

Rationality, reasoning and rules: reflections on Broome's *rationality through reasoning*

1 Two pictures of rationality

Broome proposes a particular picture of what it is for someone to be *fully rational*: according to him, a fully rational person satisfies all the requirements of rationality:

(*Requirements*) Being fully rational is satisfying all the requirements of rationality.

Broome *contrasts* his proposal with an alternative picture according to which:

(*Responding*) Being fully rational is responding correctly to the reasons you have.¹

He argues vigorously for the correctness of Requirements and rejects the Responding alternative.

One central aspect of Broome's overall position that I have not fully understood is why he takes this to be an illuminating way to set up the issue about the nature of rationality. Requirements and Responding are not intrinsically in conflict with one another. Whether they conflict depends not just on what they say as so formulated, but on what the requirements of rationality are taken to be. If the requirements of rationality were that you should respond correctly to the reasons that you have, then the two pictures would be equivalent.

I believe that the contrast Broome has in mind is better captured not by the distinction between Requirements and Responding, but rather between two different conceptions of what the requirements of rationality are.

First:

(*Structural-Rationality, SR*) Being rational is ensuring that your attitudes satisfy certain structural, coherence requirements.

And in contrast:

(*Response-Rationality, RR*) Being rational is correctly responding to the reasons that you have.

What Broome seems most to want to argue is that rationality consists of SR rather than RR.

2 The 'quick objection' to response-rationality

Broome develops the following objection to Response-Rationality. RR implies the following:

Core Condition. Necessarily, if you are rational, you F whenever your reasons require you to F.

Broome then develops what he calls a 'quick objection' to the Core Condition. The objection is that it is possible for the following four propositions to be true at the same time:

1. (1)

Your reasons require you to F

2. (2)

You do not believe that your reasons require you to F

3. (3)

As a result, you do not F

4. (4)

Nevertheless, you are perfectly rational

If it were true that all four of these propositions could be true at the same time, then obviously the Core Condition, and with it RR, would be false.

But why should we believe that (1), (2) and (4) could be true together? Could a fully rational person fail to have correct beliefs about what his reasons require him to do?

If reasons were external facts, then a rational person could get them wrong. As Broome notes, though, there is an alternative way of thinking about reasons, according to which reasons are not external facts but are rather attitudes of the thinker herself. And a traditional view about a person's knowledge of her own attitudes is that, under the right conditions, she necessarily has correct beliefs about what her attitudes are.

About this attitudinal view of reasons, Broome argues that it leads to a regress:

Even a rational person must have attitudes that she herself does not believe she has. Otherwise, for each of her beliefs she would have the higher-order belief that she has that belief. (p. 75)

Broome's counterargument might be deemed problematic in at least two respects.

First, the attitudinal view of reasons need not commit itself to every thinker *actually having* correct beliefs about her beliefs, but only to her being able to form such beliefs were she to see the need to do so. That suffices to evade the regress problem.

Second, and even if we were to put this point to one side, it is arguable that Broome targets the wrong view. For the most interesting alternative to the 'reasons as external facts' view is not that a person's reasons are all *attitudes* of hers, but rather that they are all *conscious mental states* of hers.

Such conscious states might be attitudes, but they might also be—and in the most basic cases are—*conscious presentational states of seeming*: such states as perceptual states, introspective states or states of intuition.

On a familiar foundationalist version of such a view, in the most basic case, the only justifiers for a belief are conscious states of seeming. For a *belief* to function as a reason for another belief it would have to have been independently justified by one of these states of seeming.

Broome's regress problem does not arise for these seeming states: you can have a correct belief about each presentational seeming state that you have without this initiating a vicious regress.

Furthermore, Broome's Quick Objection to RR won't work on this version of the view, because it's hard to see how you could fail to know which conscious states of presentational seeming you are experiencing, once you ask yourself the question.

So, for all that the Quick Objection shows, rationality could be at least partly about responding correctly to the reasons you have.

3 Basing prohibitions, permissions and requirements

In contrast with RR, Broome favors SR, according to which rationality consists in ensuring that one's attitudes satisfy certain requirements of coherence. He proposes the following as good candidates for such requirements:

No Contradictory Beliefs. Rationality requires of N that N does not believe at t that p and also believe at t that not p.

Modus Ponens Requirement. Rationality requires of N that, if N believes at t that p and N believes at t that if p then q, and if N cares at t whether q, then N believes at t that q.

Enkrasia: Rationality requires of you that you if you believe you ought to F, you intend to F.

