Arbitrariness Arguments Against Temporal Discounting*

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Abstract

Craig Callender (2021) provides a novel challenge to the non-arbitrariness principle. His challenge plays an important role in his argument for the rational permissibility of a non-exponential temporal discounting rate. But the challenge is also of wider interest: it raises significant questions about whether we ought to accept the non-arbitrariness principle as a constraint on rational preferences. In this paper, I present two reasons to resist Callender's challenge. First, I present a reason to reject his claim that the non-arbitrariness principle only targets pure time preferences. Second, I criticize the inference Callender draws from a modest claim to a much stronger claim. The modest claim is that it can be hard to reveal the contents of an agent's preferences. The stronger claim is that this provides us with a reason to reject a certain kind of normative constraint on rational preferences. I argue that the modest claim doesn't motivate the stronger claim. The upshot of my two arguments is good news for those sympathetic to the non-arbitrariness principle: Callender's challenge can be overcome, at least as it currently stands.

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1 Arbitrariness and rational preferences

According to 'the non-arbitrariness principle' one shouldn't allow arbitrary features of a good to influence one's preferences about that good. One kind of feature that's often taken to be arbitrary is the temporal position of the good. For example, other things being equal, non-arbitrariness holds that one shouldn't have different preferences about the prospect of getting a free donut today or next week. To do so would introduce an arbitrary feature into one's preferences, making them irrational. Understood as a constraint on rational preferences, non-arbitrariness has been popular among philosophers who have written on the topic of time and rationality. For example, it's been endorsed by Adam Smith (1976), Henry Sidgwick (1884), John Rawls (1971) and Derek Parfit (1984). Craig Callender (2021) rejects non-arbitrariness.[1] In this paper, I argue that his rejection is under-motivated. I outline two separate reasons to be dissatisfied with Callender's challenge to non-arbitrariness.

Callender's challenge targets a distinction that can be drawn between 'pure' and 'impure' time preferences. 'Impure' time preferences are preferences about when one acquires a good, *but* the temporal position of the good brings with it a host of legitimate considerations. For instance, distant goods might be more uncertain than proximate goods, or they might require waiting which might cause some short-term psychological distress, or their value might depend on being acquired after one acquires some other good. 'Pure' time preferences are preferences about when one acquires a good *as such*. A pure time preference is a brute preference about when one gets the donut (for instance), independent of any other considerations that might be associated with the temporal position of the donut. When applied to time preferences, the non-arbitrariness principle seems to rely on a distinction between pure and impure time preferences since it is usually claimed that only *pure* time preferences are improperly sensitive to an arbitrary feature of a case.[2]

[1] For other challenges to non-arbitrariness as a rational constraint on time preferences, see Lowry and Peterson (2011) and Hare (2013), §4.

[2] How should we classify time preferences which involve both a pure and an impure component? For

Callender's challenge to non-arbitrariness consists in arguing that the distinction between pure and impure time preferences is implausible (Callender 2021: 21–24). This is not because the distinction is theoretically confused, but rather because it's hard to see how we could determine whether an actual agent's time preference is pure or impure. Callender concedes that it's no doubt possible to describe an agent with pure time preferences, but doing so would involve serious idealisations that 'take us to possible worlds that are so remote as to have little relevance' (Callender 2021: 23) and which model an agent with 'preferences that we may not view as our own.' (Callender 2021: 22) If we restrict our interest to an actual agent's preferences about when things happen, Callender claims that we won't find any pure time preferences – all their time preferences will be impure. It's not entirely clear whether Callender believes that pure time preferences in worlds like ours are nomologically impossible, or that it's just implausible that an agent's pure time preferences could ever be revealed in practice. But in either case, the result for non-arbitrariness is the same: since non-arbitrariness only targets pure time preferences, and since one cannot apply this distinction to actual agents' time preferences, Callender concludes that we have grounds to reject non-arbitrariness as a constraint on rational preferences.

Callender's rejection of non-arbitrariness plays an important role in his argument for the rational permissibility of a non-exponential temporal discounting rate. But his challenge is also of wider interest: it raises significant questions about whether we ought to accept non-arbitrariness as a constraint on rational preferences.

