

LOGICAL REASONS

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draft of a paper published in *Philosophical Explorations*, 8, 1, march 2005, 21-35

Abstract:

Simon Blackburn has shown that there is an analogy between the problem of moral motivation in ethics (how can moral reasons move us?) and the problem of what we might call the problem of the power of logical reasons (how can logical reasons move us, what is the force of the “logical must?”). In this paper, I explore further the parallel between the internalism problem in ethics and the problem of the power of logical reasons, and defend a version of psychologism about reasons, although not one of the Humean form.

I discuss two forms of cognitivism: (a) a pure cognitivism and “hard” realism modelled after Dancy’s parallel conception in ethics: when we grasp logical reasons we grasp facts, which are directly known to us, b) a Kantian form of cognitivism, based on the idea that “compulsion by reason goes with the capacity of reflection. I argue that (a) is implausible, and that (b) fails to meet the internalist requirement. One would then seem to be left with what Dancy calls, about practical reasoning, psychologism about reasons. I sketch what might be such a psychologism. But it fails to account for the objectivity of logical reasons. I argue that the relevant state here is a form of dispositional knowledge of logical reasons.

1. Introduction

Let us start with some platitudes. Suppose that someone believes that A or B and also believes that not A. It is likely that she also believes B, or at least that he is disposed to believe it if the question whether B arises. Now under what conditions can this transition be a rational one?

First our thinker’s two beliefs A or B and not A, must constitute a reason for her to believe that B. And we can say that they are for her a reason to believe the third proposition because they actually entail this third proposition. It’s fact, - a logical fact, as it were - *that A or B and not A, therefore B* instantiates a valid argument form. In other words, the thinker has a reason, and an objective one, for believing the conclusion.

Now it is not enough for our thinker to have a reason to believe the conclusion. When she believes the first two propositions, we expect her to believe the third not simply because she has a reason, but also because the first two propositions *cause* her to believe the third. So the three following claims are intuitively very plausible, and almost trivial:

- (1) When an argument form is valid or truth preserving, it is an objective fact that it is; this fact constitutes a reason for a person to infer certain things from others
- (2) Someone who grasps that an argument form is valid or a rule of inference is truth preserving is expected to infer accordingly, and to draw the appropriate conclusion
- (3) Inferring is at least partly a mental state, or it is based upon a mental state

We can formulate the same trivialities by saying that someone who believes that an inference rule is truth-preserving or an argument form is valid has a good, objective, reason to draw the appropriate conclusion, and to infer the appropriate conclusion and in virtue of this generally makes the appropriate inferences. Indeed if she masters the rule, and recognises its validity, it would be surprising that, when confronted with an argument form, she does not infer the conclusion. Of course, mistakes are possible, and the psychology of human reasoning as well as the experience of teaching logic is replete with exceptions and counterexamples, but it is odd to suggest that when a subject knows a logical rule, knows that it is correct, understands the sentences presented to her, recognises that an argument instantiates an inference of this form, she is not able to draw the appropriate conclusion.

And yet, it seems to be possible: inferential *akrasia* is possible. Lewis Carroll's Tortoise seems to be such an inferential akratic. As everyone knows, he is presented three propositions of the form:

- | | |
|-----|-------------|
| (A) | P |
| (B) | If P then Q |
| (Z) | Q |

but refuses to draw the conclusion (Z), although he is ready to add as many premises of the form

- | | |
|-----|--|
| (C) | If A and B are true, then Z must be true |
|-----|--|

The Tortoise has all good logical reasons to make the inference, yet he does not do perform it. The Tortoise's unwillingness to accept (Z) on the basis of (C), and then on the basis of a conditional formed from the conjunction (A) and (B) and (C) as antecedent and with (Z) as consequent, etc. embarks us into an infinite regress. The usual diagnosis is that the Tortoise mistakes a rule of inference (*modus ponens*) for a premise in an inference. But he may well be described as a logical akratic, who just refuses to draw the conclusion even though it is obvious. The point of the paradox, on this reading, would be that the Tortoise sees very well that one has to infer (Z) from (A) and (B), but refuses to do so. ¹

¹ See Carroll 1895. For an account of the classical difficulties of the paradox see Stroud 1979

I have not used the word *akrasia* without intent. For we can draw a parallel between the logical case and the practical case, as Simon Blackburn (1995) has shown (see also Railton 1997).

Blackburn shows that a similar problem to Carroll's arises when we consider a piece of practical reasoning, for instance of the form:

- (P) I prefer lettuce to souvlaki
- (B') The moment of decision is at hand
- (Z') Let me choose to eat lettuce rather than souvlaki

However many premises of the form:

- (P*) it is right to prefer lettuce to souvlaki

are added, the Tortoise still does not act.

Blackburn argues for a "Humean conclusion": "That 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, if deliberation is ever to end by determining the will." (1995: 695).

It might seem that the Tortoise failing to take action (Z') on the basis of (P) and (B') is just a case of ordinary *akrasia*, or of weakness of the will, in the sense of acting against one's better reasons, or rather failing to do what one ought to do. In the case of Carroll's original Tortoise who fails to infer (Z) from (A) and (B), we might talk of epistemic *akrasia*, in the sense of knowingly failing to believe what one ought to believe. Some philosophers think that such an *akrasia* is possible, and failure to infer what one ought to infer would a special case.² Other philosophers doubt that there can be such an *akrasia* in the epistemic domain. The problem described here has similarities both with epistemic *akrasia* and with practical *akrasia*, but I intend to describe it specifically for the kind of failure which pertains to the domain of logical reasoning or inference from premises to conclusion.