I am inclined to agree that rationality imposes some requirements of coherence on thinkers, although I think it is doubtful that they are exactly the ones that Broome formulates above. However, I will set the point aside for now and simply grant the requirements as stated. What I want to emphasize instead, following Broome, is that rationality has views about how it would be appropriate for you to conform to these requirements.

For example, suppose you find yourself with the belief that you ought to F but without the intention to F. So far, you would be in violation of Enkrasia, and granting that it is a correct principle of rationality, you would be irrational. You must somehow get yourself to conform to Enkrasia.

However, while it would be acceptable for you to conform to the requirements of rationality by coming to intend to F *on the grounds* that you believe you ought to F, it would be unacceptable for you to reject the belief that you ought to F on the grounds that you don't intend to F.

Broome calls this a 'basing prohibition' of rationality. He also acknowledges basing permissions of rationality.

Are such basing prohibitions and permissions consistent with Broome's view that rationality is always just a matter of wide-scope, structural requirements of coherence?

One could construe (as I have done in other work) basing an attitude F on a basis B, as a matter of taking B to be a good reason for F and F'ing as a result. On such a construal, saying that one may not base F on B is to say that one may not take B as a good reason for F'ing and F as a result of that taking. Strictly speaking, this is consistent with the Core Condition, which insists that there are positive basing requirements of rationality but is silent on whether there are basing prohibitions or permissions.²

And while Broome is prepared to acknowledge basing prohibitions and permissions, he rejects the claim that there are *positive* basing requirements:

There are basing prohibitions but no positive basing requirements. For instance, if you believe you ought to F, there is no requirement that you have an intention to F that is based on this belief. To be rational, just having the intention is enough. Suppose you always intended to F, but you have only recently formed the belief that you ought to F. Your intention is not based on your belief, but nevertheless you may be rational. (p . 141)

Pace Broome, I believe that there clearly are positive basing requirements of rationality. I won't discuss his particular practical example, but a theoretical one instead.

Suppose you have a visual perception as of a cat's being on a mat. And suppose you are not aware of any defeating background beliefs.

In those circumstances, rationality requires you not merely to believe that there is a cat on the mat but

also that you *base* your belief on your visual impression.

Why is it not enough that you merely have the relevant belief? Why does rationality require that you *base* it on the visual perception?

Because you can have a good reason for a belief and yet not base your belief on that good reason, but rather on something else that is not a good reason for it. In such a case, you would not be rational. For your belief to gain rational standing it must not merely be had in the presence of a mental state that supports it, but must be *based* on that mental state.

So, in addition to whatever structural requirements of coherence there may be, and in addition to the basing prohibitions and permissions, there must be positive basing requirements of rationality.

4 Basing and purely automatic processes

Broome's view that there are no positive basing requirements is of a piece with this view that the coherence requirements of rationality could be satisfied via purely automatic sub-personal processes of which the thinker may be entirely unaware.

Let's take a case in which a subject satisfies the No Contradictory Beliefs requirement, but where this satisfaction is brought about by the sorts of purely automatic, sub-personal processes of which the subject has no awareness. Say you believe that platypuses do not lay eggs. Then you hear a radio program on which an expert says that platypuses do lay eggs. As a result you acquire the belief that platypuses lay eggs and *automatically* lose the belief that they don't. You don't think about it; reflect on the fact that the two propositions are incompatible with one another; think about which one you have most reason to keep; keep it; and get rid of the other. That would be conscious active reasoning. But in the example as I described it, no such reasoning occurs. Compliance with No Contradictory Beliefs is brought about via sub-personal automatic processes of which the subject is not aware. All he will finally be aware of is that he has acquired the new belief and that the old one is gone.

It is essential to Broome's picture of rationality that if *all* of the requirements of rationality could be fulfilled in this automatic, sub-personal way, then a person would count as ideally and fully rational.

After all, what the requirements do is ask for a person's attitudes at a time to satisfy certain patterns. The requirements don't speak to *how* those patterns are to be achieved. As a result, no particular process by which the patterns are achieved is called for or ruled out.

Indeed, Broome is very clear that, on his view, nothing further is required. He discusses reasoning not because he regards it as somehow constitutive of rationality. He discusses it only because he believes that, as a matter of contingent fact, psychologies like ours are incapable of satisfying the requirements through purely automatic means. As a result, we resort to reasoning. In principle, though, a creature could be fully rational while relying only on purely automatic processes.