In this paper, I present two reasons to resist Callender's challenge. First, I present a reason to reject his claim that 'non-arbitrariness holds only when considering so-called

example, suppose an agent prefers getting a free donut today to next week partly due to some legitimate considerations associated with temporal position (the donut next week is a little less certain) but also partly due to temporal position itself (they just prefer that good things happen sooner rather than later). Is this a pure or impure time preference? I take it cases like this raise a choice-point in how one develops the pure/impure distinction, and I won't insist on any classification here. But it's worth emphasising that it's clear how Callender understands the distinction. According to Callender, mixed preferences like this are impure. As he puts it, 'Pure time preferences are preferences for a particular temporal position *independent of any non-temporal factor*.' (Callender 2021: 22, emphasis his) On his understanding of the distinction, pure time preferences involve *only* caring about when things happen as such. Thanks to an anonymous reviewer for helpful comments on this point.

pure time preferences.' (Callender 2021: 22, emphasis his) Second, I criticize the inference Callender draws from a modest claim to a much stronger claim. The modest claim is that it can be hard to reveal the contents of an agent's preferences. The stronger claim is that this provides us with a reason to reject a certain kind of normative constraint on rational preferences. I argue that the modest claim doesn't motivate the stronger claim.

2 Impure time preferences can be arbitrary

The first reason to resist Callender's challenge is because it rests on a false assumption. Callender claims that motivating non-arbitrariness requires drawing a distinction between pure and impure time preferences. However, I think that it needn't. One can motivate non-arbitrariness without relying on a distinction like this to isolate the problematic sorts of time preferences. Whilst it's true that non-arbitrariness has sometimes been presented this way – for instance, Rawls' influential discussion explicitly targets 'pure time preferences'[3] – it's not a necessary feature of the view.

An example of motivating non-arbitrariness without this feature can be found in Meghan Sullivan's (2018) recent work on time biases. Sullivan doesn't make use of the terms 'pure time preferences' or 'impure time preferences.' But on her account, *both* pure and impure time preferences can run afoul of non-arbitrariness. I'll briefly summarise how she defines non-arbitrariness and then I'll show – although she doesn't make this explicit herself – how on her account impure time preferences can also violate non-arbitrariness.

Sullivan presents the non-arbitrariness principle as follows:

[3]Rawls writes: 'In the case of an individual the avoidance of *pure time preference* is a feature of the rational. As Sidgwick maintains, rationality implies an impartial concern for all parts of our life. The mere difference of location in time, of something's being earlier or later, is not in itself a rational ground for having more or less regard for it. Of course, a present or near future advantage may be counted more heavily on account of its greater certainty or probability, and we should take into consideration how our situation and capacity for particular enjoyments will change. But none of these things justifies our preferring a lesser present to a greater future good simply because of its nearer temporal position.' (Rawls 1971: 293–294, emphasis mine). Lowry and Peterson (2011) also discuss non-arbitrariness in these terms (although what I and others call 'non-arbitrariness' they call 'the standard argument').

> **Non-Arbitrariness:** At any given time, a prudentially rational agent's preferences are insensitive to arbitrary differences (Sullivan 2018: 36).

I want to highlight that Sullivan's notion of 'insensitivity' can target both pure and impure time preferences. She claims there are at least two ways that a time preference might fail to be insensitive to arbitrary differences. First, a preference might be improperly sensitive to some feature of a case that is completely irrelevant. Second, an agent's preference might be improperly sensitive to an arbitrary feature of a case if the agent overestimates the relevance of a particular feature (Sullivan 2018: 37). Pure time preferences, as they are usually described, manifest the first kind of improper sensitivity. What about impure time preferences? It's plausible that some, although not all, impure time preferences manifest the second kind of improper sensitivity. Sullivan doesn't say anything more about the kind of improper sensitivity that overestimates the relevance of a feature, but we can use this idea to separate impure time preferences into two general categories. Call one category *calibrated* impure time preferences and the other *miscalibrated* impure time preferences. A calibrated impure time preference is sensitive to some relevant considerations associated with temporal position *and* those considerations are correctly weighted. This sort of preference doesn't manifest the second kind of sensitivity, so it doesn't violate **Non-Arbitrariness**. A miscalibrated impure time preference is sensitive to some relevant considerations associated with temporal position *but* it incorrectly weights those considerations. For example, suppose an agent prefers getting a free donut today to next week due to the unpleasantness associated with waiting for something one wants. If the agent overestimates how unpleasant waiting will be, or how this unpleasantness compares with other salient features of the case, then their preference is a miscalibrated impure time preference. This sort of preference does manifest the second kind of sensitivity, so it does violate **Non-Arbitrariness**. The upshot is that according to Sullivan's account of non-arbitrariness, both pure and impure time preferences can be problematically arbitrary. So, at the least, Sullivan provides us with an example of a prominent account of non-arbitrariness that is a counterexample to Callender's claim

that the principle only targets pure time preferences.