It should be clear from the outset that this problem does not concern the justification of logical rules or laws - "Why are these rules valid or truth preserving?"³ - nor with the problem of the validity of reasons. Even though the two problems are not completely independent, I shall assume here that the problem of justification has been solved, in one way or another. I shall be concerned with the problem of the *force* of reasons, which Blackburn highlights in asking: "How can logic move the mind?" Our main question, then is: how can logical reasons move us?

2. The moral reasons problem and the logical reasons problem

² See A. Rorty 1983, Hurley 1993, Scanlon 1998, Owens 2002

³ The problem is raised forcefully by Dummett 1975. For recent analyses, see Peacocke 1993, Engel 1991 and Engel 2001. Boghossian 1999 and 2003, Williamson 2003

The similarity between the case of practical inference from practical reasons to act and the case of logical inference from logical reasons to believe can be made more explicit in the following way. Our initial three plausible propositions (1)-(3) remind us strongly of what has been called, in recent debates about meta-ethics, the “moral problem”.

THE MORAL PROBLEM (Smith 1994)

- (I) Moral judgements of the form “It is right to ϕ ” express beliefs about facts (cognitivism)
- (II) If someone judges that it is right to ϕ , then *ceteris paribus* he is motivated to ϕ (internalism)
- (III) Motivation goes with desires and means-ends beliefs (Hume)

(I) is the familiar claim of cognitivism about moral judgement; (II) is the claim made by internalists about moral judgement, and (III) is the basic claim of the Humean theory of motivation: there must at least be a desire in any state which is susceptible of motivating an agent to act. There is a *prima facie* inconsistency between (I), (II) and (III). (I) and (II) clash with (III). (II) and (III) clash with (I).

And just as there is a *prima facie* inconsistency between (I)-(III), there is also a *prima facie* inconsistency between (1)-(3), our three plausible propositions about logical inference. For the objectivity of our judgements about logical inference, together with the fact that they move us to infer accordingly, seems to clash with the fact that inferring is a mental state. For how can a fact about logical validity by itself have any effects upon my mental states? On the other hand, if something like (2) is true, that is if the fact that a thinker has a reason to draw a conclusion from given premises leads us to expect that he will draw this conclusion, then it seems quite plausible to suggest that the very act of inferring will be a mental act, or that it will depend upon certain mental states, as (3) says. But this clashes with (1), for if logical reasons, *qua* causal, are mental states (particular beliefs, particular transitions in thought which constitute the act of inferring), how can they be objective, and how can they be the expression of logical facts?

So it seems that we can we formulate an analogous problem to (1)-(3) for *logical* judgement, for judgements of the form “It is right (logically) to infer Q”, in other words for judgements about the logical validity of a given inference. We might call it the “logical reasons problem”, or for short “the logical problem”:

THE LOGICAL PROBLEM

- (1') Logical judgements (as to whether an inference is valid) are true and express beliefs about logical facts (logical cognitivism)

- (2') If someone recognises that an inference is valid, then *ceteris paribus* she should be moved to infer accordingly (logical internalism)
- (3') What moves a subject in such a case must be a psychological state (psychological constraint)

(1') is the characteristic claim made by cognitivists about logic. It is the claim that judgements about the validity of inferences express laws, or facts about an independent logical reality. (2') might be called, in parallel with (II), internalism about logical judgements. It is the claim that judgements which express logical laws or the validity of inference are necessarily such that they move the thinker to draw the appropriate conclusion (*ceteris paribus*, since he can make mistakes). (3') says that whatever can move a subject to infer a conclusion from given premises must be a psychological state of some kind.

Now, it may be said that just as there is a conflict between cognitivism, internalism and Humeanism in the moral case, there is a conflict between cognitivism, internalism and the psychological constraint in the logical case. If logical judgements express beliefs about facts about an independent logical reality, how can the belief about the facts in question move us to make the appropriate inferential move? So there is a potential conflict between (1') and (2'). But suppose we accept (1') and (2') together. How can we then accept (3'), for if what moves us to infer a conclusion is a psychological state, how can we reconcile this with the objectivity of logical judgements? The psychological constraint might lead us to some form of psychologism.

We might call (1')-(3') the "logical problem". And we can formulate it as a problem about logical reasons, just as the moral problem is a problem about moral reasons: how can moral reasons motivate us? how can logical reasons make us infer, or, in Blackburn's phrase, move our mind? Achilles' position in Carroll's story seems clearly an instance of the cognitivist position: Achilles does not understand why, once one recognises the validity of an inference, and once one accepts that it expresses a logical fact, one can fail to think accordingly.⁴ The Tortoise can be taken as, alternatively, an externalist about logical judgement, or a Humean. He can be taken as an externalist because he is subject to logical *akrasia*: he recognizes the truth of a logical judgement, but fails to reason according to it. And he might be taken as a Humean, because, as Blackburn suggests, he lacks the appropriate mental state to perform the inference.

But we should not push the parallel too far, for there are *prima facie* big differences between the two kinds of problems. The moral problem concerns actions and practical reasoning, whereas the logical problem concerns beliefs and theoretical reasoning. There is no reason to think that the demands of practical rationality or of reasons for actions are the same as those of theoretical rationality, nor that reasoning in the former domain operates in the same way as in the second domain. This is a much debated issue, and it is not something that we can

⁴ See Engel 1991, pp. 254–257 for a development of this idea.

presuppose without any argument.⁵ Nevertheless, we may accept the parallel between the practical and the logical case for heuristic purposes, in order to reveal the structure of the logical problem and how it differs from the moral problem.

