (*B*) The two sides of this triangle are things that are equal to the same
>
> (*Z*) The two sides of this triangle are things that are equal to each other

And she issues her challenge: he is to force her 'logically to accept *Z* as true' on the basis of *A* and *B*, i.e., '*A* is true' and '*B* is true'. The paradox of inference occurs in Achilles' attempt at forcing the Tortoise to accept *Z*. Given that *Z* follows from *A* and *B*, if the following is logically true:

> (*C*) $(A \,\&\, B) \rightarrow Z$

Achilles suggests that one includes *C* in the above:

> (*A*) Things that are equal to the same are equal to each other
>
> (*B*) The two sides of this triangle are things that are equal to the same
>
> (*C*) $(A \,\&\, B) \rightarrow Z$

[12] The discussion of Carroll's paradox in the following paragraphs is derived from (Marion to appear).

> (Z) The two sides of this triangle are things that are equal to each other

The Tortoise's reaction to this move is to point out that she has been served a further conditional or hypothetical proposition, which would be of the form:

> (D) $(A \,\&\, B \,\&\, ((A \,\&\, B) \rightarrow Z)) \rightarrow Z$

And that she would now refuse to grant D, which is, incidentally, D is an instance of the form of reasoning that medieval logicians called *Modus Ponens*. We can thus modify slightly Carroll's story, and present it under a form under which it is often discussed. Under this new form, the Tortoise accepts A and $A \rightarrow B$ but refuses to infer B, i.e., she rejects:

> (1) $(A \,\&\, (A \rightarrow B)) \rightarrow B$

Achilles then suggests that A and $A \rightarrow B$, and $(A \,\&\, (A \rightarrow B) \rightarrow B)$ together are to yield B, but the Tortoise now refuses to grant:

> (2) $(A \,\&\, (A \rightarrow B) \,\&\, ((A \,\&\, (A \rightarrow B)) \rightarrow B)) \rightarrow B$

If we reiterate the move, we will then get the Tortoise to refuse:

> (3) $(A \,\&\, (A \rightarrow B) \,\&\, ((A \,\&\, (A \rightarrow B)) \rightarrow B) \,\&\, (A \,\&\, (A \rightarrow B) \,\&\, ((A \,\&\, (A \rightarrow B)) \rightarrow B)) \rightarrow B)) \rightarrow B$

And so on.

Lewis Carroll offered no solution for his 'paradox of inference'. A common one consists in pointing out that the Tortoise would refuse to infer the conclusion (Z) by adding the needed rule of inference (C) as an extra premise simply because the rule of inference that she needs should not be added as premise; it is ineffectual as such. This point was made long before Carroll by Bolzano,[13] and it is to be found in Carroll's contemporary at Oxford, John Cook Wilson,[14] but Gilbert Ryle is more frequently cited for having made that very point:

> The principle of an inference cannot be one of its premises or part of its premises. Conclusions are drawn from premises in accordance with principles, not from premises that embody those principles.[15]

[13] In §199 of his *Wissenschaftslehre* (Bolzano 1972, 273-274).
[14] (Cook Wilson 1926, 443-444).
[15] (Ryle 1971, 138).

Ryle also observed:

> 'Well, but surely the intelligent reasoner *is* knowing rules of inference whenever he reasons intelligently.' Yes, of course he is, but knowing such a rule 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. It is realised in performances which conform to the rule, not in theoretical citations of it.[16]

Thus, according to Ryle, if there is any 'knowledge' involved in following a rule, it would be a 'knowing how', not a 'knowing that' or knowledge of a propositional content, i.e., of a logical truth such as (1). We are of course aware that Ryle's account has been controverted,[17] but we cannot defend it here, otherwise we will not get to the issues we wish to discuss. We wish instead to bring it in parallel with another lesson to be learned from Carroll's paradox hinges on distinguishing between (1), which is an implication that holds between unasserted propositions and an *inference* of the form '. . . , therefore . . . ', which holds between assertions, a distinction first made by Bertrand Russell.[18] With '$\vdash$' standing for the inference relation, while the comma on its left-hand side can be read as 'and', one would write the rule:

(1') $A, A \to B \vdash B$

This being the elimination rule for '$\to$' in Gentzen's natural deduction systems. Recall that these systems (and related sequent calculi) are characterized by the replacement of axioms by corresponding rules of inference, so that focus is shifted away from 'logical truth', since the class of logical truths now becomes merely a 'by-product' of the adoption of these rules. (This last point was already made in the *Tractatus* at 6.126.)[19] One can easily convince oneself that there is no regress if the confusion between '$\to$' and '$\vdash$' is avoided.[20]

In this context, it is worth going back to L. E. J. Brouwer's original idea, which led to the development of Heyting or BHK semantics, that *an inference*

[16] (Ryle 1971, 216-217).

[17] See, e.g., (Stanley 2011, 27*f.*).

[18] (Russell 1903, 35).

[19] See (Hacking 1976, 288*f.*).

[20] This is recognized, for instance, in (Engel 2007, 726 & 729). Somehow, Carroll had himself built this in his parable, given that the Tortoise ends up granting (1), but refusing to apply it.

is a kind of act. Like any action, an inference may be said to be in accordance with a rule or in violation of it, but does one need to entertain the rule of inference, either as a logical truth (1) or under the form (1′), in order to infer? The first thing to be said here is that having 'in mind' an explicit statement of the rule, say, (1′) would amount to *believing* that the corresponding implication (1) in logically true. These two ideas, i.e., that it is appropriate to speak of one believing in a logical truth such as (1) and of one as acting according to a rule such (1′) are seldom kept apart. This might be explained by the existence of what Stewart Shapiro called 'transfer principles',[21] i.e., principles that establish correspondences between rules of inferences and logical truths, e.g.,

(4) $A, A \to B \vdash B$ if and only if $(A \,\&\, (A \to B)) \to B$ is logically true

However, the *act* of inferring a conclusion from some premises in accordance to a rule of inference is not the same thing as a *belief* in the logical truth corresponding to that rule.[22] Belief is a propositional attitude one may have towards sentences such as logical truths, but one only *acts* according to rules or not. Does not have to refer to an 'internalized' version of rule in order to act. In some contexts, e.g., when doing logic exercises, one probably needs to, but it does not seem a necessary condition, as is amply demonstrated in other contexts such as that of dialectic in Plato's dialogues. And what seems the point of Carroll's paradox here, is that having 'in mind' an explicit statement of the rule as a logical truth amounts to introducing it as an extra premise, and it is this move that generates the regress. Therefore, under the view that harks back to Brouwer, there is no regress, while a regress is indeed generated with the view that when one infers, one has to have 'in mind' an explicit statement of the rule in the form of a logical truth, whose requirements one would then merely 'track'.

One can now see the obvious fault committed by Robinson: it is no use trying to find out if Socrates or Plato were 'aware' of this or that logical truth in order to recognize they were able to do this or that inference, because they were already acting/inferring, before one made explicit the rules in accordance to which their actions/inferences were made. The culprit here may be the view of logic as "the systematic study of the logical truths", to quote W. V.

[21] (Shapiro 2000, 337).

[22] This point has been made by many, e.g., (Dummett 1981, 596), (Priest 1979, 291), (Shapiro 2000, 337), and, as (Shapiro 2000, 338-339) notes, also it occurs in a closely related form in (Wright 1986, 192-194).

Quine,[23] which meant that one would look at logic not as a system of deductions of consequences from arbitrary, possibly false, premises, but as a system of proofs of logical truths based on logical axioms and rules.

