
of Practical Reasoning*

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ABSTRACT: In this paper I will consider criticisms that have been raised against Broome’s first-order model of practical reasoning by Bratman, Brunero, and Høj. I will modify Broome’s exposition so that it is no longer vulnerable to these objections. The main modification I will make is that I will take the principle Broome dubs the “belief-intention link” to express a pragmatic implicature instead of a material implication, on the basis of which implicatures the process of reasoning Broome describes reaches the conclusion-states Broome desires to reach. This makes a cognitivist account of at least some norms of practical rationality plausible.

KEYWORDS: Bratman, Broome, cognitivism, coherence, instrumental principle, practical rationality.

1. The Question: Why are we irrational when we fail to intend the means to our ends?

If I intend to x and believe that y is a means to x -ing, and yet I do not intend to y , then it seems that I am rationally criticizable, that I have violated some requirement of rationality. This requirement is usually called the Instrumental Requirement or the Instrumental Principle and can be given alternative wide-scope and narrow-scope formulations, respectively:

(IR_w) Rationality requires that (if I intend to x and believe that y is a means to x -ing, then I should intend to y)

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(IR_N) If I intend to x and believe that y is a means to x-ing, then rationality requires that I should intend to y.¹

Broome endorses wide-scope requirements in general, and in (2009) he attempts to give a cognitivist account of IR_W. Cognitivism generally is the thesis that norms of practical rationality are to be accounted for in terms of norms of theoretical rationality, i.e., norms concerning doxastic states like belief. Broome attempts to show that the normativity involved in IR_W can be accounted for by the normativity involved in norms that say, for example, that you should not hold inconsistent beliefs. It is because we should not violate these norms on beliefs that we should not violate the norms of practical rationality, and that explains why we are irrational if we do so; specifically, in the case of the Instrumental Principle here presented, when we fail to intend what we believe to be the necessary means to our ends. In particular, Broome attempts to show that it is by satisfying wide-scope requirements on theoretical reasoning that we bring ourselves to satisfy IR_W. Broome is not committed to this being true for all requirements of practical rationality. The subject of this paper is specifically Broome's account of the instrumental requirement in order to defend it from criticisms it has attracted from Bratman (2009), Høj (2009), and Brunero (2005 & 2009).

Broome's method of accounting for IR_W is to describe a process of reasoning that satisfies it. The process Broome describes satisfies IR_W by satisfying a wide-scope requirement of theoretical rationality. Broome's focus on a process distinguishes it from other cognitivist accounts. Høj (2009: 2) marks this contrast:

Whereas Wallace and Harman's goals were to provide direct cognitivist grounds for the normativity of the instrumental principle, Broome's aim is to account for the process through which we come to satisfy this requirement of rationality. And given that Broome suggests that in order for the principle to be a requirement of rationality, it must be possible for an agent to come to satisfy that requirement through the process of reasoning, an account of how we come to satisfy the instrumental principle is—according to Broome—a way of supporting the suggestion that this principle is indeed a requirement of rationality.

There is something slightly dubious about what Høj says here. Although I doubt Høj means this, his final phrase makes it look like being able to describe a process of reasoning by which IR_W is satisfied is merely evidence that IR_W is a genuine requirement of rationality, without saying anything at all about whether or not it is a distinct norm of practical or instrumental

¹ These are simplifications of the real requirements that would have to take into account alternative means to the same end, and means – or the states that would come about by taking the means – that can come about without requiring that they be intended. Unless specified otherwise, a means should be taken as a necessary means – this is what Broome is discussing.

rationality or to give an account of it. But the deeper problem with this phrase is that it is false – Broome makes no suggestion that “in order for the principle to be a requirement of rationality, it must be possible for an agent to come to satisfy that requirement through the process of reasoning” and in fact explicitly denies it, leaving unanswered the question whether there are requirements that cannot be satisfied by reasoning.

Some context may be useful here. Kolodny (2005) argues that “for any rational requirement on you, there must be a process of reasoning through which you can bring yourself to satisfy that requirement.” The view Høj attributes to Broome seems the same. But Broome (2006: 2) quite explicitly rejects Kolodny's arguments for this view, expressing agnosticism towards its conclusion, and in Broome (2009: 18) we see why, for he says:

The attitudes that can figure in your conscious reasoning must be ones you are conscious of, which is to say ones you believe you have. Conversely, if you believe you have an attitude that actually you do not have, the fact that you do not have it cannot impinge on your conscious reasoning.

The consequences are disturbing from a theoretical point of view. They leave us with an unpleasant dilemma. . . . [R]easoning cannot [always] bring you to satisfy *Instrumental requirement* [sic]. We shall have to conclude either that *Instrumental requirement* [sic] is not a genuine requirement of rationality, or alternatively that it is a genuine requirement but not one that reasoning can always bring you to satisfy.