Now if we take seriously the similarity between the two problems, we should take inferring as a kind of *act*. Indeed Carroll's Tortoise speaks as if adding a premise to a set of propositions and accepting it⁶ were sorts of actions. Acceptance of a proposition is indeed a sort of act. It is often said the conclusion of a piece of practical reasoning is an action⁷. And it may be one of the reasons why Carroll's paradox arises. But is it sure that it is what happens in logical inference? Sequences of the form (A)-(Z), unlike those of the form (P)-(Z), are usually taken to express the moving from one belief to another, not the moving from one act to another, or from a belief to an action. Indeed this is the difference between *being motivated*, in the case of moral judgement leading to action, and *being moved* to infer, in the case of logical judgement. In this sense, there is no such thing as a theory of motivation in the case of logical beliefs, for we are not motivated to act by them. And there does not seem to be a Humean theory of logical motivation either, for it would have to say that one of the determinants of the act of inferring is a desire, which is, on the face of it, utterly implausible. The Humean view and the internalism problem make sense in the moral case because there is, *prima facie* at least, a contrast between beliefs, which have a mind-to-world direction of fit, and desires, which have a world-to-mind direction of fit⁸. But in the case of logical inference, there is no question of moving from beliefs and desires to actions, but only from beliefs to beliefs. In the practical case, one must explain how one can act against one's own best judgement, whereas in the practical case one must explain how the Tortoise's position is not defensible or why he can refuse to accept the conclusion even though he is aware of it. Indeed the problem is to understand how *akrasia* in the theoretical domain can be possible, and it is not obvious, *prima facie*, that it is possible. It is precisely what is in question in the purported parallel. But to deny from the outset the parallel would prevent us to make the investigation that we are to make. We should be cautious not to identify the two problems. I think, nevertheless, that there is a case for the parallelism. In both the practical and the theoretical domain, there is a problem of reconciling the *normative* character of reasons with their *explanatory* character. In the practical case this distinction is often formulated as the problem of the distinction, and of the articulation between "normative" reasons and "motivating reasons". In our simple example at the beginning, it is the problem of reconciling the fact that the thinker has a reason, with the fact that this reason is in some sense the cause of his inferring the conclusion.

There are, then, at least two requirements for giving an appropriate solution to the problem of how logic can move the mind, or the problem of the force of

⁵ For a systematic (but now completely convincing in all aspects) parallel between theoretical and practical reason, see Audi 2001.

⁶ "One who accepts A and B as true *must* accept Z as true" (Carroll 1895)

⁷ Anscombe 1957, p.60

⁸ This celebrated distinction is of course Anscombe's (1957: 58)

logical reasons, as we might call it (it is reminiscent, of course, of Wittgenstein's phrase about "the force of the logical *must*"):

- (i) the logical fact of the truth preserving character of the inference gives a reason to infer (reason condition)
- (ii) that this reason causes appropriately the inferring (causal condition)

Now Lewis Carroll's story shows that another constraint must be added. For there to be the appropriate connexion between reason and causation, one should not add the inference form *A or B, not B, therefore A*, or *if A then B, therefore B* among the premises of the inference, for otherwise the constraint would lead to the characteristic regression illustrated by Carroll's story:

- (iii) the inference form should not be added as a premise (avoid regression).

As I have suggested, we can define, for the logical problem, positions which are counterparts of the positions we encounter with the moral problem. I shall first define two cognitivist solutions to the logical problem – How can logic move the mind? – one inspired by what Jonathan Dancy (2000) has called, in the theory of moral reasons, the *pure cognitivist* view, and the other, inspired by forms of neo-Kantianism. I shall try to argue that they do not solve the problem. I shall then examine a counterpart of the Humean view, or an expressivism about logic, drawing from some remarks by Blackburn. But I shall argue that this expressivistic view works at the expense of the objectivity of logical reasons. So I will be led to try to propose a third view, which will be based upon the notions of tacit knowledge of logical rules and of rational dispositions.

3. Pure cognitivism about logical reasons

Suppose one accepts (1') and (2'). Then one is an internalist cognitivist about logical reasons. The internalist cognitivist's position appears to be the one that is held by Achilles in Carroll's story. Achilles seems to hold the following view:

- (1) It is a fact that the inference form *Modus Ponens* (MP) is truth-preserving
- (2) This fact in itself should prompt the Tortoise to infer accordingly.

This seems also to be the position which is often attributed to Frege: once one recognises the laws of "being-true", which describe a special kind of fact, then one understands how they prescribe how to think, and so one is led to think accordingly. As Frege says in the preface to *The Basic Laws of Arithmetic*, to do otherwise "would be to instantiate a hitherto unknown kind of folly".⁹

⁹ cf. Frege 1964, p.12 . "In one sense a law asserts what is; in the other it prescribes what ought to be. Only in the latter sense can the laws of logic be called "laws of thought": so far as they stipulate the way in which one

There are, however, two ways of understanding (1) and (2). If we understand (1) and (2) as giving a reason for the thinker to infer, we can construe the reason in two ways, just as we can construe reasons to act in two ways.

Let us accept, as the cognitivist does, that logical reasons are facts. Then a sentence ascribing to someone such a reason will have the following form:

- (i) A's reason for drawing the conclusion was (the fact) that p

where " p " states the truth preserving argument – for instance MP.

