

Are There Process-Requirements of Rationality?

Julian Fink

University of Vienna, Vienna

Abstract: Does a coherentist version of rationality issue requirements on *states*? Or does it issue requirements on *processes*? This paper evaluates the possibility of process-requirements. It argues that there are two possible definitions of state- and process-requirements: a *satisfaction*-based definition and a *content*-based definition. I demonstrate that the satisfaction-based definition is inappropriate. It does not allow us to uphold a clear-cut distinction between state- and process-requirements. We should therefore use a content-based definition of state- and process-requirements. However, a content-based definition entails that rationality does not issue process-requirements. Content-based process-requirements violate the principle that 'rationality requires' implies 'can satisfy'. The conclusion of this paper therefore amounts to a radical rejection of process-requirements of rationality.

Keywords: rationality, process-requirements, state-requirements, Kolodny, Broome.

Introduction

It is commonly accepted that rationality is a source of requirements. Like morality, prudence, and possibly convention, rationality demands things of us. Here are some putative requirements of rationality:¹ rationality requires you not to have contradictory beliefs; it requires you to intend the means you believe to be necessary to your intended ends;

¹ In this paper, I am only concerned with a 'coherentist' conception of rationality. On this conception, you are fully rational if and only if your attitudes display internal consistency and coherence. For examples of this usage of 'rationality', see Broome (2008); Kolodny (2005); Reisner, (2009); Scanlon (1998, 2007).

it requires you to intend to do what you believe you ought to do; it requires you to have transitive preferences, *etc.*

The fact that rationality issues requirements is uncontroversial. Where there is a lack of common agreement is how to construe the *nature* of these requirements. In particular, a substantial source of disagreement is whether one should conceive of the requirements of rationality as 'state-requirements' or as 'process-requirements'. That is, does rationality require us to be in particular states? Or does it require us to undergo particular processes?

In his influential paper 'Why be rational?'², and its sequel 'State or process requirements?'³, Niko Kolodny urges us to conceive of the requirements of rationality as process-requirements, and not as state-requirements.⁴ Only process-requirements, Kolodny argues, are apt to guide our deliberation and to fit our ordinary talk about rationality. Kolodny (2007, 373) thus concludes that '[...] the proper topic [of a theory of rationality] is process requirements'.

The present paper aims to reject the view that the requirements of rationality are process-requirements. I argue that Kolodny's preference for process-requirements is unfounded. Section 1 shows that Kolodny's position appears to be incoherent. Though he advocates process-requirements, none of the concrete requirements he puts forward mentions a process. They seem to be requirements on states. Nevertheless, in section 2 I identify a way of understanding Kolodny's requirements as process-requirements. I argue that there are two possible definitions of state- and process-requirements: a 'satisfaction-based' definition and a 'content-based' definition. Indeed, on a 'satisfaction-based' definition, Kolodny's requirements turn out to be process-requirements. But that does not save his view that the requirements of rationality are process-requirements. In section 3, I argue that we should not avail ourselves of a satisfaction-based definition of process-requirements. It does not allow us to preserve a clear-cut distinction between state- and process-requirements.

Nonetheless, the content-based definition may still give us process-requirements of rationality. However, in section 4 I argue that the pros-

² Kolodny (2005).

³ Kolodny (2007).

⁴ Kolodny (2005, 517) declares that he is '[...] inclined to think [...] that all rational requirements are process-requirements'.

pects for this look rather dim. Content-based process-requirements violate the principle that ‘rationality requires’ implies ‘can satisfy’. I will show that it is conceptually impossible to satisfy a content-based process-requirement. This paper therefore amounts to a *radical* rejection of process-requirements.

1 State vs. process-requirements: Kolodny’s puzzle

Consider the following case of irrationality. Suppose you have a pair of contradictory beliefs. You believe that you are in Bratislava and you believe that you are not in Bratislava. There is nothing startling in the claim that you are not fully rational, or somewhat irrational, in virtue of having these two beliefs. That is, you are irrational in virtue of the way you are.