Some ideally rational creatures such as angels may have a rational disposition that works infallibly in this automatic manner. They find themselves automatically satisfying every rational requirement they are under. ... But we mortals will never match up to angels. Some requirements are too difficult for our automatic processes to cope with; I shall soon give an example of difficult Bayesian requirements. But when automatic processes let us down, our mortal rational dispositions equip us with a further, self-help mechanism. We have another way of improving our score by our own efforts. We can do it through the mental activity of reasoning. (p. 207)

We engage in reasoning, then, only because purely automatic processes let us down: in psychologies like ours, the engineering of rationality satisfaction cannot achieve all its goals through purely

automatic processes.

I don't believe that Broome's picture of an ideally rational creature is right. If we were to put the point into a slogan it would be this: a rational creature is a thinker that is presented to itself *as* a rational creature. It believes what it does partly *because* doing so is the rational thing to do. It follows that a creature can't count as fully rational if it fulfills its requirements automatically and opaquely, without a conception of why it's doing so.

What I have given voice to just now is one version of a standard internalist view of rational belief fixation. If you are rational in believing something you have access, in some appropriate sense, to the fact that your belief is rational, and to what it is that makes your belief rational.

The standard way of motivating such a view consists in hypothetical cases like that of Norman the clairvoyant (see Bonjour [1985](#)). Norman has the ability to have clairvoyant beliefs about certain subject matters, but he is utterly unaware that he has this ability. Every so often, this ability of his delivers into his consciousness a belief—in this case, say, that the President of the US is on a secret trip to Iran. This thought, along with the conviction that it's true, just pops into his head.

However, he lacks an introspectibly appreciable basis why the belief that has popped into his head is the right thing to think about the President's whereabouts.

In such a circumstance, Norman's natural response wouldn't necessarily be to ask straight away: Is this belief true? But rather: Do I have any reason to believe it? Do I already possess evidence that would make this a reasonable belief for me to hang onto? Or is it just something that is popping into my head, along with the conviction that it is right, for which I lack any evidence?

To answer this question he would have to try to call to mind evidence that he could recognize to bear on the question of the President's current whereabouts. Does he remember reading about this? Or someone's telling him?

Suppose Norman is reasonably confident that he couldn't have read about this or found out about in any testimonial way. Nor, in the nature of the case, could he have found out in any other more direct way. If he went on believing it, would he be rational? Surely, not—even if the belief were true and the output of a reliable process.

What does this sort of example show?

In my view it shows that being fully rational does involve something like having an introspectibly accessible *basis* for your belief, a basis whose relevance to supporting your belief you must be in a position to appreciate.

If that's right, then Broome is wrong to claim that you could count as *fully* rational even if you end up conforming to the requirements of rationality via purely automatic processes.

Norman's case is one of non-inferential belief. But the style of example would apply equally to inferential belief. Someone could be hyper reliable in believing *q* whenever he both believed *p* and believed if *p*, then *q*. But unless he did so with some awareness that having those two beliefs made it rational for him to have the third, we would not think of him as rational. Reliable, maybe; but not rational.

Broome, of course, doesn't think that conformity to the requirements of rationality is always achieved via purely automatic processes. But he thinks that this is a purely contingent matter.

On my view, a creature that satisfied all the requirements automatically, without having some conception of why that's the epistemically correct thing to do, would not be fully rational.

5 Broome's account of reasoning

Since Broome doesn't think that satisfying the requirements of rationality is, as a matter of fact, always done by automatic processes, he does face the question how we comply with the requirements of rationality when we need to rely on some reasoning. How, on his view, can we reason our way to compliance with the Modus Ponens Requirement?

As Broome says,³ his account is very similar to one that I had always been attracted to but that I had always felt nervous about because of its reliance on the notion of following a rule.

Paul has favoured a rule-following account in the past, and he continues to favour it. However, he does now seem to have acquired some anxieties about it. I favour a rule-following account too, and it pleases me very much that Paul does, and that he continues to stick to it. But I don't think he should have cold feet about it. I shall say why.

So the disagreement we have here is an unusual one for philosophy: Not so much on the question which view is true, but on the question what temperature one's feet should be at when putting it forward. I say your feet should be very cold; Broome says they can be quite toasty.

What exactly is going on here?

Let's first look at Broome's rule-based account of reasoning. Consider the simple inference:

1. (1)
It's raining.

2. (2)
If it's raining, the snow will melt.

So,

1. (3)
The snow will melt.

