

# Future-Bias and Practical Reason

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## 1. Introduction

Each of us looks on the world from our own perspective. Part of this is that we each have our own *personal* perspective. You and I have different hopes, dreams, and tastes; different pets, loved ones, and enemies. This personal perspective shapes our prudential concerns. For example, each of us has a greater concern with our own careers than the careers of strangers. In addition, each of us sees the world from a *temporal* perspective. We are living in “the now”, so to speak, with some parts of our lives in the past, and other parts in the future. This temporal perspective also shapes the prudential concerns of most of us.

Perhaps the most striking example of this concerns our attitudes towards death. The mere thought that our lives are finite can be somewhat distressing. But what is typically more distressing is the thought that time is running out and death is approaching. This concern with the approach of death is prompted by two temporally perspectival features of our psychology. The first feature is that we become alarmed that the scary event of death is drawing *near*. In this respect, we are “near-biased” — we are more concerned with what is in our near future than what is in our distant future. The second feature is that we become despondent that time is running out. That is, we have fewer and fewer things to look forward to in the *future*. In this respect, we are “future-biased” — we are more concerned with what is in our future than what is in our past.

It is the rationality of future-bias that will be the topic of this essay. To be more precise: I will discuss the rationality of a specific type of attitude — future-biased preferences. Now, we might wonder whether it is appropriate to talk of future-biased *preferences* here, given that we cannot causally affect whether an event has occurred in the past. But that we do have these preferences is demonstrated by cases involving uncertainty like the following:

*Past and Future Operations.* You wake in the hospital with amnesia, unable to remember what happened yesterday. The nurse tells you that they have mixed up your hospital records. They will resolve the confusion soon. In

the meantime, she says that either you had a four-hour operation yesterday, or you will have a one-hour operation tomorrow.

This case is introduced by Derek Parfit (1984), who points out that most of us would prefer to be the patient who has already had the operation. Although we cannot control whether the pain is in the past, we might vainly hope that we could ensure that the pain were past and we would be relieved to discover that the pain is in the past — relief that indicates an underlying preference.<sup>1</sup> Along these lines, future-biased preferences for goods can be defined as follows:

1. Along similar lines, we have various preferences about the past; I prefer that the First World War had not happened, and no doubt you do too. These examples show that we should not conceive of a preference for A over B as a disposition to choose A or B. In addition, an anonymous reviewer has pointed out that we have hopes and wishes about the past.

A further reason for rejecting the “disposition to choose” conception of preference as too narrow is that future-biased preferences can be indirectly action-guiding. Indeed, a central goal of this essay will be to illustrate a new way in which future-biased preferences can indirectly guide our actions in everyday cases. The literature contains two recent discussions of indirect ways in which future-biased preferences can guide action. I have argued that when we are uncertain about how the past has gone, we may choose to insure ourselves against our past-directed preferences being frustrated — a point that I have applied to the case of future-bias (Dougherty 2011). Along similar lines, Preston Greene and Meghan Sullivan (2015) have argued that future-biased preferences will affect how someone acts if they are keen to avoid regret.

But while I suggest that we reject a reductive definition of preferences to dispositions to choose, I do not have an alternative definition to put in its place. Indeed, I suspect a reductive definition of preferences is impossible. Instead, the best that we can do is to say something about the functional role that preferences play in our mental economies. It is true that one characteristic role of preferences is to motivate action: preferences guide our choices both directly and indirectly. In addition, preferences have an important link to emotion. The satisfaction or frustration of preferences tends to produce positive or negative forms of affect in us, respectively. With respect to both preferences’ motivational and affective roles, I suggest that we think of these as rankings that we endorse as appropriately guiding action and emotion, rather than brute urges or inclinations that we do not endorse. Here I am indebted both to conversations with Chrisoula Andreou and to her (2005, 2007).

Future-biased Preferences (Goods): You have future-biased preferences with respect to good G if and only if you prefer G to be in your future rather than your past. (All else equal.)

Likewise, with respect to bad things, one is future-biased when one prefers them to be past rather than future.

These are not the only preferences we could have. Alternatively, we could have “temporally neutral” preferences (Parfit 1984):

Temporally Neutral Preferences: You have temporally neutral preferences with respect to good G if and only if you are indifferent about the temporal location of G with respect to the present moment. (All else equal.)

A natural rationale for adopting temporally neutral preferences would be to accept David Brink’s claim that “the location of goods and harms within a life has no normative significance except insofar as it contributes to the value of that life”.<sup>2</sup> On this view, our preferences should be grounded in facts about the values of various lives, and these values are unaffected by temporal perspective.

