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Responses

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Abstract This is a response to the comments of Boghossian (Philos Stud, 2016. doi:10.1007/s11098-016-0716-1), Cullity (Philos Stud, 2016. doi:10.1007/s11098-016-0717-0), Pettit (Philos Stud, 2016. doi:10.1007/s11098-016-0718-z) and Southwood (Philos Stud, 2016. doi:10.1007/s11098-016-0719-y) on my book *Rationality Through Reasoning* (Broome in Rationality through reasoning. Wiley, Chichester, 2013).

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My four commentators have put a great deal of time and effort into writing about my book *Rationality Through Reasoning*. I am extremely honoured that they found it worth their while. They set me serious challenges. Responding to them has not been easy; they have forced me to extend my arguments beyond those that are in the book itself. I am also extremely grateful for the authors' kind and generous remarks about my book.

1 Metapropositional beliefs

My account of reasoning has much in common with Philip Pettit's (2007, 2016). Pettit believes they are essentially the same account. The closer they are the more pleased I am. But I am ungraciously going to expose one significant rift between them. Pettit thinks that a metapropositional belief is essential for reasoning. I think not.

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I start with some points of agreement. Reasoning is a causal mental process. It starts from some attitudes that you have—'premise-attitudes'—and concludes in a new attitude—the 'conclusion-attitude'. In the case of one sort of theoretical reasoning, which I call 'belief reasoning', the premise-attitudes and conclusion-attitude are beliefs. The contents of these beliefs are respectively the premises and conclusion of the reasoning.

Not all processes that fit the description in the previous paragraph are reasoning. Attitudes can be caused by other attitudes in various ways. Suppose you notice the sun setting behind a tree on the hilltop, and so come to believe the sun is setting behind a tree on the hilltop. This belief might cause you to remember something you had totally forgotten: that long ago a building stood on that hilltop. Now you believe that long ago a building stood on that hilltop. So your belief about the sun causes you to have a belief about a building that you did not previously have—at least not for many years.

To give an account of reasoning, we therefore need to find what further conditions are necessary to make the process reasoning. Pettit and I are both interested in reasoning that is something you do rather than something that just happens in you. I call this 'active reasoning'. So we are interested in what further conditions are necessary to make the process active reasoning. In this paper I shall use the term 'reasoning' for active reasoning only.

For the moment, let us concentrate on belief reasoning only. In *Rationality Through Reasoning* I mentioned, as a further necessary condition for a process to be belief reasoning, that you have a first-order linking belief that plays a causal role in the process. A first-order linking belief links the content of the conclusion-belief to the contents of the premise-beliefs. Specifically it is the belief that the premises imply the conclusion.

Pettit contends that the first-order linking belief is an example of what he calls a 'metapropositional belief'. He holds that a necessary condition for you to be reasoning is that you have a metapropositional belief such as this, and that this belief plays a causal role in the process. Moreover, he holds that this condition is essential to reasoning.

I took the content of a first-order linking belief to be simply the conditional proposition that, if p_1 and p_2 and …, then q, where p_1 and p_2 and … are the premises and q is the conclusion. I did not think that a belief with this content would fall under the category of a metapropositional belief. But Pettit argues that, as I implicitly understand the conditional, it does. I shall not oppose his argument. So I shall now accept that a necessary condition for a process to be belief reasoning is that the reasoner has a metapropositional belief that plays a causal role in the process.

However, I deny that this condition is essential for the process to be reasoning.[1] That is to say, I deny that it contributes to making the process reasoning. I contend that it is merely a necessary consequence of a quite different condition that is essential for the process to be reasoning.

[1] For the difference between necessary and essential conditions, see Fine (1994).

As Pettit agrees, some further conditions definitely need to be added before we have a full account of belief reasoning. First, something needs to distinguish the causal role of the linking belief from the causal role of the premise beliefs. True, the tortoise reminds us that a belief with the content that, if p_1 and p_2 and …, then q could play the same role as a premise-belief (Carroll 1895). If it did, it would simply be another premise-belief. Then there would have to be a more complex linking belief as a necessary condition for the process to be reasoning. At some point, there has to be a linking belief that plays a different role; otherwise there will be an infinite regress. We need to specify what that role is (Broome 2013, 230).

Second, when we do, our specification must in some way rule out deviant causation. Given the vagaries of the mind, attitudes can cause other attitudes in all sorts of ways. Even some premise-beliefs together with a linking belief that links their contents to a conclusion, could cause you to believe the conclusion in some way that is not reasoning. Our account of the causal role of the linking belief has to rule out that possibility (Broome 2013, 230).

Third, our account has to explain how our reasoning can be active—something we do.

My account of belief reasoning aims to meet these requirements. My account is that in reasoning you operate on the contents of your premise-attitudes following a rule, to derive the conclusion, which is the content of a new attitude of yours that you acquire in the process. Let us call the complex disposition to reason—to operate on the premises following a rule and come to believe the conclusion—the 'reasoning disposition'. In *Rationality Through Reasoning* I filled out the description of it in detail, and in particular presented a dispositional account of following a rule (Broome, 2013, 231–242).