Broome says:

In reasoning, you *operate* on the contents of your premise-attitudes to construct the content of your conclusion-attitude. ... Take the snow example again. You consciously believe that it is raining and that if it is raining the snow will melt. ... You operate on these two propositions following the modus ponens rule [From 'p' and 'if p, then q' to derive 'q']. This rule tells you to construct the proposition that is the consequent of the second premise. You end up believing this consequent.

...

It is an essential feature of reasoning that the operation is rule-governed. In reasoning, you follow – are guided by – a rule. (pp. 231–2)

Broome concludes by expressing satisfaction that he has arrived at an adequate account of reasoning.

I have arrived at necessary and sufficient conditions for a process to be active reasoning. Active reasoning is a particular sort of process by which conscious premise-attitudes cause

you to acquire a conclusion attitude. The process is that you operate on the contents of your premise-attitudes following a rule, to construct the conclusion, which is the content of a new attitude that you acquire in the process.

Briefly: reasoning is a rule-governed operation on the contents of your conscious attitudes.
(p. 234)

As Broome says, this is a very appealing picture of reasoning. It seems to capture the sense in which we would like reasoning to be something we do, as opposed to merely being a causal process that takes place in our minds.

It contrasts with what Broome calls the ‘jogging’ account of reasoning, according to which all that a thinker *does* is call to mind the contents of attitudes of hers; automatic processes then take over and she finds herself simply believing some new thing (the conclusion-attitude). Broome says that, by contrast, on his account “[reasoning] is an act.” (p. 235)

As Broome notes, it would be harmless to say that some reasoning is correctly described by the jogging account. Many psychologists these days like to talk about what Daniel Kahneman (2011) calls System 1 reasoning—the sort of reasoning that is automatic, quick, sub-personal and done with little sense of voluntary control. A jogging model may adequately characterize such System 1 reasoning.

But why are we so sure that not *all* reasoning can be captured by something along the lines of the jogging model?⁴

A reasonable first response is the one that Broome gives: It is simply obvious that there we are able to engage in reasoning in which we are active all the way from premises to conclusion. But I believe that there is a stronger point in the offing.

Suppose some reasoning was such that, having rehearsed its premises, some conclusion simply came to you (accompanied perhaps by the feeling that it is ‘right’), but not accompanied by any awareness of the steps leading up to it. Full rationality would require that one ask oneself whether to *endorse* the conclusion that has simply come to you in this way. And this in turn would require that you lay bare the reasoning process by which the premises are supposed to have led to the conclusion.

In other words, full rationality requires that a self-aware process of reasoning, one with no blind spots in it, vet the deliverances of an automatic process and rule on their correctness. It requires rational control. This gives voice, yet again, to the internalist picture of rational belief discussed in the last section.

A further important point that can be made in favor of the rule-following picture of reasoning is that it enables us to capture something that seems very central to our reasoning abilities, and that is that they are both *general* and *productive*.

6 The rule-following proposal: the intentional view and the inference problem

The challenge is to make sense of this rule-guided picture of reasoning.

The problem I have in mind does not derive from a *generalized skepticism* about the idea of following a rule. That problem is associated with Wittgenstein and has been expounded most influentially by Kripke (1982).

On Kripke’s well-known reading, there is a problem saying how it could be determinately true that we are following one rule as opposed to an infinity of other rules with which our finite behavior is also in conformity. What, asks Kripke’s Wittgenstein, would determinately make it the case that it is *Modus Ponens* that I am following, as opposed to some bent rule that deviates from Modus Ponens at some

point past my computational abilities? (See Broome's discussion of this on p. 241).

Let me waive this problem for now (I'll come back to it later). Let it be that there is as determinate a fact as you might want about which inference rule it is that someone has internalized or is following at this moment.

The problem is to make sense of how such a *rule could guide* a person's reasoning, in the way that Broome himself insists upon.

You operate on these two propositions following the modus ponens rule. This rule tells you to construct the proposition that is the consequent of the second premise. You end up believing this consequent...It is an essential feature of reasoning that the operation is rule-governed. In reasoning, you follow – are guided by – a rule. (pp. 231–2)

When you look at this language, it is hard to resist the following picture of what's going on. Somehow or other, you have come to accept the Modus Ponens (MP) rule. The rule says: From 'p' and 'if p, then q' to derive 'q'. This rule forms the content of some intentional state of yours. When you recognize a pair of your attitudes to have contents of the MP form, you call this rule to mind. You see that it 'tells' you to derive 'q' from the premises and so you do so. You are guided by the rule to derive a new attitude from your previous attitudes.