But a rational requirement to be temporally neutral is under fire from Parfit’s operations case. This case typically provokes in people strong intuitive support for the claim that future-biased preferences are rationally permissible. Indeed, the case inclines some people to think that these preferences are rationally required: they think that there would be something amiss with someone who was indifferent as to whether

2. This is Brink’s (2010, p. 358) definition of temporal neutrality. I prefer to see it as a likely consequence of the view. As Brink notes, temporally neutral preferences are consistent with accepting J. David Velleman’s (2000) claim that, from an aperspectival view, lives are better or worse depending on the temporal distribution of goods and bads within that life. For example, a friend of temporal neutrality might allow that it is better to start one’s life in disgrace and later gain honor rather than for one’s life to take the reverse trajectory. So temporal neutrality does not mean indifference to the objective temporal sequence of events; it means indifference to our subjective temporal perspective.

or not she had already had painful surgery. The plausibility that there is a rational requirement to be future-biased shows in turn just how intuitive it is to hold that there is a rational permission to be future-biased.

Recently, however, the intuitive position has come under attack.<sup>3</sup> Brink has argued that future-biased preferences appear irrational because these preferences are diachronically unstable.<sup>4</sup> When both operations are in the future, a future-biased person would prefer the one-hour operation to the four-hour operation. But when the four-hour operation passes, this person's preferences would reverse. This temporal instability might seem benign, so long as the impossibility of our causally affecting the past means that our preferences for what is in the past cannot directly guide action. But recent articles have argued that because future-biased preferences can be indirectly action-guiding, these diachronically unstable preferences can lead to patterns of action over time that are self-defeating in the sense that these actions

3. In addition to articles that directly argue that the intuitive position is wrong, Caspar Hare (2008) has discovered that our concern for others is future-biased when they are spatially close, but not when they are distant. He proceeds to show that this generates a puzzle, with the upshot that rationality requires that we become consistently biased or unbiased in our preferences concerning others' welfare. Hare's preferred solution to the puzzle comes down on the side of future-bias: he concludes that we should have future-biased concern for others, regardless of whether they are near or far. So the view that he ultimately adopts does not challenge the rational permissibility of future-bias. See also Hare (2013).
4. Brink (2011) makes four additional criticisms of future-bias. First, Brink notes that future-bias is limited only to hedonic experiences like pleasure and pain, and notes that he might prefer a smaller future disgrace to a larger past disgrace. Building on this remark, we might put the point the following way: It is arbitrary to have future-bias about some gains or losses but not others. This arbitrariness suggests that the preferences are not formed by rational processes. Second, Brink notes that we lack this preference about pains and pleasures when these are the pains and pleasures of other people who are not immediately present. Again, we could view this worry as a concern with arbitrariness: there seems to be no good reason for being future-biased about ourselves but not about others. Third, Brink suggests that the intuition that it is permissible to prefer pain to be past may simply arise from the fact that anticipating pain is itself painful. He claims that when he sets this anticipation aside, his intuition in favor of future-bias wanes. Fourth, Brink suggests there may be an evolutionary explanation of why we have future-bias, even though this bias is not rational.

ultimately leave the agent worse off in one or more respects and better off in no respect.<sup>5</sup>

A common challenge to each of these arguments is that their conclusion—that future-biased preferences are irrational—is deeply counterintuitive. Thus, someone may reasonably reply that she has greater confidence in the conclusion's falsity than she has confidence in the arguments' premises. This is a significant dialectical point in the debate about future-bias. However, the point does not show that these arguments have no probative force. The point only shows that the debate is unlikely ever to be settled by a single knock-down argument against future-bias. Instead, to establish that future-bias is irrational, what would be needed is a set of arguments that together form a united front. Each argument by itself could erode some of our confidence in the rationality of future-bias. Together these erosions can accumulate so that eventually our confidence crumbles. It is towards this end that I will offer in this essay a new argument against the rationality of future-bias. My argument will involve bringing out a new way that future-biased preferences can be action-guiding: these preferences guide the trade-offs that we make between hedonic experiences and other goods.

## 2. Examples of irrational future-biased practical reasoning

### 2.1 *The general recipe for the examples*

I am going to argue that future-biased preferences lead to irrational behavior. But to give you a sense of where we are going, I would like to start by sketching the ideas that animate my argument.

5. I have appealed to this diachronic inconsistency to show that a risk-averse and future-biased person will engage in self-defeating action (Dougherty 2011). I argued that this person will accept a series of insurance deals that leaves her financially worse off, and better off in no respect. Along similar lines, Greene & Sullivan (2015) have shown that if someone is averse to regret and has future-biased preferences, then she will accept a smaller future benefit at the expense of a larger present benefit. This person's reason for doing so would be to avoid later regretting having chosen the larger benefit when it is in the past and the smaller benefit is in the future.