There are some cases (where the reasoner believes that they have an intention but do not actually have that intention) where IR_W cannot be satisfied by the process of reasoning Broome describes, so if Broome really held the view Høj attributes to him he would be forced to admit that the instrumental requirement is not a genuine requirement, yet we see Broome explicitly leaving this issue open. This being so, the process described by Broome does not show that the instrumental requirement is a genuine requirement, contrary to what Høj says.

What Broome does seem to say when he appeals to requirements that can be satisfied by reasoning is that his account of the normativity of IR_W only needs to account for it insofar as it can be satisfied by reasoning. Where it cannot be so satisfied, no account is necessary. This coincides with a version of cognitivism where it is not required that the norms/requirements themselves be equivalent but only that the normative force of one be derivable from the normative force of the other. This would mean that the instrumental requirement has no normativity of its own, or at least that its normativity, if there is any, does no explanatory work in explaining why we are rational/irrational when we obey/violate this requirement. By this means Broome reduces the normativity of the instrumental requirement to the normativity of

theoretical requirements while conceding that there are cases where all such theoretical requirements are satisfied but, because the reasoner does not have the intention they believe they have, $IR_{\mathbb{W}}$ is not. This should become clear in the next section where the process is described.

2. The Model: Can practical reasoning be modelled as first-order theoretical reasoning?

In (2009) Broome rejects what he calls the second-order model of reasoning in favour of a first-order model.² I will give the useful summarization from Bratman (2009: 31–32), who refers to a requirement of theoretical reasoning he calls BC (Bratman 2009: 14) where this can be defined as:

($BC_{\mathbb{W}}$) Rationality requires that (if you believe that E and you believe that E will only occur if M, then you should believe M)

M is obviously here a necessary means. Armed with IR and BC (which I have called $IR_{\mathbb{W}}$ and $BC_{\mathbb{W}}$ and substituted into what follows) he shows how, by satisfying BC, Broome hopes to show that a reasoner can satisfy IR:

- (1) Intention is not belief.
- (2) It is not in general true that if you intend E you believe E.
This last is because (and here Broome and I agree)
- (3) You can sometimes intend E but fail to believe you intend E; and in such cases you may well not believe E.
- (4) But, if you do believe you intend E then you will believe E.
- (5) And for your intention to E to enter into practical reasoning about means to E, you need to believe you intend E.
- (6) So when your intention to E enters into your practical reasoning about means to E, you believe E.
- (7) And it is this belief that E that provides the premise for your reasoning, namely: E.

² In the second-order model reasoners reason by explicitly reflecting on and trying to comply with rational requirements, i.e., you reason that you should intend the means to your end precisely because you recognize this as a rational requirement and wish to make your beliefs and intentions coherent (Broome 2009: 3–4). This means that the rational requirements function as reasons for the reasoner to intend something or believe something. Kolodny (2007) argues that this way of getting a reason from a belief is bootstrapping and he denies that rational requirements give us reasons. Broome is more agnostic on this issue. It is natural, however, to avoid a second-order model that would commit him to such a view. Besides, he objects to the second-order model on the separate grounds that the second-order beliefs must likewise be the result of reasoning, which reasoning would then have to refer to third-order attitudes, and so on (Broome 2009: 4).

- (8) If you also believe that E only if M, and if these beliefs do not change, BC_W requires that you believe M; and that is where your reasoning can lead.
- (9) But if in the “background” you believe that M will obtain only if you intend M, then if you do arrive at the belief that M this will normally be by way of intending M. In satisfying BC_W in this way you will satisfy IR_W .

This, then, is Broome's broadly cognitivist picture of reasoning from intended ends to intended means. Broome wants to acknowledge, though, that it remains possible to intend E, believe that this requires both M and that you intend M, but falsely believe that you intend M. Broome grants that in such a case you fail to satisfy IR_W , though you may well satisfy BC_W . But, says Broome,

- (10) In such a case “your false belief blocks any reasoning that can bring you to satisfy IR_W .” So,
- (11) Insofar as IR_W is a rational demand that can be satisfied by reasoning it is demand [sic] that derives from BC_W . Insofar as IR_W seems to impose demands that go beyond what is imposed by BC_W , these are not demands that can be satisfied by reasoning.

In this sense, it is BC_W that is fundamental for a theory of practical reasoning from ends to means.

This requires some commentary.

There are basically 3 parts to this summary. Steps (1) to (7) are meant to justify “I believe E” as a premise that can be got from the intention to E and that is then used in the conscious reasoning that is modelled in steps (8) and (9). This reasoning goes:

- a) I believe that E.
- b) I believe that E only if M.
- c) I should believe M.

Step (8b) is the means-end belief and (8c) is derived from (8a) and (8b) by BC_W . Step (9) is meant to go from the belief that M to the intention that M. According to Bratman this is because you believe that M will obtain only if you intend M and so “if you do arrive at the belief that M this will normally be by way of intending M” (Bratman 2009: 32). Høj (2009: 6) breaks this into two stages: normally you would only form the belief that M by forming the belief that you intend that M, and normally you would only form the belief that you intend that M by forming the intention that M.