My account distinguishes the role of this disposition from the role of a premise-belief (Broome 2013, 234). It specifies the causal process as your operating on contents in a particular way, so it leaves no room for a deviant causal process (Broome 2013, 234). Finally, in the book I explain how my account makes reasoning something you do, just because it involves following a rule (Broome 2013, 235–242). I shall say more about this in Sect. 2. In these ways, I fill the gaps that need to be filled.

Possessing the reasoning disposition is necessary for reasoning, and furthermore it is essential to reasoning. The playing out of this disposition makes the process reasoning, and in particular it makes it something you do.

I wrote (thinking of belief reasoning only):

> We may treat your disposition to derive the conclusion from the premises—where deriving it includes actively operating on the premises following a rule and coming to believe the conclusion—as itself constituting an unconscious, implicit belief that the premises imply the conclusion…. I called the belief that the premises imply the conclusion a first-order linking belief. (Broome 2013, 233–234)

This to say, for the case of belief reasoning, that the reasoning disposition is a linking belief: it has the property of being a linking belief. I could have said instead that the reasoning disposition entails or incorporates a linking belief. The reasoning disposition is a linking belief in the way in which a human being is a biped.

I said this by way of a concession, and I do not insist it is true. It could be denied, because a typical belief has features that are not part of the reasoning disposition. For example, a belief that the premises imply the conclusion would typically incorporate a disposition to assert, if asked, that the premises imply the conclusion. The reasoning disposition does not incorporate this disposition. In so far as it is a linking belief, it is missing some of the features of a typical belief.

Still, I did accept that, in the case of belief reasoning, the reasoning disposition is a linking belief. I have now accepted that a linking belief is metapropositional. Since possessing the reasoning disposition is necessary for reasoning, I accept that possessing a metapropositional belief is necessary for belief reasoning. I agree with Pettit about that.

However, I deny that possessing a linking belief is essential for belief reasoning. The reasoning disposition is essential; it contributes to making a process reasoning. But it does not follow that a linking belief is essential. Being a human being is essential to having the right to vote, and a human being is a biped, but being a biped is not essential to having the right to vote. The fact that the reasoning disposition is a linking belief is incidental; it does not contribute to making a process reasoning.

Pettit speaks of a linking belief as controlling your process of reasoning. But it is unclear exactly how it controls it; beliefs more readily represent the world than control it. It is also unclear how a linking belief could make the reasoning process an action. What really controls your reasoning is your disposition to follow a rule. This is part of your reasoning disposition, but not part of your liking belief. It is also what makes your reasoning active.

It becomes particularly obvious that a linking belief is not essential for reasoning when we attend to sorts of reasoning other than belief reasoning. In those cases, a linking belief is not even necessary for reasoning, let alone essential for it. I did not realize this when I wrote *Rationality Through Reasoning*; I learnt it only as a result of a valuable comment I received from Nadeem Hussain (2015).

Other sorts of reasoning conclude in an attitude other than belief. For instance, practical reasoning often concludes in an intention. My account of reasoning generalizes from belief reasoning to other sorts by means of a small amendment. An amendment is required because different attitudes may have the same content. For example, an intention of yours to raise money for famine relief and a belief of yours that you will raise money for famine relief both have as their content the proposition that you will raise money for famine relief. But different attitudes participate differently in reasoning, even if they have the same content. For example, from an intention to raise money for famine relief you may derive by reasoning an intention to run a sponsored marathon. But you would not normally derive an intention to run a sponsored marathon from a mere belief that you will raise money for famine relief. So the process of reasoning must in some way take account of the nature of attitudes as well as their contents.

To recognize this, I take the objects of reasoning to be what I call the 'marked contents' of attitudes rather than their bare contents. Bare contents are propositions. The marked content of an attitude is a pair consisting of the attitude's bare content together with the sort of attitude it is the content of. For instance, if you intend to raise money for famine relief, the marked content of your intention is the pair <You

will raise money for famine relief; intention>. I take reasoning to be a rule-governed operation on the marked contents of your attitudes, rather than on their bare contents. That is the slight amendment.

The operation derives the marked content of the conclusion-attitude from the marked contents of the premise-attitudes, following a rule. A reasoning disposition is still essential for reasoning; it is the disposition to operate on the marked contents of the premise-attitudes, following a rule, to derive a marked content that is the marked content of a new conclusion-attitude. However, for reasoning apart from belief reasoning, the reasoning disposition is not implicitly a linking belief, and you may possess this disposition without possessing a linking belief.

What would a linking belief be, anyway? Take an example of instrumental reasoning. You intend to raise money for famine relief and believe that running a sponsored marathon is the best means of your doing so. You reason from these two premise-attitudes to a conclusion-attitude, which is the intention to run a sponsored marathon.

A first-order linking belief would link the contents of your attitudes. These contents are:

that you raise money for famine relief (the content of a premise-intention),
that running a sponsored marathon is the best means of raising money for famine relief (the content of a premise-belief),
that you run a sponsored marathon (the content of the conclusion-intention).

The content of a first-order linking belief would be that, if you raise money for famine relief, and if running a sponsored marathon is the best means of raising money for famine relief, then you run a sponsored marathon. You might not have this belief before you do your instrumental reasoning, since you probably do not believe you always take the best means to your ends. Even if you do have this belief, it cannot be what controls your instrumental reasoning, since it could equally well guide you to a belief that you will run a sponsored marathon as to an intention to run a sponsored marathon. A first-order linking belief is about only the propositional contents of attitudes, not the nature of the attitudes, so it cannot guide you to an attitude of one nature rather than another.