Previous discussions of future-bias have focused on our preferences between hedonic experiences: a preference between a future pain and a past pain, or between a future pleasure and a past pleasure. The novel idea behind my argument is to focus on preferences between hedonic experiences and other goods. By doing so, we will see that future-bias leads to problematic preferences in this regard.

I will illustrate this point with examples. My recipe for constructing these examples is to come up with an agent who has to choose either

- (i) how much of another good (or bad) to exchange for a hedonic experience; or
- (ii) how much of a hedonic experience to exchange for another good (or bad).

When we have an example of such an agent, we will see that her future-biased preferences will guide her attitudes or behavior. But in addition, we will see that these preferences will lead her to behave in irrational ways. She will do so because her preferences sanction different exchanges depending on whether the experience is past or future. Her future-biased preferences lead to diachronically inconsistent “exchange rates” between the hedonic experience and the non-hedonic good. Making trades on the basis of these fluctuating exchange rates is irrational.

That is a prediction that should hold regardless of what type of good or bad the hedonic experience is being exchanged for. So I will offer several examples in which different goods or bads are exchanged, in order to show that the charge of irrationality is not generated by any particular choice of good or bad.

But first we need a little set-up. Let us pick a particular agent — Victoria. It will simplify our discussion, with no loss of generality, if we assume that each minute of future pain exhibits a constant amount of disutility for Victoria. The same is true, let us suppose, for each minute of past pain. Similarly, pleasure exhibits constant utility for her. Next, we need to say a little more about Victoria’s attitudes

towards her past pains. I will assume that although she prefers not to have experienced pain in the past, Victoria discounts her past pains relative to her future pains. If so, there is some amount of past pain such that Victoria is indifferent between this amount of past pain and one hour of future pain. For the sake of discussion, let us arbitrarily suppose that she is indifferent between five hours of past pain and one hour of future pain. Similarly, let us suppose that she is indifferent between five hours of past pleasure and one hour of future pleasure. I will construct examples based on these particular trade-offs, but I trust that it will be easy to see how to construct analogous examples for any trade-offs. Indeed, it would be easy to construct analogous examples of someone who absolutely discounted past pleasures and pains.<sup>6</sup>

With these assumptions in place, we are now ready to consider examples that involve Victoria. We will follow the aforementioned recipe to cook up these examples. In each example, Victoria considers exchanging a hedonic experience for another good. She considers the exchange before the experience and after the experience. Because she is future-biased, she changes her mind about the right rate at which to exchange the hedonic experience for the other good.

My argument concerning these cases will have two strands. First, I will simply present these cases with little commentary, asking whether you consider Victoria’s changes of mind rational. In doing so, my hope is that you will share my intuitions that these changes are irrational. But while with some readers these hopes will come true, I know from bitter experience that with other readers these hopes will be dashed. Consequently, in the second strand of my argument, I will move beyond an appeal to intuition, and argue for the claim that Victoria’s changes of mind are irrational.

6. Absolute discounting would be odd, though. Victoria would then be indifferent between a childhood full of pleasant days of adventure and friendship and a childhood as a victim of bullying. This is a particularly odd attitude to have, since if Victoria is minimally decent, then she would prefer that a random stranger had a pleasurable childhood rather than a painful one.

### 2.2 *The sunbathing example: regretting having chosen pleasure*

My later examples will be cases in which the change of mind leads Victoria to act in an irrational way. But first, as a warm-up, let us consider an example in which Victoria's future-biased preferences lead only to regret. Victoria is deciding on Friday how to spend a free hour on her Saturday afternoon. The weather is forecast to be fine, and she is choosing between lazing around in the sun or working in her garden by mowing the lawn. She decides that the value of an orderly lawn is not quite enough to justify forgoing the pleasures of sunbathing for the discomfort of working in the sun. So although it is a close call, she chooses sunbathing. But when the hour is up, she notices that the pleasure is now past. And so too would be the painful hour of horticultural exertion. Because she is future-biased, she now discounts the past pleasure of sunbathing and the pain of garden-work. Meanwhile, her evaluation of a pristine lawn remains constant. Since she was antecedently only just in favor of sunbathing over garden-work, this change in her evaluations of the pleasures and pains leads her to change her most preferred way of spending the afternoon. She comes to regret having chosen the sunbathing over the gardening. She thinks, "I wish now that I had chosen differently back then!"<sup>7</sup>

Victoria has not changed her mind about the value of a pristine lawn nor how pleasurable the sunbathing stint was. Yet she prospectively preferred choosing the sunbathing, but retrospectively regretted