What Broome (2009: 14) actually says is slightly different. He begins:

Straightforward theoretical reasoning would bring you to believe you will buy a ticket However, you are limited by a special constraint, which prevents you from doing straightforward theoretical reasoning. You believe you will not buy a ticket unless you intend to do so. Therefore, if you are rational, you cannot come to believe you will buy a ticket . . . unless you also come to believe you intend to buy a ticket.

Since we are prevented from doing “straightforward theoretical reasoning” we cannot go immediately from (8a) and (8b) to (8c); we are prevented from forming the belief that M because we do not now believe that we have the intention that M (this is another application of BC_W).³ If, as stipulated in (8), the beliefs in (8a) and (8b) remain unchanged then the only way to satisfy the rational requirement is to form this belief too. So the belief that M and the belief that I intend that M are formed as part of the same step of reasoning, so to speak, or to put it slightly differently, the conscious reasoning has two conclusion-states which an unconscious process ensures match each other so as not to violate any requirements or introduce any incoherence. This seems similar to the first stage described by Høj although it is not clear whether Høj has realised that the belief that M in (8c) is not caused to occur before the belief that I intend that M is caused. Up to the formation of these conclusion-states it is the theoretical requirement BC_W that captures the normativity of the reasoning.

Broome continues that in normal circumstances “you cannot acquire the belief that you intend to buy a ticket except by actually acquiring the intention of buying one” (Broome 2009: 14), which is to say that the process by which you come to form the belief that you intend that M normally operates by causing you first to intend that M. This seems plausible and seems similar to the second stage described by Høj. However, there is a disanalogy with what Høj says because Høj argues as if both stages are likewise ways of avoiding violation of a requirement of theoretical rationality; this is true of the first stage, but not the second. The connection between the belief that I intend that M and intending that M is merely a causal dependency and not a normative constraint at all, whether theoretical or practical; it is not that intending that M is normatively required for forming the belief that I intend that M.

The third stage of Bratman’s summary consisting of steps (10) and (11) is Broome’s defence of the idea that IR_W can in some sense be derived from BC_W or more generally from requirements on theoretical reasoning despite the fact that a reasoner may be completely theoretically rational and yet be

³ Practical reasoning has the same structure as the kind of theoretical reasoning Broome describes as putting the reasoning in reverse.

instrumentally irrational because failing to have the appropriate intention. Broome (2009: 17–18) says that when this happens there is no way of getting out of this situation by reasoning because the false belief blocks any such reasoning. You cannot, as Bratman would like to do, reason to an actual intention.⁴ He concedes that this leads to the dilemma already mentioned in the previous section that either the instrumental requirement is not a genuine normative requirement or there are cases where reasoning cannot satisfy it. The conclusion reached there was that IR_W can derive its normative force from theoretical requirements as long as it gives the same critical verdict for all irrational states that we can get out of by a process of reasoning. We might wonder whether this is true (and we will question it later), but it does seem to fall out of Broome's account.

Each stage will now be discussed separately. We may set a topic question for each stage.

STAGE 1: What is the relation between intending to x and the belief that you will x ?

STAGE 2: Is this model applicable in every case where we would take an instrumental requirement to be applicable?

STAGE 3: Does this lose what is distinctly practical in practical reasoning?

There are other questions we might ask, e.g., about whether the reasoning represented in stage 2 is really good reasoning, but I will assume (and nobody seems to dispute) that it is good reasoning. Therefore, if we can get the premise required at (7), then we do seem able to reach the conclusion-states of believing that M and believing that I intend that M . Obviously, this is where we need to start.

*a. What is the relation between intending to x
and the belief that you will x ?*

Broome's view expressed in (1) to (3) contrasts with the view that intending something entails that you believe you will do it. Bratman (2009: 21) calls this the Strong Belief Thesis and offers the following kind of counterexample. Suppose that I intend to return some library books before the end of the day but, knowing from past evidence that I am likely to forget, I do not believe that I will return the library books. Broome's response to these kinds of counterexamples seems a little ambivalent. On the one hand he seems to reject

⁴ Bratman objects that we are not blocked because we can go through the same reasoning again and on this occasion the intention may be caused to occur. This is true, but a more charitable interpretation of Broome would ascribe to him the view that no process of reasoning can be *guaranteed* to result in an intention.

the Strong Belief Thesis and replaces it with what he calls the *belief-intention link* (Broome 2009: 12):

Belief-intention link. If N believes that she herself intends that p, then, because of that, N believes that p.

On the other hand he seems to say that the intentions described in these counter-examples do not really qualify as intentions, although we call them such.