One should note here a possible link with Wittgenstein's 'rule-following argument', given that it is understood by some as counting among its targets the very idea that in order to follow a rule one needs to track its requirements.[24] But before we should get to this, we would like to address an issue to which Pascal Engel as devoted numerous paper, namely the question 'How can logic move the mind?'. The original motivation for this question comes from Simon Blackburn's 'Practical Tortoise Raising': according to him, the Tortoise's failure to infer B indicates that logic alone does not move the mind, so that one always needs something else – a desire, a disposition or a habit – that *causes* one to infer. As he puts it:

> There is always something else, something that is not under the control of fact and reason, which has to be given as a brute extra.[25]

Engel agrees with Blackburn inasmuch as he takes Carroll's paradox to have refuted a simple version of 'internalism' which we need to reformulate here in terms of belief in (1):[26]

(i) $(A \,\&\, (A \to B)) \to B$ is a logical truth

(ii) This conditional is an instance of the form $(A \,\&\, (A \to B)) \to B$

(iii) Thus it is valid

One should note that (i)-(iii) is under the form of a *Modus Ponens*, so we will speak of the *Modus Ponens Model*, hereafter MPM, for reasons that will become clear shortly. According to this particular version of MPM, no one recognizing that (1) is a logical truth could fail to infer that B.[27] But Carroll's paradox shows precisely that this is not the case, given that the Tortoise is never moved to infer B. Hence the need to supplement this particular version of MPM with an added ingredient that will ultimately explain why the Tortoise was forced to infer, i.e., to provide a complete, satisfactory solution to Carroll's paradox.

[23] (Quine 1986, vii).

[24] See, e.g., (Wright 2001).

[25] (Blackburn 1995, 695).

[26] Engel puts it in terms of rules of inference in (Engel 2009, 27), but for the reasons just given, we think this is inappropriate.

[27] This is what Engel calls 'logical cognitivism' in (Engel 2005, 24*f.*).

Engel, who calls Blackburn's proposal 'externalism', also sees inference as a kind of act, but defined that act as "the moving from a belief to another", i.e., from one mental state to another, and he shares with Blackburn the idea that we have to explain how we are thus "*being moved* to infer".[28] He also grants to Blackburn that one's following a rule of inference without being conscious of it, because of a disposition or habit.[29] Engel ends up dismissing Blackburn's externalism, however, but this is not the place to enter into a detailed discussion of his reasons. For the purpose of our argument we need merely to emphasize the premises they share. We merely note one objection: to be told that a disposition or habit as a 'brute extra' that forces us to infer is Engel's eyes insufficient, because this much does not at the same time explain why our belief in the truth of the premises and in the validity of the inference both justifies us *and* forces us to infer. For the same reasons, Engel finds it insufficient to be told that one follows the rule 'blindly'.[30] Engel offers instead his own solution, which he calls 'sophisticated'[31] or 'nonreflective internalism',[32] in order to distinguish it from the above 'internalism' that falls prey to Carroll's regress argument. His solution hinges on the analogy between judgements of perception and logical judgements (of which (i), above, is an example). Judgements of perception such as my judging that 'this object is red' are here taken to be non-inferential and as offering us an 'epistemic warrant'. In the case of logical judgements, we are told, one needs the logical rule as some sort of 'norm' or 'law', which is in that sense external, objective, and so forth, but one also needs an internal reason accessible to the agent, which would justify her in making the inference according to it, i.e., would be the

[28] (Engel 2005, 25). (Engel speaks at times as if 'inferring' is a "mental state' (Engel 1998, 48), but the claim would be indefensible.) One should note that we do not understand the idea that inference is a kind of act in the same manner. To begin with, for us an inference is not a relation between beliefs but a relation between assertions. Furthermore Engel seems to be looking for a further mental state to explain the 'moving' from one state to another.

[29] (Engel 2005, 31). This might serve as basis for a critique to the view we put forth above concerning the likes of Socrates and Plato, who followed before they were made explicit, namely that all this would show is that they have internalized these rules. The problem with this view is that one cannot presuppose that what was internalized was first made explicit, so it is not clear what 'internalization' means in this context. The source of the rules of inference is to be located elsewhere, in the very interaction within, say, a regimented dialogue such as dialectic or even an ordinary dialogue, which contains them implicitly.