On this Intentional State construal of rule-following, then, your actively applying a rule consists in your grasping the rule, forming a view to the effect that its trigger conditions are satisfied, and drawing the conclusion that you must now perform the act required by its consequent.

In other words, on this Intentional view of rule-following, rule-following is carried out with *reasoning*. You have to reason your way from what the rule tells you, plus your recognition that its trigger conditions are satisfied, to do what it calls for you to do.

There is no doubt that some rule-following is like that. When I wake up my computer, I follow the rule: Tap any button, wait for the dialogue box to open, enter your password, then press 'return.' Of course, all this can happen very quickly because I may have automated the routine. But when something goes wrong it becomes very evident that all this rule-guidance by way of reasoning is there in the background and can be called to mind.

But, if, as on Broome's and my picture, rule-following is to *explain* reasoning, then this can't be what rule-following in general consists in: it can't both be the case that rule-guidance in general explains reasoning and that rule-guidance in general is explained by a process that involves reasoning from a rule. The two views can't be true together. Elsewhere, I have called this the 'Inference Problem' for the notion of rule-guidance [see my (2008a, b, 2014)].

7 Rule-following without intentional states: dispositions

So, if rule-guidance is to be the key to reasoning, we are going to have to find a way of thinking about how a rule might guide you in deriving a conclusion from some premises without this itself involving some reasoning. How is that to be done?

We can try one of two tacks. The first and most radical would be to rid our picture of rule-guidance of any rule-encoding intentional state. The other would be to allow a rule-encoding intentional state into our picture, but to find a way of maintaining that it can exert its control over our thought and behavior in a way that's *non-inferential*.

Broome tries to convince us that the first idea can be made to work. In this respect, he follows in the footsteps of a number of philosophers who have thought that we can explicate what it is for a rule R to *guide* our thoughts merely in terms of our dispositions to conform to R under appropriate

circumstances.

On this view, roughly, for S to be guided by rule R is for S to be *disposed to conform to R*. If this sort of account could be made to work, then clearly there would be no Inference Problem.

On my view, any such construal would not be an explication of rule-following, but rather an abandonment of it. There are at least four major reasons.⁵

First, rules prescribe what to do. They are sets of instructions that tell us what to do this or that thing under this or that circumstance.

(Wakeup) If you want to wake up the computer, tap any button, then wait for dialogue box, then enter your password.

Following them correctly means complying with their instructions. Necessarily, there is such a thing as following a rule correctly or incorrectly.

Dispositions, however, don't have correctness conditions. If a particular cube of sugar were not to dissolve in water, it wouldn't be behaving incorrectly. It would just show that we had not yet figured out exactly which dispositions sugar has.

Second, even if we could make sense of our dispositions having correctness conditions, the rules we follow have infinitary correctness conditions, whereas our dispositions are finite. Modus Ponens is defined for *any* three propositions that are related in a MP way, no matter how long or complex they may be. The rule that says, for any propositions that are related by MP while contemplated on the surface of the Earth, from 'p' and 'if p, then q' to derive 'q', is a completely different rule. You would not count as rational if you employed that rule.

But how are we to make the distinction between full-blown MP and such bent rules, when we are restricted to making it on the basis of a person's dispositions alone?

Third, even with respect to the dispositions we do have, we know that they can contain dispositions to make mistakes. So, if we read off what rule we are following simply from our dispositions, we will attribute a rule that will be intuitively incorrect. Getting around this problem requires specifying in non-circular terms a set of optimality conditions under which it will be impossible for your dispositions to deviate from the rule that is, intuitively speaking, intended. But no one has succeeded in showing that there are such optimality conditions.

Finally, *following* a rule involves being *guided* by it. But this element would appear to have gone completely missing from a Dispositional View. If the element of guidance were present, we would expect the disposition to conform to a rule to be *explained* by the agent's acceptance of the rule. On a Dispositional View, that is impossible, however, since there is no rule-encoding state that explains the dispositions to behave, but only the dispositions themselves.

8 Broome's dispositional account of rule-following

Broome believes that the relevant objections to a Dispositional Account can be answered. However, Broome's main innovation, which has some antecedents in the literature, is to add a certain sort of 'seeming right' to the exercise of the disposition that is said to constitute following a rule of reasoning. Modus Ponens' guiding me on this occasion is: my being disposed to conform to MP, along with this behavior's seeming right to me.