You might alternatively have a higher-order linking belief, which links the attitudes themselves rather than their contents. The link would have to be normative or rational in some way. For example, you might believe that rationality requires of you that, if you intend to raise money for famine relief, and if you believe that running a sponsored marathon is the best means of raising money for famine relief, then you intend to run a sponsored marathon. But a higher-order linking belief is not a necessary condition for reasoning. Even to have such a belief you need a range of sophisticated concepts including the concepts of *rationality*, *requirement*, *belief* and *intention*. Children can do instrumental reasoning before they acquire concepts like these (Broome 2013, 229). A higher-order linking belief is a metapropositional belief, but it is certainly not the sort of metapropositional belief Pettit has in mind.

Might you have a linking belief that links marked contents? It would be a belief with the content that if <You will raise money for famine relief; intention> and if <Running a sponsored marathon is the best was to raise money for famine relief;

belief>, then <You will run a sponsored marathon; intention>. But this is nonsense. Marked contents are not propositions, and they cannot be embedded under propositional connectives in sentences. Trying to embed them is a dead end; it leads to the well-known Frege-Geach problem (Broome 2013, 260–261; Geach 1960, 1965). This is not what Pettit has in mind either.

Pettit's idea that reasoning is controlled by a metapropositional belief therefore cannot get off the ground for reasoning other than belief reasoning. I conclude that, though the reasoning disposition is essential to reasoning, a metapropositional belief is not.

2 Following a rule

Why does it matter? Because my account of the reasoning disposition comes with an account of how, when you behave according to the reasoning disposition, you act. Reasoning is something you do. This is because the reasoning disposition involves following a rule. You are not merely caused to behave in accordance with the rule. The rule creates a standard of rightness, and you are guided by this standard.

It raises a problem. If you are to be guided in your behaviour by a standard of rightness, the standard must be distinct from your behaviour. It cannot itself be determined by your behaviour. But when you reason according to your reasoning disposition, it is not clear how this can be so. You disposition simply causes you to behave in a particular way, and there seems to be no room for a distinct rule to guide you. So it is still not clear how reasoning can be an act.

This is one of the problems of rule-following raised by Wittgenstein (1968, remarks 143–265). It is not the problem Pettit mentions of 'explaining how anything available to you in a relevant case … could present a relatively determinate, readable rule'. This is also raised by Wittgenstein and stressed by Kripke.[2] It has a place in my account of what makes reasoning correct (Broome 2013, 241–242). But in my separate account of what makes a process reasoning, it is the first problem that matters. This problem of rule-following is raised by Pettit, by Paul Boghossian (2016) and by Garrett Cullity (2016). *Rationality Through Reasoning* offers a solution, but evidently not persuasively enough. So I shall have another go now.

Suppose that, in the course of your education in arithmetic, you are asked the question '1000 + 2?' and give the answer '1004' (Wittgenstein, 1968, remark 185). There is a causal explanation of why you give this answer. The explanation will normally be something to do with your constitution, so we may attribute it to a disposition of yours. You are disposed to answer '1004', given the circumstances you are in, and that explains why you do.

You are disposed to answer '1004', but this disposition may be of more than one sort and it may unfold in more than one way. One possibility is that you do not believe the question has a correct answer, perhaps because you think addition does not apply over 1000. You may view the question as an invitation to pick a number at

[2] Kripke (1982). The problems are distinguished by Paul Boghossian (2016, 2014, Sect. 10).

random, and you happen to be disposed to pick 1004. Another possibility is that you believe a rule of arithmetic determines the right answer, and this answer is '1004'. In this second case, it seems to you that you reach your answer by following a rule.

In both cases you were disposed to answer '1004', but in the second case this disposition is accompanied by another. I call it the disposition for the answer to 'seem right' to you. It is a disposition to think there is a right answer, and to think you have it. Seeming right is not a phenomenal state, though it may be associated with a phenomenal state. It involves recognizing that there are wrong answers, and that conceivably yours might be one. It involves recognizing that the idea of checking your answer makes sense, and that checking might lead you to a different answer. By contrast, when you pick a random number you do not recognize any issue of right or wrong, and checking would make no sense. Seeming right distinguishes cases where it seems to you that you follow a rule from cases where it does not.

Still, even though your answer seems right to you, your apparent rule-following could be just a sham. It could be that your disposition causes you to give the answer 1004, and causes this to seem right to you, but you are not really guided by any standard of rightness. In that case, your answer would be merely caused, and not result from any act of yours. If you are really acting, following a rule, there must be a rule, and there must be the possibility of your failing to follow it correctly. There must be at least a potential difference between your answer's seeming right to you and its actually being right. Otherwise the rule-following is a sham. How can there be this difference?

In the example, there is an objective rule, which is the rule of adding 2. It determines that the correct answer is 1002, whereas 1004 seems right to you. So there is a difference between the answer's seeming right to you and its being objectively right. But this is not the difference that explains how you can be genuinely following a rule. Every rule is subject to interpretation, and your interpretation of the rule of adding 2 is not the standard one. You think that when you get the answer '1004' you are adding 2 according to the objective rule. You say 'Isn't it right? I thought that was how I was *meant* to do it' (Wittgenstein 1968, remark 185). You are therefore definitely not guided by the objective rule of adding 2. We are looking for a rule that you are genuinely following, and this is not it. The objective rule is irrelevant.