For some the story ends here. Taking a snapshot of your mental attitudes generally suffices to evaluate and explain your degree of rationality. If there is ‘mental tidiness’ among your states, you are rational. If attitudes display some disarray, you are less than rational.

For others, however, the story does not end here. You are not only rational or irrational in virtue of having these contradictory beliefs. Your irrationality also stems from not *revising* one or both of these beliefs in accordance with the evidence for or against them. In general, your rationality does not only depend on the state you are in at a given time; in addition, you are rational and irrational in virtue of how you transform from one state to another over time.

Kolodny finds himself in the latter camp. In his seminal ‘Why be rational?’, and its sequel ‘State or process requirements?’, Kolodny argues for a conception of rationality that makes evaluations of rationality and irrationality dependent on how a subject transforms between states over time. He does so for two reasons.⁵ First, ordinary talk about rationality is not only about how to *be*. It is about what to *do*. It is about *changing* and *responding* rationally to your situation. Second, requirements of rationality appear to be *normatively guiding*. They function as advice to our deliberation. This can be so only if they tell us what to do. The requirements of rationality need to guide our actions and function as advice in our deliberation.⁶

⁵ Cf. Kolodny (2005, 517) and Kolodny (2007, 371-372).

⁶ On the point of ‘guidance’, see Reisner (2009).

Kolodny takes this to be enough evidence for the existence of ‘process-requirements’ of rationality. I am sceptical about this, but for the purpose of this paper I shall let it pass. Instead, I will take issue with a particular tension that arises between Kolodny’s characterisation of process-requirements and his examples thereof.

Kolodny (2005, 517) characterises process-requirements as telling us ‘... how, going forward, one is to form, retain or revise one’s attitudes’. He differentiates process- and state-requirements in terms of ‘being’ and ‘doing’.

State requirements require that you *be* a certain way at a given time. Process requirements require you to *do* something over time, where ‘do’ is understood broadly, so as to include forming and revising beliefs. (Kolodny 2007, 371; original emphasis)

However, Kolodny’s claim that we should conceive of the requirements of rationality as process-requirements comes with a substantive puzzle. Consider the following two requirements Kolodny (2005, 521) explicitly introduces as *process-requirements*.

‘B+: Rationality requires one to believe that *p*, if one believes that there is conclusive evidence that *p*.’

‘I+: Rationality requires one to intend to *X*, if one believes that there is conclusive reason to *X*.’

How can we possibly conceive of these two requirements as *process-requirements*? Are they not just requirements on particular states?

John Broome makes a point as follows. Take I+, for example:

[It] mentions only states, not processes. It says nothing about how, going forward, one is to form, retain or revise one’s attitudes. So I do not know how to understand [I+] as a requirement on processes. (Broome 2007b, 366)

Broome concludes that Kolodny only *talks* the process talk. But he does not *walk* the process walk. Kolodny’s requirement formulations fail to reflect their process nature. Of course, this does not *per se* discredit B+ and I+. But it makes Kolodny’s position incomprehensible, if not incoherent.

But I think this response is too quick. We are not yet entitled to reproach Kolodny with incoherence. Maybe there is an intelligible way

to construe B+ and I+ as process-requirements. We should ask two questions. First, is there a way to understand B+ and I+ as process-requirements? If so, how does it diverge from Broome's understanding of process-requirements?

2 Understanding Kolodny's puzzle: two definitions of process-requirements

Indeed, I propose there is a way of understanding Kolodny's B+ and I+ as process-requirements. To do so, we need to define process-requirements on the basis of a 'satisfaction-based' definition, as I shall call it.

Satisfaction-based process-requirement definition. For all possible worlds w , and all requirements of rationality R , at w , R is a process-requirement if and only if, at w , undergoing a process is a necessary condition of satisfying R .