[30] (Engel 2009, 28). This point could be served to object to our own approach in this paper, as it would appear that we are also not attempting to explain why we are *forced* to infer. Our point is rather that we wish to undermine the need to provide such an explanation.

[31] (Engel 2009, 32).

[32] (Engel 2007, 737).

cause of her inferring, and some sort of equivalent of an epistemic warrant in the case of perceptual judgements for logical judgements would thus provide that extra something needed for the mind to be moved.[33]

One could try and pick apart Engel's solution at its weak spots, e.g., the analogy between perceptual and logical judgements, but we will not engage in this direction (Engel is aware of this objection and provides a rejoinder)[34] or by asking further clarifications concerning the nature of the 'warrant' in the case of logical judgements. We would like first simply to note that our 'inferentialist' solution is neither 'internalist' (simple or sophisticated) nor 'externalist', because we think that, in the end, the fault is with MPM, which we do not presuppose in our solution of Carroll's paradox.[35] Secondly, we would like to argue that the range of solutions marshalled by Engel, including his own solution and related ones[36] are defective precisely in their reliance on some form or the other of MPM, and the request that some extra ingredient be added to it, and for this we would like to propose an argument which we claim can be found in Wittgenstein's remarks on 'rule-following' in *Philosophical Investigations*, hereafter *PI*, §§143-242.[37]

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To make our point, we need to rehearse the central argument of Wright's most recent paper on rule following: 'Rule-Following Without Reasons: Wittgenstein's Quietism and the Constitutive Question'.[38] It is based on a distinc-

[33] (Engel 2009, 32).

[34] (Engel 2009, 30-31).

[35] As we claimed above, rules of inference as such are merely making explicit features of a prior practice, i.e., in the case of the Ancient Greeks, the highly regimented form of dialogue known as 'dialectic' so our proposal would thus hinge instead on a better understanding of the location and role of rules of inference in *dialogue* itself. This is, alas, not a point that can be argued for here.

[36] For example, a view such as Bill Brewer's appeal to some sort of rational compulsion; see, e.g., (Brewer 1995, 242), which is briefly discussed in (Engel 2005, 29), (Engel 2007, 743, n. 30), (Engel 2009, 30).

[37] Qutoations from *Philosophical Investigations* are from the 4th edition, (Wittgenstein 2009). Engel also saw interesting links between Carroll's paradox and Wittgenstein on rule following, e.g., at (Engel 1998, 49-51) and (Engel 2007, 726), but they are in terms that presuppose the validity of Kripke's reading in (Kripke 1982). We read *PI* §§143-242 otherwise – see the next footnote.

[38] (Wright 2007). In this last section we make use of a variant of the rule-following argument by Friedrich Waismann, which we studied in an hitherto unpublished paper, 'Wittgenstein on Reasons, Causes, And Rule-Following: A Variation by Waismann' (Marion & Okada, manuscript), thus putting greater emphasis that usual on the source of some remarks *PI* §§143-242 in the opening pages of the *Blue Book* and the distinction between reason and cause.

tion between basic and the complex cases of rule-following. To use Wright's own examples, predicating 'red' would be a basic case, while castling in chess would be complex one. Concerning the latter, Wright proposes a "*modus ponens* model of rule-following". This being another version of MPM, we adapt his example:[39]

> (i') If neither King nor one of its Rooks has moved in the course of the game so far, and if the squares between them are unoccupied, and if neither the King nor any of those squares is in check to an opposing piece, then one may Castle.
>
> (ii') In this game neither my King nor this Rook have yet been moved, the squares between them are unoccupied, and ...
>
> (iii') I may castle now.

Wright's argument is to the effect, however, that MPM cannot apply to basic cases. To demonstrate this, he proposes that we entertain what it would look like in the case of predications of red (we adapt again his example):[40]

> (i") If ...x..., it is correct to predicate 'red' of x
>
> (ii") ...x...
>
> (iii") It is correct to apply 'red' to x.