How would I best describe the library book scenario to myself or another? I would not say, as I would if I were confident of success, “I am going to return the library books before the end of the day” or “I will return the library books before the end of the day” – I am not entitled to say this. I need to cancel the implicature that the books will actually be returned. Too weak would be “I will try to return the library books” or “I intend to try to return the library books” since this would imply that I may carry out my intention yet fail because of some obstruction, but if I carry out my intention to return the books there is every reason to suppose that I will succeed in returning the books (Holton 2008: 2–3). There is a difference between not believing that one will return the library books because one believes that something will prevent one carrying out the intention successfully and not believing it because one believes simply that one will not carry out the intention at all, possibly because at the time the intention should have been carried out one has (having forgotten) ceased to believe that one has the intention (Bratman 1987: 37–38). The first might be described as trying or intending to try, but the second is best described simply by saying “I intend to return the library books (but may not).” It is the second that seems to be reported in (3) which says that you may well not believe E because you fail to believe you intend E although you do in fact intend it. It does not seem to cover the case where you may not believe E because you think your attempt to E may fail.

Broome (2009: 13) endorses this description of how I should describe this situation while simultaneously implying that it is not, strictly speaking, correct and that what I have is not an intention but a weaker kind of attitude that we have no word for and hence call (slightly inaccurately) by the name of ‘intention.’ He concedes that his account is thus limited to intentions for which the belief-intention link is true, and this seems to mean either that the instrumental requirement does not apply to these weaker intentions or that it does apply but in these cases a different account is needed. Both Bratman (2009: 21–22) and Høj (2009: 8–10) object that surely the norm of means-rationality is engaged in these cases; surely I am irrational if I do not reason about how to achieve an end I intend and form the intention to take the means to that end even if, in fact, I believe that I will forget about my

intention or believe that the means will not be successful (as long as I believe it will improve my chances).

The *belief-intention link* is meant to be a weaker, more inclusive principle than the Strong Belief Thesis. It is not immediately clear why. If intending x does not entail believing that x , why does believing you intend x entail believing that x ? What difference does it make that you continue to believe that you intend x ? Perhaps the idea is that by insisting that you believe that you have the intention you rule out as inapplicable those cases where you forget you have the intention, cases where you have the intention but do not believe that you have it. This limits the scope of the principle, as already said. But why should this be thought a reasonable thing to do?

Let us clear up a couple of preliminaries first. It might be wondered where this belief that you intend comes from in the first place. It comes simply from the fact that we are consciously reasoning about our intentions and beliefs, and being conscious of them is to say that we believe we have them. This does not mean that these second-order attitudes actually enter into our reasoning. The reasoning process as Broome presents it consists of saying things to yourself. Saying to yourself "I will return the library books" as an intention and not just as a predictive belief expresses both the intention to return the library books and the belief that I intend to return the library books, since I am not in a position to say sincerely that I intend to x unless this intention is one I believe I have. In saying it sincerely you are also expressing the corresponding predictive belief [i.e., the belief in (7)]. However, this seems to be an implicature rather than an entailment and as such can be cancelled by saying something like "I intend to return the library books (but may not)" or "I will try to return the library books." We may not believe the predictive belief to be true, and when we do not we prefer not to say "I will ____." We may say "I intend ____," but when we do there is the sometimes unspoken qualifier "but may not ____."

Why, then, should we take the belief-intention link to be true? According to Høj (2009: 4–5) Broome's solution is to insist that when we do express our intentions we do so by saying "I will x ", and the linguistic fact that this is the normal way in which we express our intentions out loud is evidence that the belief-intention link is true. Perhaps one should take this stipulatively as saying that only those intentions that can be expressed in the normal way are the subject matter of this account. This is what Broome (2009: 12–13) says:

You cannot sincerely express an intention to do something without believing you have that intention. Consequently, when you sincerely express an intention, you must believe you will do what you intend. That is why you are in a position to express this belief simultaneously.

The evidence I offer for the existence of this belief-intention link is just that expressing an intention is also expressing a belief; both take the form of saying the same indicative sentence. So you cannot express an intention without expressing a belief that you will do what you intend. And you cannot do that sincerely without having the belief.

The illative “consequently” does not seem at all obvious. The appeal to sincerity suggests that perhaps Broome believes that it is a sincerity condition of the speech act of expressing the intention to *x* that one believes that *x*, and that a speaker or reasoner would not be entitled to say this unless they believe they will do what they intend to do. This would be an attractive solution if there were such a sincerity condition. Unfortunately there is not: the sincerity condition for expressions of intention and for commissives in general is simply having the intention and not any belief that the intention will be fulfilled (Searle 1979: 14).

Nevertheless, I think there is something right about what Broome says. Certainly there is something at least a little paradoxical in saying “I intend to return the library books, but they will not be returned,” and this seems to be because if I say that I will do something, I usually do so with the intention to make it known to the listener that they can rely on its being done and coordinate their own intentions or joint intentions we may have together on that expectation. Similarly it may be important to my own plans that I take achieving what I intend (by some means or other) as read. It is not entailed that it will be done or that I believe that it will be done – Broome is wrong to present the link as an entailment – but there is an implicature. Like all implicatures it can be cancelled, as we have already seen, by saying something like “I intend to return the library books but I may not succeed.”