A corresponding 'satisfaction-based' definition of *state-requirements* thus reads as follows:

Satisfaction-based state-requirement definition. For all possible worlds w , and all requirements of rationality R , at w , R is a state-requirement if and only if, at w , being in a particular state is a necessary condition of satisfying R .

Suppose, at w , you are subject to a requirement of rationality R . If, at w , you can satisfy R *only if* you undergo a process, then, at w , R is a process-requirement. If, at w , you can satisfy R *only if* you are in a particular state, then, at w , R is a state-requirement.

On these definitions, there are situations in which B+ and I+ turn out to be *process* requirements. Take I+, for example. Suppose you believe there are conclusive reasons to get a flu vaccination. However, you do not intend to get a flu vaccination. In order to satisfy I+, you must undergo a process that leads you to intending to get a flu vaccination. You must change to satisfy this requirement.

No doubt, there are circumstances in which this requirement is not a process-requirement. Suppose you believe there are conclusive reasons to get a flu vaccination *and* you intend to get a flu vaccination. In those

circumstances, you do not have to undergo a process to satisfy the requirement. You already satisfy it by *remaining* as you are.

In deciding which requirements count as state- or process-requirements, Broome does obviously not employ a *satisfaction-based* definition. He declares that a process-requirement must *mention* a process. It must say ‘... how, going forward, one is to form, retain or revise one’s attitudes.’ Consequently, Broome seems to implicitly use a *content-based* definition of process-requirements.

Content-based process-requirement definition. For all possible worlds w , and all requirements of rationality R , at w , a requirement of rationality R is a process-requirement if and only if the content of R designates a relation between a subject and a process.

A corresponding *content-based* definition of *state-requirements* thus reads as follows:

Content-based state-requirement definition. For all possible worlds w , and all requirements of rationality R , at w , a requirement of rationality R is a state-requirement if and only if the content of R designates a relation between a subject and a state.

On these definitions, B+ and I+ are *not* process-requirements. Their contents do not refer to a relation between a subject and a process. But it is easy to turn them into process-requirements. For example, consider an analogous *content-based* process-requirement of I+:

I+*: Rationality requires one to form an intention to A , if one believes that there is conclusive reason to A .

Forming an intention is clearly a process; requiring *you* to form an intention refers to a relation between a subject, i.e. you, and a process. So, I+* is unquestionably a *content-based* process-requirement.

3 Satisfaction or content? What is a correct definition of state- and process-requirements?

How should we define state- and process-requirements? Should we use content- or a satisfaction-based definition? In this section, I argue that the satisfaction-based definition is inappropriate. It does *not* allow us to uphold a *clear-cut* distinction between state- and process-require-

ments. This is a significant shortcoming of the satisfaction-based definition.

Arguably, this is not the only way to discredit the satisfaction-based definition. On this definition, the process-property turns out to be *inter-temporally fragile*. That is, a requirement of rationality may gain or lose this property over time. *Prima facie* this might appear as an unwelcome consequence of a satisfaction-based definition, but I shall argue that it is not.

Suppose, at t_1 and t_2 , a *consistency requirement* of rationality requires that you do not believe a contradiction. Suppose, at t_1 , you do not believe a contradiction. So, at t_1 , the *consistency requirement* will not be a process-requirement. You do not need to undergo a process to satisfy it. You satisfy it by remaining as you are. However, suppose at the time t_2 , a contradiction has crept into your beliefs. The *consistency requirement* will now be a process-requirement. At t_2 , you must undergo a process to satisfy it.

Inter-temporal fragility is not a significant problem for the satisfaction-based process-requirement definition. It just implies that the *process property* is a *context-dependent property* of requirements of rationality. This is not an unwelcome consequence of the satisfaction-based definition.