One might object that the second kind of improper sensitivity described by Sullivan – that is, the kind that overestimates the relevance of a feature – isn't properly characterised as sensitivity to an *arbitrary* feature. After all, if a feature is relevant enough that it can be factored into one's rational preferences, isn't it confused to think of that feature as an arbitrary feature of the case? But I think both uses of the term 'arbitrary' are natural. Whether an agent gives positive weight to a feature which is irrelevant and hence deserves no weight, or whether an agent gives more weight to a relevant feature than it deserves, in either case it seems natural to say that the agent's preferences are irrational due to an improper sensitivity to an arbitrary feature.

Another objection is that Sullivan's account of non-arbitrariness provides a counterexample to the letter but not the spirit of Callender's challenge. Callender is worried that a theoretical distinction between different kinds of time preferences can't be applied to actual agents' preferences. In this spirit, one might object that the distinction Sullivan endorses between different kinds of sensitivity — and that I've filled out in terms of calibrated and miscalibrated impure time preferences — likewise can't be applied to actual agents' preferences. In particular, we can ask at least two questions of an agent who seems to overestimate the relevance of a feature. First, what weight *does* the agent give the feature? Second, what weight *should* the agent give the feature? I take it that both questions can be very difficult to answer. Without answers to these questions, it seems that Callender's challenge still applies even if we accept Sullivan's account of non-arbitrariness. In the next section, I'll outline one way this objection can be met.

3 Redescribing preferences

Callender's challenge involves drawing an inference from a modest claim to a much stronger claim. In this section, I'll argue that the modest claim doesn't provide sufficient support for the stronger claim.

The modest claim is that it can be difficult to reveal the contents of an agent's preferences. The stronger claim is that this provides us with a reason to reject a certain kind of normative constraint on rational preferences. As we've just seen, Callender's original modest claim is that it can be difficult to determine whether an agent's time preferences are pure or impure, and at the end of the previous section I suggested that the spirit of this challenge still holds even if one accepts a version of non-arbitrariness that doesn't require drawing a distinction between pure and impure time preferences. In this section, I'll argue that one can accept the modest claim and reject the stronger claim. To support my view, I'll draw an analogy between Callender's challenge and a similar argument from elsewhere in decision theory; namely, John Broome's (1991) discussion of transitivity in *Weighing Goods* in which Broome accepts an analogous modest claim but rejects an analogous stronger claim.

Let's briefly look at Broome's discussion. Transitivity requires that if you prefer A over B and B over C, then you prefer A over C. Broome considers the following case that seems to present a counterexample to transitivity. Maurice is planning a holiday. When given the choice between visiting Rome to take in all its cultural delights (R) or going mountaineering in the Alps (M), Maurice is disposed to choose visiting Rome. When given the choice between staying at home (H) or visiting Rome, he is disposed to choose staying at home. But when given the choice between staying at home (H) or mountaineering in the Alps (M), he is disposed to choose mountaineering. Maurice prefers R over M, and H over R, but he does not prefer, as transitivity rationally requires of him, H over M. However, here's a further piece of relevant information about Maurice: he is morally committed to becoming less cowardly. This provides Maurice with a way of justifying his preference ordering, since staying home when he could have gone mountaineering would be cowardly. To properly capture Maurice's preferences we should divide H into two distinct alternatives: staying home without having turned down a mountaineering trip (H_1), and staying home having turned down a mountaineering trip (H_2). Maurice believes H_2, but not H_1 and not R, would be cowardly. On this way of

individuating outcomes, Maurice's preferences are transitive. He prefers R to M and H_1 to R. Transitivity requires him to prefer H_1 to M. But were he to face a choice between mountaineering or staying at home, that would be a choice between H_2 and M, and transitivity does not require that he prefer H_2 to M (Broome 1991: 100–101).