Let us start by returning to the bizarre example and compare the two versions of it that I have by now described. In both, you start by believing it is raining and believing that if it is raining the snow will melt. In both versions, a causal process takes you from these beliefs

to a new belief that you hear trumpets. In the original version on page 225, the new belief just comes to you. In the new version on page 233, you acquire the new belief by reasoning following a rule. The rule is incorrect, of course. It is the rule of deriving the proposition that you hear trumpets from the proposition that it is raining and the proposition that if it is raining the snow will melt.

What is the difference between the two versions of the example? One difference is that in the version where you reason the process *seems right* to you, as I put it, whereas in the original version it does not. (p. 237)

What is this notion of ‘seeming right’ such that it can, by its mere appearance, transform a purely causal process, in which one thought merely succeeds another, into a piece of *reasoning*, a process in which a rule of reasoning *guides* the thinker to actively derive a conclusion from his premise beliefs?

Seeming right in our context is an attitude of yours towards the mental process you go through when you reason. An essential part of it is being open to the possibility of correction. When a process seems right to you, you are open to the possibility that the process might no longer seem right to you if a certain sort of event were to occur. We may call the event ‘checking.’ (p. 238)

As Broome explains, this openness to correction is itself a disposition. You are disposed to lose the attitude of its seeming right in particular circumstances, specifically if checking occurs and produces a different result.

By contrast, when you just find yourself believing you hear trumpets, there is nothing like this attitude. It is not open to correction in the same way, and there is no such thing as checking.

Well, even when the belief about hearing trumpets just pops into your head, there is, of course, a lot of checking that you can do, since you can check whether you really do hear trumpets or whether it really is raining. Beliefs can always be checked.

What Broome means, of course, is that in the one case, but not in the other, the *process* linking these beliefs will seem to you to be one that can be checked and corrected. And you are open both to checking it and to being corrected.

However exactly this ‘seeming right’ is to be construed, there looks to be a puzzle about how to make sense of it.

The crucial observation is that in the case of following a rule, or reasoning from some premises to a conclusion, what has to seem right is something *relational*: the behavior has to seem right *relative* to the rule that is being followed.

What is at issue is not the correctness of a belief; it’s not even the validity of an inference. Rather, what is at issue is the correctness of the application of a particular rule. It could even be a bad rule, such as Affirming the Consequent. But if Affirming the Consequent is the rule you are following, then it ought to seem right to you to reason from ‘If p, then q’ and q to p.

But now, how are we to make sense of the existence of this sort of relational seeming, while acknowledging that the subject doesn’t have access to an independent specification of what the rule is, given that we are working with a dispositional account according to which there is no rule-encoding intentional state.

We may formulate this problem in the form of a dilemma: either Broome takes this seeming to be relative to the rule, or he does not.

If he does, then he can drop the dispositionalism. An intentional state of the thinker’s that captures

which rule the thinker ‘has in mind’ in performing a given inference will not need any help from the dispositional facts. It will solve the problems of correctness, although may still leave a puzzle about guidance (the Inference Problem).

On the other hand, if the seeming right can’t be counted upon to have that rich relational content, but is effectively exhausted by the openness to correction, then Broome’s view is vulnerable to all the objections to the Dispositional View that we reviewed above.

My own preference is to take the other tack, to allow a rule-encoding intentional state into our picture of reasoning, but to find a way of maintaining that it can guide our thought and behavior in a way that’s *non-inferential*. I take some small steps to explaining how this might work in (Boghossian [2012](#), [2016](#)).

Footnotes

[1.](#)

I will follow Broome in not always explicitly adding the qualification ‘fully’, although ‘fully rational’ will always be what’s meant by ‘rational’.

[2.](#)

See Boghossian ([2014](#)). I am indebted here to Alex Worsnip.

[3.](#)

In an earlier exchange, see Broome ([2011](#)). See also the closely related passage in Broome ([2014](#), p. 20).

[4.](#)

The notion of an automatic process has entered the discussion in two distinct places: first in the contrast between automatic processes and person-level reasoning; and, second, in the contrast between (automatic) ‘jogging’ and active accounts of reasoning itself.

[5.](#)

See Kripke ([1982](#)), Boghossian ([1989](#), [2008a](#)) and Fodor ([2008](#)).

Notes

Acknowledgments

Thanks to the audience at the Symposium on John Broome’s book organized by Marie Josee Brunet and held in Montreal in March 2014 and to David James Barnett, Yu Guo and Alex Worsnip for helpful comments on an earlier version. Special thanks to John Broome for many stimulating conversations on these topics over the years.

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