The interesting thing is, if we accept Broome’s idea that reasoning amounts to saying things to yourself, an implicature is enough to get to step (7), and once we have got that far, it has already been conceded that the reasoning in (8) and (9) is valid. This gives an answer for our topic question for stage 1: the relation between intending to *E* and the belief that you will *E* is the implicature from “I will *E*” to “*E*” or “*E* will be done.” In turn, this means that when we say to ourselves “I will *E*” we are entitled to say “*E*”. In saying this we can still be counted as reasoning if reasoning is a process of saying things to oneself, despite the lack of any deductive entailment.

But what about those cases where we would not be entitled to say “I will *E*”? That this account implies that we can only reason about what we can sincerely say to ourselves limits it unacceptably. Even if we accepted Broome’s claim (*contra* Bratman and Høj) that this reasoning does not need to satisfy rational requirements, it surely cannot be accepted that we cannot reason at

all, yet this seems to be a consequence of Broome's model; at least, no practical reasoning seems possible, since this requires us to get from the belief that I intend that E to the belief that I will E, as expressed in the belief-intention link. Thus, intentions that do not satisfy the belief-intention link are not only outside the scope of this account, but do not seem able to initiate any reasoning which concludes in an intention. Broome (2009: 80) seems prepared to admit this. This brings us to our next topic question.

b. Is this model applicable in every case where we would take an instrumental requirement to be applicable?

Whether we call such tentatively held attitudes 'intentions' or not is less important than whether the norms at issue apply to them. Bratman and Høj say that they do and I am inclined to agree that this is correct. However, I think this is less of a problem for the first-order model than may be thought. Broome does not need to limit his account to intentions that satisfy the belief-intention link; reasoning with weak intentions is simply to reason *ex hypothesi*, just as we may construct and follow arguments whose premises we believe to be false. We do not need to actually be sincere in order to reason as if we are.

To say that an intention is weak is only to say that one is more easily disposed to cease having it, in which case, under normal circumstances, one will cease to believe that one has it. Let us look at the wording of (8): "If you also believe that E only if M, and *if these beliefs do not change*, BC_W requires that you believe M." The grammatical form is deceptive, for it makes BC_W look like a narrow-scope requirement. In fact, it is a wide-scope requirement, viz. " BC_W requires that (if you also believe that E only if M, and *if these beliefs do not change*, you believe M)." So this conditional is satisfied if the beliefs do change due to weakness of the intention. In such a case we would not have (8c) as the conclusion-state, but the model never actually said that you would. If they do not change, then the weakness of the intention is immaterial – a weak intention that does not change is on a par with a strong intention that does not change.

If this is correct then the problem of weak intentions is a pseudo-problem. There are still serious problems, however. There are timing issues, for surely I am already instrumentally irrational if I do not have coherent intentions, even before I have the belief that I intend the end and even if I never form the belief that I have this intention, and the pressure to make myself instrumentally rational should begin as soon as I have this intention and the belief that I have the means to achieve it and not, as Høj (2009: 13–16) says

of Broome's model, only after the intention and the means-end belief have been expressed, i.e., featured explicitly in the practical reasoning, or even later at the last moment that the means is still effective as a means. Although I am not necessarily irrational when I leave taking the means "to the last moment" it seems that I am under some rational pressure to take the means before then. Furthermore, suppose that I do have the intention to take the means yet I do not have coherent beliefs, which is to say that I satisfy IR_W but not BC_W . If I then lose that intention, then surely this is where I begin to be instrumentally irrational and under pressure to remedy that problem, and this is an additional problem and an additional pressure to that due to the fact that I am *already* violating a requirement of theoretical rationality (Brunero 2009: 316–17).

Broome has already conceded that there are cases where the theoretical requirements are satisfied and instrumental requirements are not (because the belief that one intends the means is false) and, presumably, also vice versa. Now it seems he must also concede that even in cases where both types of requirement are satisfied, they can be satisfied at different times. Generally speaking, the instrumental requirement will be violated before the theoretical requirement is violated and satisfied after the theoretical requirement is satisfied.

Now, we could say that we are not aware of being in violation of the instrumental requirement unless we are conscious of being in an incoherent doxastic state, where this is brought about by being in violation of a theoretical requirement, and it is only then that we can purposely get out of this state by reasoning. Here we appeal to the idea that the normative force of the instrumental requirement can be captured by the normative force of theoretical requirements even if the instrumental requirement itself is not captured by theoretical requirements. On the other hand, perhaps this idea is accumulating too many counter-intuitive consequences.