This makes the problem of rule-following harder. When you follow a rule, the rule you follow has to be the rule as you interpret it; that is what determines your standard of rightness. But your interpretation of the rule is surely determined by what seems right to you. So what seems right apparently determines the standard of rightness, which means there cannot be a gap between what seems right and what is right. 'And that only means that here we can't talk about 'right'', as Wittgenstein (1968, remark 258) says. Following a rule would be a sham.

But there is a solution. Let us change the example. Further on in your education, you are given a long column of numbers to add up. Perhaps you have to add them up in your head, or perhaps you are allowed to use a pencil and paper, or a calculator. You add up the numbers and get an answer. This seems right to you, since you work carefully. But its seeming right involves a recognition that it could conceivably be

wrong, and in this case you think it might well be actually wrong. You might have mispunched a number on the calculator or made a slip in your mental arithmetic. So you check by doing the sum again. If you get a different answer, you might do it a third time. You might continue for a while, hoping that a reasonably stable answer will emerge from your various attempts.

In this case what seems right may not be right. You yourself recognize that the answer you get on a particular occasion, which seems right, may not be right. This means it may not be right on your own interpretation of addition. You take this to be objective rightness, but it may not be. Your arithmetic may be deviant; perhaps you have not yet overcome your idiosyncratic way of adding 2 to 1000. Or perhaps you read the display on the calculator in an idiosyncratic way or use the keys idiosyncratically. If so, checking again and again will not get you any nearer to objective rightness. It seems to you that you are struggling to get the difficult sum right according to the objective rule, but actually you are struggling to get it right according to your own rule.

What is the standard of rightness you are striving for, given by your own rule? It is the stable answer that would emerge from your efforts if you repeated them several times. I mean an answer that comes up frequently compared with others. If there is no stable answer, there is no standard of rightness.

When there is a standard of rightness, it is given by your 'steady disposition', as I call it. On each occasion when you follow a rule, you are disposed to reach a particular answer and for this answer to seem right to you. As well as this, you have a steady disposition. This is a disposition for a particular answer to come up frequently, and for it to seem right to you, were you to repeat the process several times. The steady disposition determines what answer is actually right. It may be different from what seems right on a particular occasion.

Pettit asks 'How does a response seem when it seems right?' and he says 'The answer cannot be: it seems that it would seem right in a steady fashion.' Cullity makes a similar remark. They are right. When you do your long addition and the answer seems right, it is not that it seems to you that you would get this same answer frequently. How it seems to you is that it conforms to the objective rule of addition. In general, to seem right is to seem to conform to whatever rule you aim to follow—addition or whatever it is. However, the rule it seems to you that you conform to is the rule as you interpret it. What it actually is to conform to this rule—the rule as you interpret it—is given by your steady disposition.

What if you realize this, and believe that the rule you follow is given by your steady disposition? If this causes you to stop believing you are following the objective rules of addition, you are in trouble. But fortunately most of us believe our steady dispositions accord with the objective rule. So seeming right for us continues to be seeming to conform to the objective rule.

What determines the objective rule? That does not matter here. But as I understand him, Wittgenstein takes it to be given by the steady dispositions of members of your community, which generally converge together.

Seeming right is always relative to some rule or other, as Boghossian points out. In the example, your answer seems right relative to addition, not subtraction. This is the rule you intend to follow. Following a rule involves intending to follow a

particular rule. Pettit suggests that a rule requires to be 'relatively determinate' and 'readable' if you are to intend to follow it. But to intend to follow a particular rule, you do not need to know what behaviour will flow from it in particular cases. You have only to be able to identify the rule to yourself. For example, you might have a name for it, such as 'addition'. Or you might be able to pick it out by some other means.

You are really picking out a particular complex disposition—your steady disposition—with the purpose of allowing it to play itself out. In choosing whether to add or to subtract, you are choosing which among alternative steady dispositions to set in play. We often choose among dispositions. When setting out on a journey, you can decide whether to travel quickly or calmly. This is to choose between a quick disposition and a calm one. The quick disposition will doubtless lead you to rush a bit thoughtlessly if you encounter crowds; the calm one will make you more careful. You may choose between these dispositions, even though you do not know in detail what either one will bring you to do at particular stages of the journey.

The steady disposition you choose to set in play encodes the rule you intend to follow. When you intend, say, to follow the modus ponens rule, you have a steady disposition that encodes the modus ponens rule as you interpret it. We could say you are in a 'rule-encoding intentional state', in Boghossian's terms. This does not mean you can express the rule to yourself and work out what it implies. Boghossian says that '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'. But it is the dispositional facts that capture the rule.

Boghossian lists four reasons why he there cannot be a dispositional account of rule-following.