Admittedly, it would be unwelcome if being a process-requirement were an *essential* property of a requirement of rationality. That is, necessarily, R is a requirement of rationality if and only if undergoing a process is a necessary condition for satisfying R . But this cannot be correct. It would imply that for something to be a requirement of rationality it *must* be violated. Surely, that is absurd. Requirements can be satisfied, violated, or avoided.⁷ So, for a requirement's having the process-property is *not* like a cuboid's having eight corners. Instead, it is more comparable to a cuboid's having the properties of being small, heavy, cold, etc. These properties may vary from time to time. They are time, or, more generally, context dependent. A cuboid can gain and lose these

⁷ By 'avoiding' I mean that a requirement does not apply. For example, in Britain, the law requires you to drive on the left side of the road. You can satisfy the law by driving on the left side, you can violate it by driving on the right side, or you can avoid the law by leaving the area of British traffic law legislation; i.e. by driving to France, for instance. In France, British traffic laws simply do not apply. On this point, see Broome (2007a).

properties without ceasing to be a cuboid. I do not see why the same should not hold for the process-property requirements of rationality.

I now turn to a more significant shortcoming of the satisfaction-based definition. I treat the 'state-property' and 'process-property'⁸ as being incompatible. As just argued, this incompatibility needs only to range over *one and the same* time or context, and not over *different* times or contexts. That is, if, at w , a requirement is a state-requirement, then it is not a process-requirement, and *vice versa*. This should be a constraint on how we define state- and process-requirements. However, I argue that a satisfaction-based definition violates this constraint.

Suppose, at t_1 , a *strength-of-will requirement* of rationality requires you to intend to A if you believe there is conclusive reason to A . Suppose, at t_1 , you believe there is conclusive reason to A . However, at t_1 , you fail to intend to A . How can you satisfy this requirement?

To begin with, as, at t_1 , you violate the *strength-of-will requirement*, just remaining as you are will not satisfy it. You can satisfy this requirement only by undergoing a particular process, leading you to intend to A .

Note, however, that just *attempting* to form an intention will not suffice to satisfy the requirement. You must also *succeed* in doing so. In the end, you must intend to A . So, there are at least two satisfaction conditions of the above requirement: (i) you must undergo a process that leads you to intending to A ; (ii) you must be in the state of intending to A .

Recall the satisfaction-based definitions of state- and process-requirement: at w , R is a *process-requirement* if and only if a necessary condition for satisfying R is the undergoing of a process. R is a *state-requirement* if and only if a necessary condition for satisfying R is being in a particular state. Therefore, (i) and (ii) imply that there are worlds where the *strength-of-will requirement* turns out to be both simultaneously: a state- and a process-requirement.

This is a substantive defect of the satisfaction-based definitions. In defining state- and process-requirements, we should preserve a clear-cut distinction between state- and process-requirements. But by employing a satisfaction-based definition, we lose such a clear-cut distinction. This is an unacceptable consequence of the satisfaction-based

⁸ By 'state-property' or 'process-property' I mean the property of being a state or a process-requirement respectively.

definition. It entitles us to conclude that Kolodny's B+ and I+ are not real process-requirements. Indeed, the fact that Kolodny refers to them as process-requirements makes his position incomprehensible, if not incoherent.

I compared the process-property of requirements with a cuboid's properties of being small, heavy, cold, *etc.* These properties imply some 'intra-contextual exclusions', as I shall call them. Consider a context w : if, at w , a cuboid is small, then, at w , it is not big. Likewise, if it is heavy, then it is not light; if it is cold, it is not hot. The same should hold for the state-property and the process-property. A definition must consequently reflect this exclusion.

4 Are there content-based process-requirements?

A content-based definition surely reflects this exclusion. Recall that on a content-based definition, R is a process-requirement if and only if R 's content designates a process; R is a state-requirement if and only if R 's content designates a state. It is unequivocal, I argue, if the content of a requirement designates the relation between a subject and a state or a process.

Suppose 'S Xs' forms the content of a requirement of rationality. How can one establish whether 'S Xs' designates a relation between S and a *state* or S and a *process*?