MPM requires here that one possesses an anterior concept '...x...' whose satisfaction in a given situation will determine as appropriate the application of the rule. Wright is quick to point out, however, that the anterior concept in question is no other than the concept 'red' itself. But this looks as if in order to follow any rule one needs a conceptual repertoire anterior to the understanding of that very rule, a bit like the child, in *PI* §32, who learned his first language as if he "came into a strange country and did not understand the language of the country; that is, as if [he] already had a language, only not this one". As Wright points out:

> In short the problem with extending the modus ponens model to cover all rule-following, including that involved in basic cases, is that it calls for a conceptual repertoire *anterior* to an understanding of any particular rule – the conceptual repertoire needed to grasp the input conditions, and the association of them which the rule

[39] (Wright 2007, 490).
[40] (Wright 2007, 495).

> effects with a certain mandated, prohibited or permissible form of response. From the standpoint of the philosophy of thought and language of the *Investigations*, this is an enormous mistake. With respect to a wide class of concepts, a grasp of them is not anterior to the ability to give them competent linguistic expression but rather *resides in* that very ability.[41]

Therefore:

> the modus ponens model *must* lapse for basic cases. Basic cases – where rule-following is 'blind' – are cases where rule-following is *uninformed by anterior reason-giving judgement*.[42]

To see how the point applies to our above discussion, it suffices that we think of applying MPM to *Modus Ponens* itself: this would result in exactly Carroll's regress.

One could reply to this that Engel has avoided precisely this very pitfall with his idea of a non-inferential warrant, in the case of perceptual and logical judgements. Not so, since a problem appears to lie in the vicinity, not for the notion of 'non-inferential warrant' but for the idea that we need one at all. Recall now what Wittgenstein had to say in *PI* §§211-219 about 'blind rule-following':

> 211. No matter how you instruct him in continuing the ornamental pattern, how can he *know* how he is to continue it by himself – Well how do *I* know? – If that means "Have I reasons?" the answer is: my reasons will soon give out, and then I shall act without reasons.
>
> 217. "How am I able to follow a rule?" – If it is not a question about causes, then it is about the justification for my acting in *this* way in complying with the rule.
>
> Once I have exhausted the justifications, I have reached bedrock, and my spade is turned. Then I am inclined to say: "This is simply what I do".
>
> 219. [...] When I obey a rule I do not choose.
>
> I obey the rule blindly.

[41] (Wright 2007, 496).

[42] (Wright 2007, 496). One could even go one step further and point out that complex cases are always reducible to a set of basic cases, a bit like arithmetical calculations can be broken down in a series simple tasks, e.g., programming a Turing Machine to perform addition, so that basic cases in the end the key cases of rule-following.

The idea that "reasons will soon give out" so that, in the end, "I obey the rule blindly" is likely to be misunderstood.[43] We suggest that, to gain a better understanding of its meaning, it be replaced in its context of origin in the *Blue Book*, where Wittgenstein suggests that there are two ways of looking at teaching the meaning of a word such as 'red'. Either (a) teaching is a drill that could be said "to have built up a psychical mechanism", i.e., a 'disposition' or (b) teaching supplies one "with a rule which is itself involved in the process of understanding, obeying, etc.". In other words, it supplies one with a reason. The first alternative is, by contrast, causal:

> The drill of teaching could [...] be said to have built up a psychical mechanism. This, however, would only be a hypothesis or else a metaphor. We could *compare* teaching with installing an electric connection between a switch and a bulb [...] it is the *cause* of the phenomena of understanding, obeying, etc; and it is an hypothesis that the process of teaching should be needed in order to bring about these effects.[44]

Wittgenstein then proceeds to argue against (a), so that it "drops out of our considerations".[45] One of the points made is that (a) would only provide us with a cause, not a reason. He then defends (b) against a possible regress argument:

> Now there is the idea that if an order is understood and obeyed there must be a reason for our obeying it as we do, and, in fact, a chain of reasons reaching back to infinity.[46]

Indeed, Wittgenstein dismisses as based on a wrong analogy with the infinite divisibility of the line:

> [...] the idea of an infinite chain of reasons arises out of a confusion similar to this: that a line of a certain length consists of an infinite number of parts because it is indefinitely divisible, i.e., because there is no end to the possibility of dividing it. [...] If on the

[43] For example, Kripke understands the thought as meaning that applying the rule is "an unjustified stab in the dark", (Kripke 1982, 16).