But it seems that the very fact that MP is a valid argument form cannot, by itself, be the reason *for which* the agent drew the conclusion. For it may be a fact (a logical fact), that MP is a valid argument form, and nevertheless it may happen that the agent does not recognize it *as a fact*, *i.e.* does not *believe* that the fact obtains. So (i) seems to be correct only if we have the following condition:

- (ii) A believed that p

Compare, for instance, our answers to the question: "Why did he infer A from "A or B, and not B"?"

- (a) because A follows from "A or B, and not B"
 (b) because he believed that A follows from "A or B, and not B"

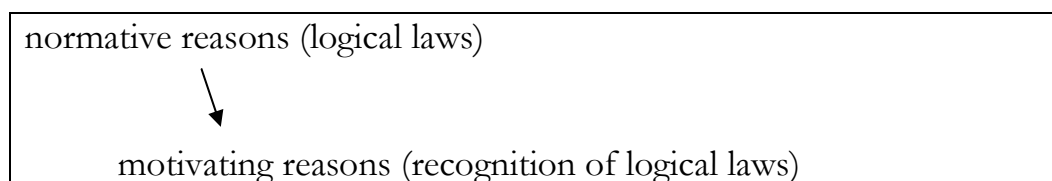
This suggests that we are to formulate (i) in this way:

- (iii) A's reason for drawing the conclusion was that he believed that p

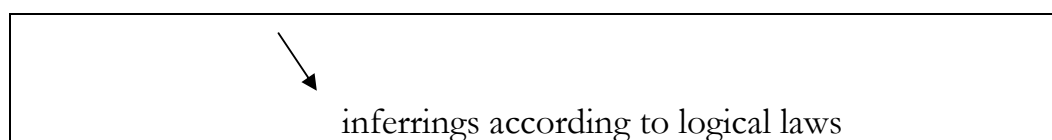
In other words, it is not enough that p can constitute a reason for A to draw a conclusion from the premises. It has also to be the case that A is in some sense in psychological contact with this reason.

If we talk in terms of the vocabulary of normative reasons *versus* motivating reasons which is used in the context of the theory of moral reasons, we have to say that our motivating reasons must be psychological states. This is the assumption which I have identified as (at least a mild form of) psychologism about reasons and it is indeed the name which Dancy (2000) gives to this view.

On the psychological account we have a three-tier model:



ought to think. any law asserting what is can be conceived as prescribing the one ought to think in conformity with it, and it is thus in this sense a law of thought."



Most cognitivist accounts of the capacity for deductive inference will use such a model.

But they will have to face two main difficulties. The first one is the implausibility of their epistemology. In general they do not take our relationship with logical facts to be mediated by beliefs, but by a special faculty of intuition. But no satisfactory account has been given of this form of intuition. The second difficulty is the possibility of logical *akrasia*: one can recognise the truth of a logical law, or the validity of an inference form, and fail to infer accordingly. Just as the possibility of *akrasia* is a threat to moral cognitivism, the possibility of theoretical *akrasia* is a threat to logical cognitivism.

In the moral case, Dancy (1993) defends instead the following view:

(3*) A state can be motivating even if it does not always motivate

On this view, *akrasia* is possible. According to (3*) a state can be sufficient for motivating on one occasion, and yet not motivate in another. Motivation depends upon the circumstance. This is why this view deserves to be called particularism. But in his book *Practical Reality*, Dancy associates this view with an even stronger one. He claims that the reason relation does not hold between thinkers and their beliefs on the one hand and facts on the other hand, but only between facts and actions.

Dancy criticizes the three-tier account for being unable to explain to us how the reasons why we act can be among the reasons in favour of acting. If there is a real division between normative reasons and motivating reasons, as the three-tier account has it, then we are just unable to explain how the two fit together. The paradox is that it is impossible to do an action for the reason that makes it right

As Dancy remarks (2000: 105) the paradox is even more marked in the theoretical case: for the reasons why we believe a conclusion are always other beliefs of ours – that is other *believings* (as mental states), and it is those believings which explain our adopting the belief in the conclusion. But then, as in the action case, the reasons why we believe are never the reasons in favour of which we believe it. In other words our normative reasons and our motivating reasons do not coincide: what we ought to believe does not cause us to believe (This is why there is a difference between (i) and (iii) above). And this slack between the two kinds of reasons is also why the Tortoise's regress seems to be possible. The reasons he favours for inferring (Z) are not those why she infers (Z)

Dancy then rejects the three-tier model. He considers that the only acceptable ascriptions of reasons are of the form (i), and not of the form (ii). Reasons, according to him, cannot be anything psychological.

Against the psychological conception of reasons Dancy holds that the reasons which motivate us are just the normative reasons, hence on his view the facts themselves. What makes you help someone who is in danger? The *fact* that she is in danger and not that you *believe* that she is in danger. If we apply this to the logical case, we shall say: what makes you infer B from A and if A then B? The fact that the former follows from the latter.

Facts, so to say, require our actions and, in the case of beliefs, our inferences. It is in virtue of their being normative that they cause us to infer. This is more than pure cognitivism. This is pure realism.