This does, however, mean that there are some quite straightforward implicatures that we can point to: "I am instrumentally (ir)rational (concerning my intending a certain end and means)" has as an implicature "I am theoretically (ir)rational (concerning my beliefs about intending that end and means)" and in explaining why I am (ir)rational I can appeal only to intentions and beliefs I am conscious of and believe that I have. This is a very strong implicature and not easily cancellable, since my only evidence of being instrumentally irrational is by being theoretically irrational. The converse implicature from "I am theoretically (ir)rational" to "I am instrumentally (ir)rational" is weaker because it can be cancelled by appending "but there are abnormal cases where my belief that I have an intention is not caused by having that intention."

c. Does this lose what is distinctly practical in practical reasoning?

I have now had to appeal to implicatures twice, firstly in the belief-intention link, and secondly to link instrumental rationality and practical rationality. The first, I think, is fairly innocent, the second more troublesome, because it seems that what Broome has given is less a theory of instrumental rationality than an empirical test or heuristic of when its requirements are violated. An implicature is not sufficient for a theoretical reduction, yet this is apparently what we need and what cognitivism is attempting to give. Cognitivism does not account for the unique role intentions play in our efforts to form coherent plans; this is a distinct feature of practical norms, or so it could be argued.

It should also be noted that Broome conceives requirements of rationality as coherence requirements: as long as we are in the right psychological state, it doesn't matter how we got there. Brunero (2005: 8) complains that on Broome's account

[I]t does not seem to be the case that if this agent were to intend the necessary means, he would thereby be instrumentally rational; the formation of the intention [for the means] is not sufficient for instrumental rationality. Suppose the intention [for the means] is weak-willed. Suppose I see no reason to borrow money, perhaps because it would put me too far into debt, but intend to do so anyway. So, my intentions are consistent.

I believe that I have the intention to buy a boat, I believe that borrowing money is necessary for me to buy a boat, and I have the intention to borrow money. It is not clear whether or not I have this last intention *because* this has been brought about by practical reasoning, i.e., through $BC_{\mathbb{W}}$. In any case, Brunero asks us to suppose that I see no reason to borrow money when he continues:

But suppose that even though I see no reason to borrow money, I don't see that I have no reason to buy the boat. I fail to see the relevant inferential connections. On Broome's view, I would be instrumentally rational since my intentions are consistent.

Is Brunero's complaint here that Broome's account fails to take into account beliefs that tell against intending the necessary means to an intended end? This might be true, but the instrumental principle does not claim to be saying what is rational all-things-considered, so this criticism seems to miss its mark. Or is it that I do not necessarily have the intention to take the necessary means *because* I have the intention to take the end, that is to say, I have failed, in a quite general sense and not just with respect to the fact that I see no reason to borrow money, to grasp the inferential connections? This seems more to the point.

According to Brunero, that I see no reason to borrow money should (but in Broome's account does not) mean that I am not instrumentally rational when I have this combination of attitudes. The passage continues:

But this seems too quick. If I were instrumentally rational, I would see that since I have no reason to borrow money, I have no reason to buy the boat. Correct instrumental reasoning would start from the premise that I have no reason to borrow the money, and conclude that I have no reason to buy the boat. And if I fail to see the relevant inferential connections here, it seems that I would be exhibiting a form of instrumental irrationality, even if my intentions are consistent. So, having consistent intentions does not suffice to make one instrumentally rational.

Brunero's point seems to be that I should cease to have the intention to buy the boat given that I see no reason to take the necessary means. This assumes quite generally (and, I think, correctly) that failing to see the relevant inferential connections constitutes a form of instrumental irrationality.

If Brunero's point is that our intentions should be formed in the right way, by grasping the inferential connections between our intention for the end and our intention for the necessary means, then I agree, and would add that without such a historical condition Broome's account loses something distinctive about practical rationality. True, Broome describes a process of reasoning, but this only means that we are rationally required to have those attitudes that we would have *if* they resulted from this reasoning; Broome does not pretend to be giving a process-requirement. I propose that this problem can be solved if we make the principle link our intentions to our intentional actions, for to count as intentional an action must be caused not only by an intention but by the practical syllogism as a whole.⁵ I will return to this.

If Brunero's point is that, granted that our intentions are formed by the process Broome describes, there should be another process – from the belief that there is no reason to borrow money to ceasing to have the intention to buy the boat – that instead tells us what we would be instrumentally rational

⁵In another paper, I propose that the conditional that we should make true is a counterfactual one, where this is supposed to capture the idea of having a belief *because* we have other beliefs. This was given as an account of the rational requirement of *modus ponens*; I have yet to extend this approach to requirements of practical rationality. Here, I am simply bypassing the question of whether intentions that are not conclusion-states but are the same as those that would be conclusion-states, are rational or not; if they are not conclusion-states, then we do not act intentionally when we act upon them because of “causal deviance” in the practical reasoning itself. I make no attempt here to solve, or even elucidate further upon, the thorny issue of causal deviance – I simply assume that intentional action has been defined so as to avoid this problem. By addressing this problem in the definition of intentional action, I avoid addressing it in the definition of practical rationality.

in doing, then we must distinguish two cases, which Brunero confusingly combines.