I propose that there is an imaginary test for establishing this. Suppose there is a technology that makes it possible to represent visually relations between a subject and a state or a process. I assume that this representation takes the form of a two-dimensional image. For example, if you are in the state of being concentrated, then there is a two-dimensional image of you concentrating. Likewise, if you are in the process of writing a shopping list, then there is a two-dimensional image of undergoing this process. I argue that 'S Xs' designates a relation between S and a *state* if and only if S Xs can be visually represented by a *static* image. In contrast, 'S Xs' designates a relation between S and a *process* if and only if 'S Xs' cannot be represented as a static image. Instead, representing a process must take the form of a *dynamic* image. I take the difference between a static and dynamic picture to be analogous to the difference between a photo and a film or movie. I am unable to conceive of a relation that can *and* cannot be visually represented by a static image.

Consequently, the content-based definition preserves a clear-cut distinction between state- and process-requirements. We should therefore prefer it to a satisfaction-based definition of state- and process-requirements.

How does this affect Kolodny's claim that requirements of rationality are process-requirements? I shall argue that it makes his position untenable. There are *no content-based* process-requirements of rationality.

Here is my argument for this claim. Suppose you find yourself in a situation where rationality requires you to *form* an intention to visit Bratislava. Call this particular instance of a requirement $R_{\text{IV-BA}}$. Of course, $R_{\text{IV-BA}}$ may stem from a variety of antecedent conditions. For example, you may believe that you ought to visit Bratislava, or you may believe that visiting Bratislava is a necessary means to fulfil one of your intentions.

At any rate, the source of this requirement is in fact irrelevant for my argument. What is relevant is that $R_{\text{IV-BA}}$ is a genuine *content-based* process-requirement. But there should not be doubts about this. The *formation* of an intention cannot be truthfully represented visually by a static image. Only a dynamic image could do so. So, the $R_{\text{IV-BA}}$ is unequivocally a content-based process-requirement.

Under which conditions *can* you form an intention to visit Bratislava? No doubt, there will be a plethora of conditions. Many will be psychological in nature. Let me focus on one in particular. I assume you cannot form an intention you already have. That is, you can form an intention only if you are in a situation in which you do *not* intend to visit Bratislava. Compare this with the process of raising your arm, for example. You can undergo the process of raising your arm only if your arm is not already raised. In short, your arm must be un-raised to raise it. Or you cannot drive to New York if you are already in New York. You must be out of New York to drive into it. The same, I assume, will hold for an intention. You can only form it if you do not already have it.

Apply this to an additional assumption, namely that 'rationality requires' implies 'can'. That is, if rationality requires of you that you F , then you can F . I take this to be relatively uncontroversial. Consequently, if you *can* form an intention to visit Bratislava only if you do not intend to visit Bratislava, then you are subject to $R_{\text{IV-BA}}$ only in situations in which you do not intend to visit Bratislava. Intuitively, this seems evident. There is no point requiring one to *form* an intention one already has.

However, this implies a significant application condition for R_{Iv-BA} . You must *violate* R_{Iv-BA} to be subject to this requirement. For I just concluded that being subject to this requirement presuppose that you do *not* intend to visit Bratislava. Being in a state of *not* intending to visit Bratislava certainly suffices to violate R_{Iv-BA} . As long as you are subject to R_{Iv-BA} , you infringe this requirement before reaching the state of intending to visit Bratislava. This holds, I submit, for *any* content-based process-requirement. You must *successfully complete* the required process in order to satisfy the requirement. A mere attempt will not be enough. So, before having successfully formed an intention to visit Bratislava, you will violate R_{Iv-BA} .

This is significant. It implies that you *cannot satisfy* R_{Iv-BA} . In fact, *all* content-based process-requirements cannot be satisfied. If a requirement of rationality requires one to undergo a process, then you violate it. In other words, if it is not the case that you violate a process-requirement, then you are not subject to this requirement. Consequently, you *cannot* satisfy a content-based process-requirement.