But this radical conception is utterly implausible. First it implies that pure logical facts have a sort of action at distance upon our minds. This is the very kind of Platonism that makes Frege's cognitivism so implausible. If we want to escape this we need to appeal to some faculty of intuition, which is as mysterious as the psychologistic version. Second, if we apply Dancy's particularism in the logical case, it will mean that logical facts move us to infer, but they motivate us, so to say, case by case. Each situation would motivate us, or fail to motivate us in its own way. This is utterly implausible, since it makes us lose the generality of logical facts.¹⁰

4. *Non-reflective cognitivism*

The utter implausibility of pure cognitivism invites us to reconsider the initial psychologistic version. The difficulty that we have with the three-tier model applied to logical reasons is that we are faced with a Charybdis and a Scylla.

The Charybdis is that in order for a thinker to infer a conclusion for a reason, the thinker must not be blindly instantiating a mechanism, or be disposed to follow a rule which he does not grasp at all. This means that she must in some sense recognise the rationality of the transition in thought that she is instantiating, and therefore be able to reflect upon it. For otherwise the validity of the inference form could not be her reason for inferring what she does infer. Such a position is suggested by Tim Scanlon when he talks of "judgement sensitive attitudes" as

"attitudes that an ideally rational person would come to have whenever that person judged there to be sufficient reasons for them and that would, in an ideally rational person, "extinguish" when that person judged them not to be supported by reasons of the appropriate kind." (Scanlon 1998: 20)

Now suppose that we say that the thinker needs to reflect upon the validity of the argument form which her reasoning instantiates. This means that the thinker comes to know the conclusion of her deduction by reflection upon the validity of

¹⁰ Moral particularism, combined with pure cognitivism, and transposed to the logical case is thus strikingly similar to an actually opposite view about logical inference, Wittgenstein's "radical conventionalism" (Dummett 19) according to which each new proof of a conclusion creates a new concept. See also Engel 1991: 261-62

its form. But then we are embarked in the potential regression that Carroll's paradox was meant to signal¹¹. This is the Scylla.

Bill Brewer (1995), in a paper in which he addresses this very difficulty, remarks that the subject who has a rational capacity of making inferential deductive transitions in thought must not simply mirror blindly the norms of thought that she obeys, but must also be sensitive to them. This implies a kind of awareness of what one is doing by inferring a proposition from others. But this awareness cannot be *reflective*. For if it were, the subject would have to present to herself the explicit general rule that he follows.

“There is more to grasping the laws of logic or mathematical argument than simply being disposed to have one's beliefs mirror the moves they prescribe. Epistemologically productive reasoning is not a merely mechanical manipulation of belief, but a compulsion in thought *by reason*, and as such involves conscious understanding of why one is right in one's conclusion. (Brewer 1995: 242)

This form of compulsion by reason makes, Brewer suggests, the proper link between reason and causation. It is “causation in virtue of rationalisation”, whereby one simply *sees* why one is right.¹²

In “Reason and First Person” (1998) Tyler Burge elaborates further an account along similar lines. He argues that the very concept of reason requires the concept of a subject and the notion of the first person: “To understand fully the fundamental notions associated with reason, including the notion of reasoning, judgement, change of mind, propositional attitude, point of view, one must have and employ a first person concept” (p.249). He further argues that someone who is a subject, or a “critical reasoner” in this full sense not only must understand the evaluative norms that provide standards that count a reasoning good or bad, but also that a subject who is able to understand these norms of reasons must “immediately be moved by reasons”. To understand reasons one must understand their force and application. So to be aware of these norms involves a tendency to be immediately motivated by them (*ibid.* p. 252). In other words one cannot have reasons for thinking that P, or doing that P, without being able to be moved by them, and to take oneself as responsive to them, as able to implement them in one's epistemic and practical decisions. And this also requires that one is able to ascribe these reasons to oneself, and have the concept of a first person. Hence the concepts of reason, of subjectivity and of agency are intrinsically interconnected.

Brewer and Burge's account of motivation by reason is cognitivist: they take epistemic reasons or norms to express truths or facts, although facts of a normative, non empirical kind. It is also internalist, for they suggest that these epistemic reasons

¹¹ See also Railton 1997 (2003: 316-317)

¹² Something similar to Brewer's view is suggested by Boghossian (2003) when he talks about “blind reasoning”, but his problem is more the justificatory problem than the explanatory one which interests me here. Still, as suggested above, it is difficult to keep the two kinds of problems apart, although I cannot deal with this connexion here. In Engel 2001, I proposed a view of the justification of logical constants along the lines of Peacocke 1993, which is also connected to a psychological conception of inference through mental models.

compel us to have the appropriate beliefs. But it is not epistemic norms by themselves which can motivate us.

Both Brewer and Burge emphasise the intimate connection between having a reason to draw a conclusion and being moved to this conclusion, between what I have called the reason condition and the causal condition. But they do not make it less mysterious.

For how can the fact that one *sees* that one is right, by a form of non-reflective awareness, be at the same time the cause of one's going from premises to conclusion? How is this supposed to escape the Humean objection that a mere cognitive state, whether it is belief or non-reflective awareness, can make the mind move? To repeat the point somewhat rhetorically, even if it is true that "one cannot think of oneself as powerless", and if "to understand reasons, one must understand their force in application in one's reasoning" (p.251), how is it that reasons *move* us? Burge's description suggests that our very awareness of reasons as *our* reasons, and of the evaluative norms of beliefs and actions as being *ours* is *in itself* sufficient to lead us "immediately" to the appropriate beliefs and actions. But is it the case? Someone can certainly see that R is a good reason for doing A, and grant that it is *his* reason, and have the *I* concept, but still fail to be moved by it. This is, after all, the Tortoise's predicament.