The first is where, having engaged in practical reasoning and foreseeing negative side-effects of taking the means that outweigh the positive aspects of the intended end, the rational thing to do is to reject the end, that is to say, because borrowing money would put me too far into debt I should cease to have the intention to buy the boat. But this seems to be just another way of satisfying the wide-scope requirement BC_W , which it should be remembered had as part of its antecedent that the belief that you will E (achieve the end you intend) should not change. So the course that Brunero says is rational also counts as rational on Broome's account; however, Broome's account does not rule out satisfying the wide-scope requirement in the alternative way, by intending to borrow the money, as irrational; we are still instrumentally rational despite the fact that we see no reason to borrow the money, as long as we do not actually cease to believe that we will buy the boat and believe that borrowing money is a necessary means for doing this, and there does not seem to be any requirement that tells us not to have this intention. It is not equally instrumentally rational, Brunero seems to say, since it would conflict with the belief that we should not put ourselves further into debt. However, it is not obvious to me that, even if you are aware of the inferential connection, that you should be rationally required to cease having the intention. Perhaps in some cases this may be an instance where one cannot get from "I intend to buy a boat" to "I will buy a boat," but this reduces to the case where we satisfy the conditional by ceasing to have the belief. Then, supposing instead the implicature from "I do not intend to borrow money" or "I intend not to borrow money" to "I will not borrow money" we have another rational requirement, whose conditional is made true this time by making the consequent true, that is to say, by not intending to take any necessary means to borrowing money." True, this will still not deliver the verdict of irrationality to intending to borrow the money that Brunero seems to want, but I am not convinced that it should. While I still have the intention to buy the boat and believe that borrowing the money is a necessary means, I would be instrumentally irrational if I do not have also the intention to borrow the money. This does not rule out both intentions being nullified by an intention not to borrow money, though I do not think "nullified" here necessarily means that we should be required not to have them, but only that they should not be acted on. This is another reason why a principle linking intention to intentional action should be helpful.

This is not, however, the problem I think Brunero wants to pose. Brunero describes a second case where my failing to have a reason to intend the

means is not explained by its negative side-effects but is explained instead as weakness of will (that this puts me further into debt is then an irrelevance). Brunero complains that although the intentions are consistent, because I am not sufficiently motivated to actually take the means, rather than just to intend it, I am not instrumentally rational. It should be noted here that by putting the principle as a wide-scope conditional, Broome deliberately avoids saying that we are rationally required to intend the necessary means. Yet intending the necessary means is at least one way of being rational, on Broome's account, but Brunero says that it is irrational – no account should tolerate it. The instrumentally rational thing to do, Brunero seems to say, is to cease to intend the end.

I find this rather peculiar; surely rationality should attempt to overcome weakness of will, or at least consider it to be rationally criticizable, rather than use it as a premise. It would be a strange principle of instrumental rationality indeed that said that we should not intend ends for which our intention to take the means is weak-willed. The plausibility of Brunero's claim depends, in fact, on the negative side-effect after all, not the weakness of will.

Yet I agree with the general point that it is not enough to have the intention but that it must have been formed in the right way, and claim further we can handle this by switching the focus to intentional actions, for to be intentional is to have been brought about in the right way, i.e., caused in a non-deviant way by an intention inferentially connected to and non-deviantly caused by desires and beliefs that I have.

Elaborating, instrumental rationality does not end with having the right intentions but in performing the right actions. We may have coherent intentions and yet still be instrumentally irrational because we did not form the intention in the right way, i.e., as the conclusion-state of a process of reasoning. We are not instrumentally rational when it is formed in the wrong way because when we act on such an intention we do not act intentionally, and it is only our intentional actions, and perhaps those unintended but foreseen, that are subject to rational criticism; when we fail to act on such an intention we are vulnerable to the criticism of weakness of will, but we are not so vulnerable when the intention is formed in the wrong way. The drunk who mouths rational or ethical principles but fails to follow them because failing to understand them or see their normative force is not being irrational because he is not engaging in reasoning at all, except perhaps as a sham; rather he is being arational.

Why is such an action non-intentional? After all, the action has an intention as a causal antecedent, or so it may be supposed. If we adopt a causal theory of action, isn't this sufficient to make the action intentional? Actually, I know of no causal theory of action that would say that this action was inten-

tional. By an "intention" what they typically mean is whatever issues from a practical syllogism. There is a causal and conceptual connection between the intentional action and the practical reasoning; strictly speaking, one cannot act intentionally without its resulting from a (non-deviant) process of reasoning, and if Broome's model of reasoning is correct, this means that whenever I act intentionally it is because $BC_{\mathbb{W}}$ is satisfied and that the normative question is: what process of reasoning is correct given an intention and means-end belief I believe myself to have?