1. Rule-following needs a correctness condition. *True, and I have provided one.*
2. We cannot distinguish following a correct rule from following a 'bent' one. *Maybe true. But reasoning is reasoning whether it follows a genuine rule or a bent one, so it does not matter.*
3. You can have a disposition to make mistakes in following a rule. *True, and I have allowed for that.*
4. If you are to be guided by a rule, there needs to be a rule-encoding state that explains your rule-following behaviour. *In my account the rule-encoding state is your steady disposition, which explains your behaviour.*

I have no doubt that Boghossian finds my response to 4 unsatisfactory. It does not seem like proper guidance to him. You have 'only the dispositions themselves', he says. But what does he expect? In our causal world, our behaviour is caused by the external circumstances we are in together with our causal dispositions. There is nothing else to explain it. This can seem paradoxical. In our causal world, action itself can seem paradoxical. Our actions are nothing more than the playing out of our dispositions in whatever external circumstances we are in, so how can they be actions of ours? Mine is a compatibilist theory of action that applies to the special case of action in reasoning. It is intended to reconcile action with causation. If it still seems paradoxical, that cannot be helped.

3 Epistemology

It is very beneficial to me that Paul Boghossian has assessed my arguments from the point of view of epistemology. I did not pay enough attention to this point of view in writing *Rationality Through Reasoning*; I thought of this is a job for the future. Boghossian provides useful guidance. I interpret him as proposing additions to my catalogue of requirements of rationality, which I never claimed to be complete. His proposals seem plausible to me to differing degrees. I do not want to make a firm commitment to any of them just yet.

First, I am happy to accept that certain states of seeming, such as perceptual states, are reasons to believe. I am happy to accept that, if it seems cold to you, that is a reason for you to believe it is cold. Let us call these 'reasons of seeming'. I am also happy to accept a version of the Core Condition as applied to reasons of seeming—that rationality requires you to believe p whenever your reasons of seeming require you to believe p (where the first 'requires' has a wide scope). However, I am not sure just when reasons of seeming require you to believe a particular proposition. For instance, I do not know whether seemings have propositional form. I do not know whether reasons of seeming can conflict, and if they can, what they require you to believe when they do conflict. But however that works out, recognizing a requirement of rationality of this sort makes an important addition to my catalogue of requirements.

Boghossian argues there are positive basing requirements, but I am not convinced by his example. 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. Your perception is a reason of seeming to believe there is a cat on the mat, and let us assume that this reason requires you to believe there is a cat on the mat. Suppose you do believe there is a cat on the mat. But suppose your belief is based on something other than your perception. Suppose that, from long experience you have learnt for sure that there is always a cat on the mat at this time of day. You believe there is a cat is on the mat even before you turn round and acquire the visual perception as of a cat's being on a mat. Suppose that acquiring this perception does not alter what your belief is based on. I think you are not in any way lacking in rationality. I am not even sure you are able to shift the basis of your belief when you acquire a new perceptual reason to have the belief. Basing implies causation, and your belief was caused by your prior certainty, so how can its basis be changed to your perception? Anyway, I definitely see no irrationality in failing to shift your basis.

But I think Boghossian's real point is different. I think he means to say that rationality requires you not to have a belief without any basis. This seems plausible to me, and an important difference between beliefs and intentions. On the face of it, baseless intentions are fine, but not baseless beliefs. If this is correct, it is another significant addition to the catalogue of rational requirements.

I am also not convinced by Boghossian's objection to the ideally rational angel. This angel's attitudes are automatically coherent, kept coherent by sub-angelic processes. The angel does not do reasoning and does not need to. Boghossian denies that this angel is fully rational. In his argument he assumes that its processes are

opaque as well as automatic. But he should not assume that. Sub-personal processes are not necessarily opaque, as his own example shows.

In his example, you initially believe platypuses do not lay eggs. But you come to believe they do lay eggs, and at the same time automatic processes cause you stop believing they do not lay eggs. It will be clear to you why you do not believe platypuses do not lay eggs; it is because you believe the opposite. Boghossian stipulates that you are unaware of the process itself. Maybe you could be, but you could not be unaware of the process's results. You are aware that you used to believe that platypuses do not lay eggs and that now you do not have that belief. You are also aware of what your present non-belief is based on.

There is no reason to assume that, just because the angel's processes are sub-angelic, the angel does not know what its attitudes are based on. Again, I think Boghossian's real point is different. In setting out his conclusion, he says: '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'. Boghossian denies the rationality of creatures whose beliefs do not have a basis that is transparent to them. He assumes that creatures that do not reason are in this position. But I think that is an incorrect assumption. The angel might well have introspectibly accessible bases for its beliefs. I do not think Boghossian needs to deny the rationality of creatures that do not reason.

So I read Boghossian as adding this further requirement of rationality: not only does rationality require your beliefs to have a basis; it requires this basis to be introspectibly accessible to you. For the moment, I prefer not to take a stand for or against this requirement.

4 The point of rationality

In *Rationality Through Reasoning* I described what we might call the content of rationality. I think the content is a collection of requirements. (I do not need to mention prohibitions and permissions separately: a prohibition is a requirement with a negative content and a permission is the absence of a requirement.) But I did not say much about the nature of rationality: what rationality is. I did say some things. For example, I said that rationality supervenes on the mind, and is about good order in the mind. But I would like to have gone further. Mine is like a book of law that says what the law requires but does not say much about what the law is and what it is for the law to require something of you. This is definitely a weakness. It means I did not explain well what unifies requirements of rationality and separates them from other requirements. I also could not explain why we have a reason to satisfy requirements of rationality, if indeed we do. It would be very nice to overcome this weakness, and I am delighted to find Cullity (2016) making a bid to do so. Although I shall criticize his particular suggestion, I very much applaud the enterprise.