The cognitivist solution thus seems to give us no solution, for it makes motivation by reason mysterious. It just reinstates our original problem.

As David Owens (2000) puts it:

"If you already have a non-reflective awareness of the reasons which ought to motivate you, how does the judgement that you ought to be moved by them help to ensure that you are so moved? Such judgements look an idle wheel in our motivational economy, whether we are perfectly rational or not." (Owens 2000: 17-18)

5. Conventionalism and expressivism about logical reasons

If one puts together Humean doubts about the power of reasons to move us by themselves with a Humean doubt about the *factual* nature of reasons, then one is led to withdraw cognitivism about reasons. There are two directions that one can take here. The first consists in adopting a form of conventionalism about logical rules, according to which logical rules are adopted as implicit conventions which we follow. The other one consists in adopting a form of expressivism about them. Let us envisage these solutions in turn.

Conventionalism about logic is mainly an account of the justification of logical laws or rules, and in this sense it does not concern us here. But it has a counterpart for the problem of the force of logical reasons. According to the conventionalist conception of logic, we are moved to think according to logical rules because we have adopted, tacitly or not, various linguistic conventions. But this solution

encounters the same difficulty as that which is encountered by conventionalism about logic, and which is well known since Quine's "Truth by Convention" (Quine 1936). Quine's objection to conventionalism about logic was that one cannot derive logic from conventions since we would have to use logic itself in the derivation. The Lewis Carroll paradox has an exact counterpart to this: when the Tortoise is asked to draw the conclusion of her inference, and when he is shown the explicit premises (C) above, she fails to draw the conclusion. On the conventionalist story, there is at some point a convention which either a) we have explicitly, hence reflectively, accepted, or b) that we have accepted implicitly. If the convention is explicit (case (a)), why don't we need another convention in order to make our acceptance of the first convention effective? This is the familiar Carrollian regress: the very fact that we are aware of the convention does not make us move to the conclusion. If the convention is implicit (case (b)) how is it supposed to operate?

Expressivism holds that our acceptance of the rule is implicit. Famously, in the moral case, taking the expressivist line involves dropping (I) out of the picture, and endorsing both internalism and the Humean theory of motivation. Now what would it mean to endorse expressivism for logical reasons?

First it would mean to reinterpret what following an inference rule means, in the style of, for instance, Allan Gibbard's (1991) conception of our acceptance of moral norms. We could say, mimicking Gibbard's definition:

To say that Q follows from P is not to state some sort of fact about the relation between P and Q, but to express one's acceptance of a system of norms that permits inferring Q from P

There are no logical facts acting at distance. There are only acceptances of norms, and these are psychological facts about individuals. This is in line with the familiar point about Carroll's Tortoise, that she mistakes a rule of inference for a proposition of logic. And a rule is not an abstract object, but the product of a *practice* of inferring.¹³

Such a view of logic is of course much present in Wittgenstein's remarks about the "must", but it can be extracted also from recent expressivist writings such as Blackburn's book *Ruling passions* (1998). Blackburn actually suggests such a view of logic:

"Logic is our way of codifying and of keeping track of intelligible combinations of commitments" (Blackburn 1998: 72)

The norms of logic are not out there. They have to be internalized through a practice of inferring. An inferential rule, on this view, need not be conscious or the object of a reflective thought. It can be a disposition, and like a habit, it may remain largely tacit. As Blackburn says, following a norm, both in the practical and in the theoretical domain, is the product of an "implicit, tacit or practical epistemology."

¹³ The proximity between the kind of moral expressivism defended by Gibbard and Blackburn, and Wittgenstein's conception of logic is stressed by Blackburn 1990 and Blackburn 1998, pp.81--82.

When someone challenges me, I can try to articulate the principles and the norms of this epistemology, in order to justify my assertion. It is probable that I am not good at it, but it is the fact that my assertion is governed by norms, rather than my capacity to be conscious of them which is important to give meaning to my assertion (Blackburn 1998: 82).

This, I want to suggest, is on the right track. But there are still two problems with the expressivist position.

The first one is that logical reasons, on this view, fail to be objective. If logic reflects the structure of our implicit commitments, then its rules are just the reflection of the fact that these commitments are coherent. But we lose grip of the objectivity of logical reasons. It is not clear how we can escape the challenge raised by a Tortoise who would come to us with some deviant, non-truth preserving rule, of the kind instantiated by Prior's famous connective *tonk*, and who would claim that this rule is conform to *her* pattern of commitments. There is at least a relativist threat in the expressivist view.¹⁴

The second difficulty is that it is not clear that it solves our initial problem of accounting for the connection between a logical reason for inferring and the causal power of this reason. It says that our implicit practice with rules involves a disposition to infer accordingly. But the trouble is that a disposition is not, in itself, a cause. Merely being disposed to infer is not the same as being causally moved to infer. Someone can in general be disposed to accept certain inferences (in our paradigmatic case, of *modus ponens* inferences) in certain circumstances and yet be prevented from assenting to the conclusion in other circumstances. The Carroll problem shows that even dispositions can be defeasible, for the Tortoise could as well be said to have the disposition to infer the conclusion (*Z*), and still not act accordingly.¹⁵

6. Logical akrasia and rational dispositions.

We have reached the following position:

- (1) in order to solve the reason-causation problem in the case of deductive inference, we must not construe the kind of knowledge that a subject has or her logical reasons as a form of *explicit* knowledge, for this would lead us to the familiar Carrollian regress.
- (2) but we cannot simply assimilate our knowledge of logical rules to a form of practice or to a set of dispositions, for it would threaten the objective character

¹⁴ As said above, I do not intend to deal here with the problem of the justification of logical rules. An expressivist or non-factualist conception nevertheless faces hard problems with respect to this. Compare here P. Boghossian's objections to a comparable non-factualist view about the justification of the laws of logic, p.241

¹⁵ The point is stressed by Williamson 2003, p.254.

of reasons, and it would fail to explain how they can cause us into rational transitions.