Of course, the process of reasoning Broome describes does not always end in the intention but sometimes stops at the belief that one has the intention, and in these cases $IR_{\mathbb{W}}$ is not satisfied but $BC_{\mathbb{W}}$ is, as already said. What is instrumentally rational in this situation in terms of how we should act? Let us consider Brunero's example: supposing that I believe that I have the intention to borrow money but do not in fact have this intention, am I acting rationally if I borrow money and irrationally if I fail to borrow money? If I borrow money then this can only be because something else has motivated me to borrow money and not because I thereby satisfy a rational requirement, since my borrowing money is not connected in any way with the practical syllogism initiated by my intention to buy a boat without the causal mediation of the intention that, when everything works perfectly, is its conclusion-state. And if I do not borrow money then I believe that I am not borrowing money, and this seems to put me under rational pressure, as Høj calls it, to make (8c) true by borrowing money. It is not so much my lack of an intention to borrow money but my failure to actually borrow money that creates this pressure.

If this is right, then it seems that the instrumental requirement should be (IR*) If I intend to x and believe that y is my preferred means to x-ing, then I should intentionally x by intentionally y-ing.

This is to be read as a wide-scope rational requirement: you are rationally required to take what you believe to be your best means towards your intended end. If the means is believed to be necessary then you must be irrational if you do not act on the intention to take that means, for such a means would be a part of whatever is your preferred means. If you take a means that is not your preferred means but is still sufficient for the end then perhaps it would be too harsh to call this irrational, but still you would not be as rational as you could be.

Whenever you do not act on what you believe to be a means (of any description) I would still consider you to have violated the rational requirement, though it might be all-things-considered rational to violate such requirements. In fact, when taking your preferred means you will *ipso facto*

be violating requirements to take alternative means, since I believe that you actually have intentions, at least dispositionally, to take any sufficient means. But your intention for your preferred means is what it is most rational to act upon, for otherwise you would be deliberately and consciously choosing what you believe to be sub-optimal.

There is much more that I could say at this point about what intentions it is rational to have and how they interact with each other, but this is outside the scope of this paper. It is enough to note here that (IR*) includes a historical condition in the concept of acting intentionally, for one does not act intentionally except as the result of (non-deviant) practical reasoning, and Broome's account tells us how practical reasoning should be in order to be rational.

3. Conclusion

The Strong Belief Thesis is false. The belief-intention link is false. Yet something like the belief-intention link, with a pragmatic implicature in the place of a material implication, is true, and, perhaps surprisingly, this is enough to provide the reasoner with the predictive belief that he will carry out his intention successfully as a premise, even, also perhaps surprisingly, when he does not believe that he will carry out his intention successfully. Our reasoning is not limited to what we sincerely believe or intend but can be carried out *ex hypothesi*, as it were. This gives Broome's model more scope and versatility than Bratman and Høj, and probably Broome himself, thinks. All that it relies upon is the idea of practical reasoning, or indeed reasoning as such, as enough like internal speech that we cannot only say what we think but think what we say. In the cases where the implicature is cancelled or otherwise to be considered unsafe, the reasoning cannot properly get started and either we never have the beliefs that form the antecedent of the rational requirement in the first place, in which case the rational requirement does not apply, or we have them but then cease having them, in which case the rational requirement does apply but is satisfied when the antecedent becomes false.

Practical reasoning as such ends in the belief that I will carry out my means-end intention and the belief that I intend to carry out my means-end intention. Providing (as the conditional says) that my premise-beliefs remain unchanged this is the only way to make my beliefs coherent. This does not, however, necessarily make my intentions coherent – satisfying the requirements on the beliefs does not guarantee satisfying the requirements on the intentions, which is to say that the *instrumental requirement* does not have the same extension as the theoretical requirements. Nevertheless, it is true

that it is only by satisfying the requirements on the beliefs that we can by reasoning bring ourselves to satisfy the *instrumental requirement* and only, I argued further, by violating the requirements on the beliefs that we can be led to believe (sometimes falsely) that the *instrumental requirement* is likewise violated. Because of this I tentatively suggested that the normative force of the *instrumental requirement* could be given in terms of the normative force of theoretical requirements even though they differed in extension, and this was sufficient for a broadly cognitivist account of the *instrumental requirement*.

However, I investigated the possibility mentioned by Broome that the *instrumental requirement* is not, strictly speaking, a genuine rational requirement, and I started to look around for alternatives that still seemed to capture the normativity of practical reasoning. This was (IR*) which connected intending the end and actually intentionally performing the action (as opposed to forming the intention to perform it) conducive to achieving the end. An intentional action is conceptually and causally, rather than normatively, connected to the intention to perform it and to the practical reasoning from which that intention emerges. Because of this, I think that Broome's model works as a cognitivist account of (IR*).

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