Cullity switches attention from requirements to 'standards' of rationality, for a reason I do not understand. I also do not approve of this switch. It is evidently connected with an interest in people's possessing the property of rationality, whereas I explained in chapter 7 that I take requirement to go beyond what is

necessary to promote this property. I shall take the liberty of ignoring this shift and editing Cullity's proposal to make it refer to requirements. I get:

Requirement *R* is a requirement of rationality if and only if

(a) the disposition to satisfy *R* is important because of its exercise in the thought through which one responds to one's reasons, whatever their content; and
(b) the importance of this disposition gives us collectively a decisive reason to promote it.

The idea is to identify rationality through its point. Roughly, the point of rationality is to help us to do what we ought to do, believe what we ought to believe, intend what we ought to intend and so on. And it does this by regulating our thought at a general level that is not connected with the particular matter at issue.

I like the idea of identifying rationality through its point, and this specification of its point may be right. But I do think this formula needs a lot of developing before it can be satisfying. It is in one way too narrow and in another too broad.

Confining the exercise of the disposition to 'thought' seems too narrow. 'Thought' seems to refer to deliberate thought processes such as deliberating and reasoning. But requirements of rationality apply whether you think or not, and they do not apply only to processes. For example, whether you think or not, rationality requires you not to have contradictory beliefs, and this is a requirement on your state, not your processes. For this reason I prefer to say that rationality regulates the mind as a whole, rather than simply thought. Perhaps Cullity means this too.

The formula is too wide because it is easy to think of requirements that satisfy the conditions (a) and (b) but are not requirements of rationality. For example, there is the requirement to do your thinking in a cool hour when there are not a lot of distractions and after you have had a good night's sleep. This helps your thought but it is not a requirement of rationality.

Perhaps Cullity would not count it as a requirement that applies *in* your thought, though it does apply when you are thinking. But if we are supposed to read so much into the preposition 'in', we are entitled to ask for more precision in the whole statement than we are given. It is easy to cavil. For example, I could ask the meaning of the word 'important' in the conditions? Could there not be unimportant requirements of rationality? Why does importance give us a reason to promote a disposition? The importance of climate change gives us no reason to promote it. Should the word be 'good'?

Anyway, whatever the merits of Cullity's criterion for rationality, on the basis of it he criticizes in detail some of my particular requirements of rationality, and proposes some more. I am very pleased to see more requirements formulated. In *Rationality Through Reasoning*, I offered only some examples, chosen because they were useful for my purposes. I am sure many more are worth exploring.

I mentioned one significant gap that needs filling. Instrumental rationality requires you to intend means to ends you intend. It seems it should also direct you towards better means rather than worse ones, and there should be a requirement that does this (Broome, 2013, 169–70). I do not know how to close this gap, since I do not know how to define 'better'. Should it be relative to the end, so that a better

means is one that is more effective at achieving the end, or more likely to achieve it? Or should it take account of other aims too? It does not seem irrational to adopt a less effective means if it is better in other ways. How is that to be recognized in the formulation? And it is important to remember that your end may be bad. Cullity offers to close this gap partially, and some other gaps too. This is very constructive.

However, my experience tells me that formulating requirements of rationality is harder than you might think. While I was writing *Rationality Through Reasoning*, many people helped me by finding fault with each formula I proposed, until I eventually found a version that appeared to be robust. I am going to offer the same service to Cullity. But this sort of argument is fussy, so to avoid being too boring I shall pick just one of his formulae as an example, and mention a few problems with its formulation.

I shall pick his 'Intention-Formation Requirement', which opposes one form of procrastination. It find it plausible that there is some such requirement. But I do think some reformulation is necessary, at least. Cullity's formula is:

Rationality requires of *N* that if, throughout a period of time
(1) *N* intends that *e*,
(2) *N* believes that *e* will only suitably be achieved if *N* herself intends some particular means to *e*, and
(3) *N* believes that not choosing a means until after that period will make the corealization of *N*'s intentions more difficult, or less likely, and no better in any other respect, then, during that period, there is a particular means *m* of which
(4) *N* forms the belief that *m* is a suitable means to *e*, and
(5) *N* forms the intention to take *m*.

Here are some problems.

First, suppose that during the specified period *N* is unable to form a belief, of any *m*, that *m* is a suitable means to *e*. She could continue to satisfy the conditions (1), (2) and (3), but not (4) and (5) for any *m*, and yet be rational. Here, I assume *N* does not believe there is no suitable means to *e*; she merely does not believe she has yet found one. This is a counterexample to the requirement as it is formulated.

Alternatively, suppose *N* does believe there is no suitable means to *e*. A suitable means to *e* is defined by Cullity as 'a means that allows for the realization of your other intended ends'. Rationality still permits her to satisfy (1), (2) and (3) but not (4) and (5). This is another counterexample. True, if *N* makes some valid inferences, she must believe that not all her intentions can be achieved. Perhaps in that case rationality requires her not to have one of those intentions, but that is a different requirement.