A non-starter would consist in admitting that reason and causation have nothing to do in common, and that it is an impossible requirement to demand that normative reasons be also motivating ones, or that objective reasons be also causes. The hard cognitivist line which construes reasons as facts which act on us at a distance simply illustrates the implausibility of this articulation between the normative order and the causal order. But it would be a denial of the problem rather than a solution to it.

In order to confirm this conclusion, let us come back to our initial comparison, between ordinary practical *akrasia* and logical *akrasia*. Practical *akrasia* is usually defined as the ability for an agent to do, deliberately and freely, what he judges that he ought not to do. Although the description of the phenomenon often varies, let us, following David Owens (2002), call the first condition the *control* condition, and the second one the *judgement* condition. If we define epistemic *akrasia* as the power to believe, freely and deliberately what one judges that one ought not to believe, the two parallels conditions would have to hold in this case. If we now consider logical *akrasia* as a special case of epistemic *akrasia*, we can define it as the power to infer, freely and deliberately, what one judges that one ought not to infer, or alternatively – as in the Tortoise’s case, the power not to infer, freely and deliberately, what one judges that one ought to infer.

In describing the Tortoise’s case, we have assumed that such a logical *akrasia* is possible. But is it? According to the judgement condition, logical *akrasia* is possible in the first place only if a person has the power to have a second order judgement to the effect that she ought to infer a given proposition on the basis of propositions A,B.. and a number of other premises, and if this second-order judgement differs from her first-order judgement:

(a) I ought to infer that Z on the basis of A, B...etc., but not Z

Or by using, as we did above, the notion of a reason:

(a’) I have all good logical reasons to infer Z on the basis of A,B..., but not Z

This seems to be a case of Moore’s paradox “P, but I believe that not P”, or “P but I do not believe that P”. If one considers that it is impossible to have thoughts of this form, this would rule out automatically (a) or (a’). But even if one considers that thoughts of this form are impossible, there does not seem to be any such impossibility with (a) or (a’). For instance one might refuse to accept (Z) just because one has *other* reasons than logical reasons not to believe (Z). The Tortoise could admit that he is not reasonable, and could simply here bite as bullet, as we sometimes do. In order to engender a real incoherence, one has to restrict the reasons to believe in context (a) or (b’) to *logical reasons*. For a rational thinker, logical reasons are those which are supposed to rule his transitions in thought when he

attempts to be logical. In other words, the normal way to form a belief through inference is to work out whether it is true in virtue of its following logically from other beliefs that one has, and it is therefore incoherent both to recognize that this method of forming belief is reasonable and to fail to adopt this method. But to insist on this requirement in order to rule out (a) or (a') is just to insist, once again, on what we have called in section 4 the condition of reflective awareness. And this leads just to the usual Carrollian regress.¹⁶

The second condition for the possibility of logical *akrasia* is that the subject in some sense controls her beliefs, *i.e.* that the belief in the conclusion of an inference be freely and deliberately formed. This is of course the point where the parallel between the practical and the logical case fails, for there seems to be no sense in which one could freely and deliberately infer a conclusion or infer at will contrary to our inferential reasons, just as there does not seem to be any sense in which we could, at least directly believe at will. The issue is indeed complex and disputed, but I shall here simply assume that there is no such control. And if there is no such control, logical *akrasia* is impossible.¹⁷

These brief reflections on the possibility of logical *akrasia* do not tell us how the normative force of logical reasons can have a causal influence upon our mind. But they suggest a solution. In order to be a logical reasoner, it is not necessary to have a reflective awareness of what one ought to infer from one's current beliefs. As we have seen we are automatically led to the Carrollian paradox if we suppose that in order to believe that P on the basis of other beliefs through a process of reasoning or inference, we have to attend the norms of our reasoning in the form of second-order judgements about what we ought to believe. We do not have what Scanlon calls "judgement sensitive" beliefs, in the sense of what an ideally rational person ought to believe when she would judge that there are sufficient reasons to believe something. We do not reason on the basis of such second-order beliefs about our beliefs. We do reason, however, on the basis of the contents of our beliefs. Transitions in thought are not reflective in this sense. When I believe that Q on the basis of P and if P then Q, I believe that Q because I believe *that* P and because I believe *that* if P then Q, but not because I believe that I ought to infer the former from the latter beliefs if I were rational or because I have a further belief of a similar form. What goes wrong in the Tortoise's story is that it induces to construct reasoning in this sense.

It does not follow, however, that reasoning is a matter of brute force, or a mere causal disposition to believe Q when I believe that P and that if P then Q. I

¹⁶ It seems to me that the Carrollian regress illustrates the impossibility of the judgement condition for logical *akrasia*. Owens (2002), argues, on the contrary, that the judgement condition is possible, and denies that the control condition is possible.