[44] (Wittgenstein 1969, 12).

[45] (Wittgenstein 1969, 14). The connection with *PI* §§143-242 is obvious, since he is also trying there to undermine the view that understanding is a 'mental process' (§154).

[46] (Wittgenstein 1969, 14).

> other hand you realize that the chain of *actual* reasons has a beginning, you will no longer be revolted by the idea of a case in which there is *no* reason for the way you obey the order.[47]

The upshot is clear: having dismissed causal explanations in terms of training, Wittgenstein saw no valid objection to holding the view that the chain of reasons comes to an end. He immediately entertains the possibility that one carries on asking 'Why?', even after reaching this 'bedrock', i.e., the end of the chain of reasons:

> At this point, however, another confusion sets in, that between reason and cause. One is lead into this confusion by the ambiguous use of the word "why". Thus when the chain of reasons has come to an end and still the question "why?" is asked, one is inclined to give a cause instead of a reason.[48]

So the thought is that, once the end of the chain of reasons is reached, there ought not to be any more 'why-question' asked, because answering them would lead us into causal territory, so to speak, i.e., one would surreptitiously begin to replace rational by causal explanations. Having one's spade turned when reaching bedrock, merely means, therefore, that one should not step into the realm of causal explanation. But that is precisely the sort of extra 'causal' ingredient that the 'internalists' and 'externalists' discussed by Engel are looking for.

What would the argument in favour of this prohibition be? It would simply be the argument against MPM, properly understood. As Wright puts it:

> And basic- 'blind' – rule-following, properly understood, is rule-following without reason – not in the sense of being phenomenologically immediate or spontaneous in the way a good chess player may make a clever move without fully self-consciously rationalising his grounds for it, but in a sense involving the inappropriateness of the modus ponens model.[49]

The upshot is thus the inapplicability of MPM to basic cases, i.e., 'blind rule-following'. Thus the inappropriateness of MPM calls into question the very basis for the range of views marshalled by Engel, including his own solution,

[47] (Wittgenstein 1969, 15). See also (Wittgenstein 1969, 143).
[48] (Wittgenstein 1969, 15).
[49] (Wright 2007, 497).

inasmuch as they purport to find the missing ingredient that will make MPM function.

*

Perhaps we should let Crispin Wright speak one last time, in order to conclude:

> In any basic case, the lapse of the modus ponens model means that we should not think of knowledge of the requirements of the rule as a state which rationally underlies and enables competence, as knowledge of the rule for castling rationally underlies a chess player's successfully restricting the cases where she attempts to castle situations where it is legal to do so. In basic cases there is no such underlying, rationalising knowledge enabling the competence. *A fortiori* there is no metaphysical issue about the character of the facts it is knowledge of, with Platonism and communautarism presenting the horns of a dilemma. The knowledge *is* the competence. Or so I take Wittgenstein to be saying.[50]

As an interpretation of Wittgenstein, this seems on the whole right, especially in its 'quietist' inclinations. But the argument deployed against MPM in basic cases of rule-following to sustain this conclusion is also a powerful one, one that suggests that we abandon the attempt to find a solution of the type envisaged by Engel. We began the paper with an example of a practice, dialectic as a regimented form of dialogue, where logical rules where followed prior to being made explicit. Here too we have basic cases where, so to speak, 'there is no underlying, rationalising knowledge enabling the competence' and 'knowledge *is* the competence'. This, again, is very much in line with the basic lesson to be learned from Carroll's paradox.

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[50] (Wright 2007, 498).

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