Perhaps condition (2) is supposed to rule out the possibility that *N* does not believe there is a suitable means to *e*. If so, its logical structure needs to be made clearer. In any case, the conditional in (2) is too loose. What if *N* believes that some event will cause the suitable achievement of *e*, and will separately cause *N* to believe of some *m* that it is a suitable means to *e*, and also cause her to intend this *m*? Then *N* satisfies (2), and she might also satisfy (1) and (3) but not satisfy (4) and

(5) and yet be rational. To be sure, her predictive belief described in (2) will turn out false, but that makes no difference. This is a third counterexample to the requirement as formulated.

Next, suppose that, even before the specified period, *N* believed of some *m* that it is a suitable means to *e*, and also intended *m*, and that she maintains this belief and intention throughout the period. She does not satisfy either (4) or (5) because she does not form the belief or the intention during the period. Yet she might satisfy (1), (2) and (3) and be rational. This is a fourth counterexample to the requirement as it is formulated.

I am unclear anyway why Cullity chooses to make this a requirement on the events of forming a belief and forming an intention rather than on the states of believing and intending. If you form a belief during a period, unless you do it at the very last moment, you have the belief at some time during the period. The matter of the very last moment can easily be fixed up. So a more conventional formulation in terms of states would be possible.

5 Enkratic reasoning and the motivation question

The final subsection of Cullity's comment is about enkratic reasoning. Here is some text from that subsection, transposed to a different sort of reasoning.

> To reason by modus ponens is to follow the rule: 'From the belief that *p* and the belief that if *p* then *q*, derive the belief that *q*.' So does the rule not simply amount to 'Don't be like this: followed by a description of the problem-state that I am in when I am failing to believe what follows by modus ponens from what I believe? If so, Broome's answer to the question of how we come to believe what follows by modus ponens from what we believe just amounts to the assertion that we can make the transition from belief to belief through our own activity. It is not a solution to the problem of explaining how this is possible…. It is *because* the modus ponens rule is a rule we can actively follow that following it can count as reasoning.

Would Cullity say this about modus ponens reasoning? I think probably not, because he probably recognizes that there is something problematic about following the rule of not being in the state of believing that *p,* and believing that if *p* then *q*, and not believing that *q*. Believing a proposition or not believing a proposition is not something you can do. Nor is it something you can bring about 'at will'; you cannot come to believe something by intending to believe it, unless you use some means to believing it. So how can you follow this rule? It needs to be explained how modus ponens reasoning is possible.

Rationality Through Reasoning undertakes this task. It argues that you can come to believe *q* by using the means of reasoning, which is something you can do. In reasoning, you follow a quite different rule, which is about operating on the *contents* of your attitudes, not about the attitudes themselves. After giving an account of reasoning by modus ponens, I next extended my account to practical reasoning,

including instrumental reasoning and practical reasoning. Though Cullity denies this, I explained how enkratic reasoning is possible.

Why does Cullity ignore this work of mine? Why does he say about enkratic reasoning something that (if I am right) he would not say about modus ponens reasoning? I think it must be because he sees nothing problematic about following the rule of not being in the state of believing you ought to *F*, and believing that *F*ing is up to you, and not intending to *F*. I think he must assumes that, in contrast to believing that *p*, intending to *F* is something you can bring about 'at will'; you can come to intend something by intending to intend it, without using a means to intending it. I cannot think why else he believes we need no explanation of how 'we have the ability to make ourselves enkratic through our own activity'.

This assumption I attribute to Cullity is not what I take to be the consensus view (for instance Hieronymi 2006). Oddly enough, in *Rationality Through Reasoning*, I produced some slight evidence to support it, though not enough to convince me (Broome, 2013, 213–215). At any rate, if Cullity is to set aside my explanation of enkratic reasoning, I think he should have a more solid basis for doing so.

Nicholas Southwood (2016) joins Cullity in objecting to my account of enkratic reasoning and my answer to what I called 'the motivation question'. I am very grateful to him for the reminder he issues at the end of his comments. The motivation question was the initial motivation for the book, but answering it occupies just a few pages at the beginning and end of the book. I said at the beginning that my treatment of it is the most contentious thing in the book, since it depends on a conjunction of many of the contentious claims I make in the book (Broome 2013, 4). I do hope no one will think that an objection to my treatment of the motivation question is an objection to the book as a whole.

When you believe you ought to do something, often the effect is that you intend to do it. How come? That is the motivation question. My answer to it is that sometimes—not always—it happens through enkratic reasoning, and this is something you do. Enkratic reasoning is, furthermore, correct reasoning. Southwood takes the trouble to object in detail to each part of this answer. But I am sorry to say I find it difficult to know how to respond, because Southwood and I evidently see things very differently. Claims that seem straightforward to me seem bizarre to him, and I am almost equally puzzled by some of his claims, even though they must be so obvious to him that he does not feel they need much defending. With so little common ground between us, I find it difficult to engage with Southwood's arguments.

For instance, Southwood thinks that the fact, if it is a fact, that he ought to send his paper to *Analysis* does not bear positively on his intending to send his paper to *Analysis*. He takes the opposite view—that it does bear positively—to be bizarre. On the other hand, I find it hard to think of anything that would bear more positively on his intending to send his paper to *Analysis* than the fact that he ought to.