¹⁷ *Locus classicus*: Williams 1973. Williams' basic argument is that an agent could not at the same time will to be believe that P and take herself to have a belief, for she would both believe that she does not believe that P (by hypothesis) and will to have the belief that P as a result of some action of hers – hence she would have both to believe that P and to believe that not P, and be conscious of it. I shall ignore here the literature on the possibility of control over belief, and shall assume, with most writers, that *direct* control over belief is impossible. See Engel 2002

am aware of what I am doing, even though I do not attend to my reasons. Let us call this the *foreground* conditions of my reasoning or inferring.

But there are *background* conditions as well. We can take these to be of two kinds: on the one hand they must tell us something about the psychological states which have a *causal* role in our inferences, and on the other hand they must tell us something about the *rational* role of these inferences.

The first condition is met if we construe our logical reasons as based on a *tacit knowledge* of the inferential forms which govern our logical arguments. Such tacit knowledge is implicit, but not simply in the sense of being dispositional. It must be implicit in the sense of instantiating a causal structure in thought which must, in some sense, mirror the formal structure of our arguments. This requirement is the one that Evans (1985) and Davies (1987) have imposed upon the notion of tacit knowledge. Tacit knowledge of this kind is required to be a state, or a set of states, in the brain. They are fully causal. The point is that there must be a mechanism, which is generally reliable, and which grounds our inferential dispositions. At a sub-personal level (Davies 2000), the transitions must be instantiated in thought, and the subject need not be aware of them. I take these conditions to be determined by proper research in the psychology of reasoning. Such research will, for instance tell us whether certain schemes of inference are closer to those sanctioned by logic or not; it will tell us whether some are more “natural” than other others, or more easy to process.¹⁸ These psychological facts, I submit are necessary to meet our psychological and causal conditions. But tacit knowledge of this sort is certainly not enough to give us *reasons* to infer, for a blind causal mechanism, even tacitly known, is not a reason. For this it is required that we can become aware of our inferential transitions at the personal, conscious, level. So we need to add a further condition, that such knowledge can become explicit.

This involves the possession of *rational dispositions in addition to having the requisite tacit knowledge of rules*. Rational dispositions are not of the same kind as causal dispositions or states of tacit knowledge. They are dispositions to reflect about one’s first-order states. In this we need not disagree with the views described in section 4 above, of non reflective cognitivism, or with Scanlon’s more reflective view of this point:

“*Having* a judgement sensitive attitude involves a complicated set of dispositions to think and react in specified ways. For example, a person who believes that P will tend to have feelings of conviction about P when the question arises, will normally be prepared to affirm P and use it as a premise in further reasoning, will tend to think of P as a piece of counterevidence when claims incompatible with it are advanced, and on.” (Scanlon 1998: 21)

But the point is that these are dispositions, we need not be elicited in all instances of reasoning, and which are, most of the time absent from our ordinary inferences.

¹⁸ See Engel 2001.

I propose, therefore, that our logical reasons be based on states of tacit knowledge, considered as first order dispositions. But being based upon them does not mean being reduced to such states. Our logical reasons are also based on rational dispositions, which are second-order dispositions to have reflective states about our first order states and beliefs. It is essential here that the latter be dispositions, and not systematically associated to the first ones in the course of the psychological act of inferring. For a subject to be sensitive to a logical reason, it is not necessary be conscious of it and reflect upon it, in the second-order mode. One can be a rational thinker without being able to conceptualise one's transitions, and without being reflective about them. Rationality in logical inference does not require that one knows what kind of transitions one follows, and even less that one knows that one knows it. In Williamson's terminology rationality is not "transparent" (Williamson 2000). Nevertheless, we can become conscious of our rationality, and form second-order judgements upon our ways of inferring. But the reasons, in order to be operative, must in some sense be known. The requirements of logical rationality are such that they need not be all accessible to the subject. One can be logically rational, and a reasoner, without being a conscious reasoner.

It remains to be seen how, on this quasi psychological account, our logical reasons can be objective. I can only here suggest an analysis of this feature. A subject who has rational dispositions is not simply following rules which belong to his psychological set up. He is aware of the rules he follows, takes a stance towards them, and is able to revise them occasionally. He takes his rules as norms or as leading principles. In this sense he is able to reflect upon them critically. This activity of comparison and evaluation allows him to conceive of his rules as objective. Our description of a thinker's rational dispositions need not differ here from the description of what Scanlon calls "judgement sensitive attitudes" or of what Burge calls "being a critical reasoner".¹⁹ It might be thought that reflection upon the rules that one is rationally disposed to follow takes us back into the difficulties which I have raised above for reflective cognitivism. But this is not the case. There is all the difference in the world between being able to think reflectively about the rules that one follows and actually thinking of them in the course of reasoning. Logical reasoning is not such a reflective activity and does not need it. But understanding how our rules of inference can be reasons needs this form of reflection. We do not need to take reasons as facts in order to secure this objectivity of logical reasons.

This sketch of an account of the causal and rational force of our logical reasons is certainly incomplete. It does not tell us what the base of these dispositions are, nor how they are triggered. It is certainly open to the usual difficulties of a dispositional analysis, but it seems to me to be on a better track than those examined here.*

¹⁹ The distinction I have in mind here is close to that advocated by Philip Pettit between intentionality and thought in Pettit 1993, although I am not claiming that objectivity of rules comes with their being social.

* A version of this paper was read at the 4th conference of The European Society for Analytic Philosophy, at Lund University June 2002. For discussion of another version, read at the conference on *Mind and Action III*, in Lisbon 2001, I am indebted to Antonio Marques, Fred Dretske, and Donald Davidson. I thank two anonymous referees of this journal for their very helpful comments and suggestions.

CV

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