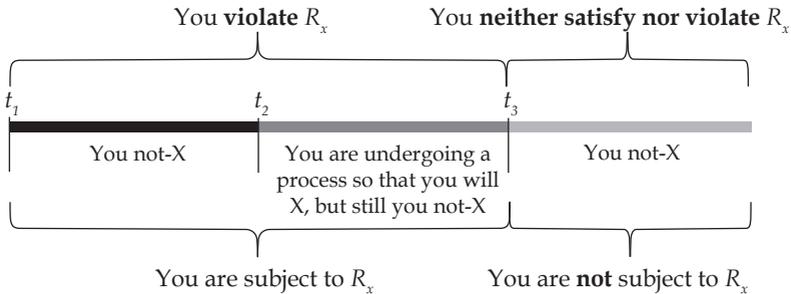


Figure 1

Figure 1 above recapitulates my argument. Suppose you are subject to a content-based process-requirement. Let me represent this requirement via a *generic* content-based process-requirement: rationality requires of you that you undergo a process so that you X. In this formula, 'you X' functions as a placeholder for a mental attitude, such as 'you believe P' or 'you intend A', etc. Call this requirement R_x . Assume the following temporal transition in forming X. Between t_1 and t_2 , you do not X; between t_2 and t_3 , you are undergoing a process so that you will X, but you still do not X; and from t_3 onwards you X. According to my argument, the application of R_x to you will be subject to two con-

straints. First, as long as you do not X , you are subject to R_X . Second, as soon as you X , you will not be subject to R_X . That is, between t_1 and t_3 , you are subject to R_X . From t_3 onwards, you are not subject to X . However, as argued above, as long as you do not X , you *violate* R_X . As soon as you X , you are no longer subject to R_X . So, the content-based process-requirement R_X applies to you whilst violating it. There is no situation in which you satisfy it. I assume that a 'requirement' that cannot be satisfied is not a requirement of rationality. It follows that there are no content-based process-requirements of rationality.

Conclusion

I conclude that there are no genuine process-requirements. This radical view is based on my rejection of content-based process-requirements. A content-based process-requirement can only apply in situations in which it is violated.

This is not to say that one never needs to undergo a process in order to satisfy a requirement of rationality. In fact, this will hold true for all violated requirements of rationality. But it would be a mistake to use the need to undergo a process in order to satisfy a requirement as a definitional criterion for process-requirements. Though such a satisfaction-based definition would make it intelligible why Kolodny labels some of his requirements 'process-requirements', it would lead us to lose a clear-cut distinction between state- and process-requirements. Some requirements would turn out to be state- and process-requirements at the same time. This would not do justice to the distinction between state- and process-requirements.

Hence I suggested that we should use a content-based definition of state- and process-requirements. This way of defining state- and process-requirements preserves a clear-cut distinction between state- and process-requirements. But this definition faces another problem. Content-based process-requirements are unsatisfiable. I therefore concluded that there are no process-requirements at all. Kolodny's pronouncement that '[...] the proper topic [of a theory of rationality] is process requirements' (Kolodny 2007, 373) is thus unreproducible.

If my arguments are correct, then results of this paper are likely to transcend their immediate significance for a theory of rationality. After all, rationality is not the only source of requirements considered to issue requirements on processes. For example, morality and prudence

are commonly thought to issue requirements on processes. This paper can therefore be conceived of as a general call for rethinking the nature of the demands evaluative requirements make upon us.

Acknowledgements

I am very grateful to Carolyn Benson, John Broome, Krister Bykvist, Micha Gläser, Kari Refsdal, Mathias Sagdahl, Attila Tanji, and audiences at Bratislava and Oslo for very helpful comments on earlier drafts of this paper. This paper was written with financial support of the Austrian Academy of Sciences, the Research Council of Norway, and the European Research Council (Advanced Grant 'Distortions of Normativity'). I thank those institutions for their generous support.

*Department of Philosophy
University of Vienna
Ebendorferstraße 10/13
1010 Wien
Austria
julian.fink@univie.ac.at*

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