Southwood's argument is that he would not say 'Because I ought to' in answer to the question 'Why are you going to send your paper to *Analysis*'. This answer would not be 'apt', he says. But it seems to me that what one would say or what would it would be apt to say is not a good guide to the truth. It can be influenced by other considerations besides the truth.

Southwood would generally not say 'Because they do' in answer to the question 'Why do you believe kangaroos hop'. That would be impolite. It gives his questioner no information, since her question shows she already knows he believes kangaroos hop. A polite response would contain some evidence for what he believes. Nevertheless, the fact that kangaroos hop bears positively on his believing that kangaroos hop; nothing could bear more positively.

'Because I ought to' is not quite so impolite in answer to the question 'Why are you going to send your paper to *Analysis*'. It carries some information—for instance that he is not doing it out of mere irritation—but not much. It would be more polite to produce some evidence that he ought to. Nevertheless, the fact that he ought to, if it is a fact, bears positively on his intending to send his paper to *Analysis.*

Southwood claims in general that the fact, if it is a fact, that you ought to do something does not bear positively on your intending to do it. This claim is an essential premise in two of his arguments. First, it is essential to his argument against my 'Enkratic Permission' of rationality. The Enkratic Permission is what makes enkratic reasoning correct, so at this point Southwood is arguing that enkratic reasoning is not correct. Later, it is an essential premise in his argument that enkratic reasoning is hardly even possible. If these arguments were to succeed, they would demolish most of my answer to the motivation question. But without the premise they do not succeed.

Another example of our lack of common ground appears in Southwood's argument against the last remaining element in my answer to the motivation question: my claim that enkratic reasoning is an act—something you do. In denying this, Southwood says 'The special way in which we manifest agency in forming intentions is in the service of responding to specific choice situations.' I cannot tell why he says this. He gives an example that he takes to violate this condition. I have a book in which are written various things I believe I ought to do. I find an item at random in this book, and by enkratic reasoning form the intention of doing it. Southwood thinks this reasoning does not manifest my agency. Why not?

I do in fact have a book in which are written various things I believe I ought to do. They include 'Get the shed door replaced' and 'Move money from the US bank account'. Since I wrote them down and I am reasonably rational, these are presumably things I already intend to do. But someone else who knows a bit about my life could add entries to the list. If that happened, and I came across one of those entries, and as a result formed the intention of doing what it says, why could I not be manifesting agency?

True, I would often not be manifesting agency. Often I satisfy requirements of rationality including Enkrasia by subpersonal processes that are not acts. I might acquire the intention as a result of subpersonal processing. But sometimes I may acquire it by means of reasoning. For example, suppose I find an entry in the book that mentions something I do not want to do. Let it be 'Apologize to that obnoxious person I insulted last year'. I would probably think first about whether this is really something I ought to do, but let us suppose I conclude it is. I might not yet intend to do it. I might even shut the book and never look at that page again. But I might instead form the intention of doing it. I contend that I might do this through a process of reasoning that is an act, like other acts of reasoning. This is definitely

contentious, and there are many ways of arguing against it. But Southwood seems to think it is clear from the start that it is not an act. I do not know why he thinks that.

I am not even sure he does think it. He says that, if I did the reasoning with the aim of settling the question of whether to apologize, or if I were in the specific choice situation of whether or not to apologize, then it might be an act. And it seems plausible to me that either of these things might correctly be said of me. So perhaps he might agree that, as I have developed this example, my reasoning is an act. But then it seems plausible to me that, whenever I arrive at an intention to do something through enkratic reasoning, I might correctly be said to reason with the aim of settling the question of whether to do it, and to be in the specific choice situation of whether or not to do it. Southwood thinks differently. He evidently attaches special meanings to 'the aim of settling the question' and 'specific choice situation', which I have not grasped. So I can go no further with the argument.

I shall close by supporting an important and interesting conclusion of Southwood's. At the point where Southwood denies that 'Because I ought to' is an apt response to 'Why do you intend to do that?', he claims by way of contrast that 'Because morality requires it' is an apt response. I agree that the latter is a politer and more apt response. I think this is because a polite response mentions evidence, and the fact, if it is a fact, that morality requires you to do something constitutes some evidence that you ought to do it. Be that as it may, Southwood concludes that the fact, if is a fact, that morality requires you to do something bear positively on your intending to do it. This leads him to conclude that it is permissible to intend to do something on the basis of believing that morality requires you to do it. He may very well be right. If so, it interests me because it goes further in an important direction than I did in *Rationality Through Reasoning*.

It would not go further than I did if morality were necessarily overriding: if, necessarily, when morality requires you to do something, you ought to do it. But neither Southwood nor I assumes this is so, and let us now assume it is not. Then it is possible that morality is sometimes overridden by other considerations so that, even when morality requires you to do something, it may not be the case that you ought to do it. Consequently, if you intend to do something on the basis of believing morality requires it, your basis is defeasible; it may turn out to be an insufficient basis. Similarly, you may believe something on the basis of defeasible evidence, and then your basis is defeasible.

It is surely sometimes permissible to possess an attitude that is based on a defeasible basis. If that is so, reasoning based on a defeasible basis would be correct. *Rationality Through Reasoning* did not deal with reasoning that is defeasible in this way, but it also did not rule it out. I would love to be able to extend my account of reasoning to defeasible reasoning.

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