How does this case challenge transitivity? Broome worries that cases like Maurice's show that it will always be possible to redescribe an agent's preferences more finely until it turns out that they don't violate transitivity after all. If this is allowed, then transitivity loses its normative force as a requirement on rational preferences. One can always avoid having to change one's intransitive preferences simply by redescribing them as preferences over a more fine-grained individuation of outcomes until they come out as transitive. Broome writes, 'If this sort of fine individuation is always allowed, transitivity will truly be an empty condition.' (Broome 1991: 101)

Broome's view, as I've described it so far, provides us with a modest claim analogous to Callender's modest claim. Both Broome and Callender take it that the possibility of redescribing an agent's preferences makes it difficult to reveal the actual contents of an agent's preferences which, in turn, threatens to undermine a norm for rational preferences. In Broome's case, intransitive preferences might be redescribed as transitive preferences over a finer-grained individuation of outcomes such that they no longer violate the transitivity norm. In Callender's case, pure time preferences might be redescribed as impure time preferences such that they no longer violate the non-arbitrariness norm (Callender 2021: 22–23). However, Broome and Callender differ on whether they accept that this kind of challenge ultimately undermines the norm. While Callender takes it that this provides grounds to reject non-arbitrariness, Broome resists drawing the analogous inference, concluding that the challenge doesn't ultimately undermine transitivity.

In the case of the transitivity norm, there are at least two ways one might resist the inference from the modest claim to the stronger claim. One is discussed and endorsed by Broome and one is due to Jamie Dreier's (1996) work on the same problem. Broome's own view is that the possibility of redescribing preferences doesn't undermine

transitivity since there are rational constraints on how one's preferences can be ordered over finely individuated outcomes. He defends a norm called the 'rational requirement of indifference' which holds that, at some point, slight differences between outcomes are not sufficient to make it rational to have a difference in preference between them. So in Maurice's case, it's irrational for him to have a preferences between H_1 and H_2. This additional constraint prevents Maurice from escaping transitivity. Either Maurice has intransitive preferences over R, M, and H, or he has transitive preferences over R, M, H_1, and H_2, which includes two outcomes one ought to be indifferent between. In either case, Maurice's preferences are irrational. (Broome 1991: 103–105)

Dreier's view is that the mere possibility of redescribing an agent's preferences doesn't undermine transitivity since the redescription mightn't be true. Although it might be possible to redescribe an agent's intransitive preferences over coarse-grained outcomes as transitive preferences over fine-grained outcomes, Dreier thinks there's ultimately a fact of the matter about what preferences an agent has (Dreier 1996: 260). In those cases where the agent *actually* has the first kind of preferences – that is, intransitive preferences over coarse-grained outcomes – then the possibility of redescription hasn't allowed the agent to escape the norm and their preferences are irrational after all.

Both Broome and Dreier accept a view analogous to Callender's modest claim, but they each provide a reason for thinking that it needn't support a view analogous to Callender's stronger claim. One lesson we can draw from this analogy is that the fact that it can be difficult to reveal the contents of an agent's preferences isn't, in general, a sufficient reason to reject a norm on rational preferences. One more specific lesson is that I think we can resist Callender's challenge to non-arbitrariness in an analogous way to how Dreier resists rejecting transitivity. That is, we can accept Callender's modest claim that it can be difficult to reveal in practice whether an agent has the kinds of time preferences targeted by non-arbitrariness, but assert that there is nevertheless a fact of the matter about the contents of the agent's time preferences. If an agent's preferences are actually the kind that violate non-arbitrariness – that is, if they're actually pure

time preferences (on Callender's version of non-arbitrariness) or actually sensitive to an arbitrary feature (on Sullivan's version of non-arbitrariness) – then the fact that they can be redescribed doesn't allow the agent to escape the non-arbitrariness principle.

4 Conclusion

Callender presents a challenging new objection to the non-arbitrariness principle that ought to be of interest to a wide range of philosophers working on time and rationality. I've argued that there are two ways a friend of non-arbitrariness might resist his challenge. First, by rejecting his claim that non-arbitrariness only targets pure time preferences. Second, by questioning the inference he draws from the fact that it can be difficult to reveal a class of an agent's preferences to the conclusion that we should reject a rational constraint on that class of preferences. Of course, none of this amounts to a positive case for non-arbitrariness. But it does show that Callender's challenge to non-arbitrariness can be overcome, at least as it currently stands.

References

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