7. We can put this point in terms of quantities of utility, understood in the standard decision-theoretic way in terms of preference-satisfaction. Suppose that Victoria gets 15 units of utility from an orderly lawn; prospectively, an hour of future garden work has -10 units of utility for her; and an hour of future sunbathing has 10 units of utility. So when she compares the options prospectively, the gardening option offers her 5 net units of utility, while the sunbathing option offers her 10 net units of utility. So overall she prospectively prefers sunbathing to gardening. But when the hour passes, the pains and pleasures are past. Because of Victoria's future-bias, she discounts these at a rate of 5:1. So an hour of past garden work has only -2 units of utility, while an hour of past sunbathing has only 2 units of utility. Consequently, when she compares the options retrospectively, the gardening option involves 13 net units of utility, while the sunbathing option involves 2 net units of utility. So overall she retrospectively prefers gardening to sunbathing.

this choice. Is this a rational pattern of attitudes? Or is Victoria rationally required not to regret a choice that she takes herself to have been correct to make at the time?

### 2.3 *The riverbank example: changing one's decision about how much time to spend volunteering*

The previous case concerned the rationality of regretful preferences. The next concerns the rationality of actions. So let us now see a case in which future-biased preferences are indirectly action-guiding. Victoria has decided to volunteer to clear trash from the side of a polluted river on Sunday. Despite her noble intentions, this is not work that she will particularly enjoy. The smell of rotting trash makes her gag, and she loathes the feeling of sweaty clothes against her skin. Every hour Victoria spends volunteering is a (mildly) painful one for her. So once she has "done her bit", she does not want to spend a minute longer breathing in the smell of a dirty river. She decides how much time to spend volunteering in terms of how much she would be sacrificing, and she calculates this sacrifice in terms of her preferences concerning the pain of the volunteering.<sup>8</sup> On Saturday evening, Victoria decides that five painful hours have exactly the right amount of disvalue to count as "doing her bit". Sunday comes, and Victoria does indeed spend her planned five hours cleaning the riverbank. At the end of this arduous shift, she is about to head home, when the following thought crosses her mind: The five painful hours are now *in the past*. However, in light of her future-bias, she is indifferent between five painful hours in the past and one painful hour *in the future*. She thinks back to her initial decision the night before. Then she had judged that the sacrifice of spending five painful hours on Sunday was "doing her bit". But hadn't she been contemplating how many *future* hours of pain to put up with?

8. In adding these features to the case, I am not suggesting that Victoria's moral obligations are so easily quantified, or even that she necessarily takes them to be. Rather, I am only appealing to the fact that someone like Victoria has to decide how much time she is going to put in, and she has picked five hours. It will not make any difference for our purposes whether she sees this as her duty or supererogation.

She decides that she had been: earlier, she judged that sacrificing five future hours of pain was doing her bit. But Victoria realizes that she is currently in a position where she has only sacrificed five *past* hours of pain. Because of her future-bias, she is indifferent between five past hours of pain and one future hour. Since she continues to judge that she has not done her bit until she has made a sacrifice equivalent to five future hours of pain, she concludes that she has not yet sacrificed enough to have done her bit. So she reluctantly returns to pick up more litter...

Let us stop to note that this example demonstrates something interesting. Contrary to what one might have thought, future-biased preferences can indirectly guide action in everyday situations.<sup>9</sup> If an agent uses her future-biased preferences to evaluate hedonic experiences, then she will make different decisions about how much pain to endure for the sake of some other good, such as taking part in a group effort to clean a river, depending on whether she makes this decision prospectively or retrospectively.<sup>10</sup> In the example, because Victoria deliberates on the basis of future-biased preferences, she decides to spend a different total amount of time volunteering, depending on whether this volunteering is past or future.

But even more interesting is the question of how we should evaluate Victoria. Prospectively, Victoria decided that volunteering for five hours counted as doing her bit, but retrospectively she decided that this amount of time fell short. Was this pattern of decisions rational? Was volunteering beyond the fifth hour rational, given she had antecedently decided to volunteer for five hours?

9. In the literature there are already examples of future-biased preferences that guide action, but these examples involve additional assumptions about the agent's motivations. For example, my previous example concerned an outlandish case involving an agent who is risk-averse (Dougherty 2011). Meanwhile, Greene & Sullivan's (2015) example concerns an agent who has an aversion to regret.

10. For experimental work that shows that people's decisions differ in this way, see (Caruso et al. 2008, Caruso 2010).

#### 2.4 *The restaurant example: changing one's mind about how much one is willing to pay for a meal*

My aim in discussing multiple examples is to show that the same problematic pattern emerges whichever type of good that we choose. Since the second example involved sacrificing pain for the sake of an altruistic good, I will return to a purely self-regarding decision with my third case.<sup>11</sup> After what turns out to be rather a long shift volunteering, Victoria decides to cheer herself up by eating at her favorite restaurant. The restaurant is run by hippies who take a principled opposition to the way that capitalist markets determine prices. So rather than set fixed prices for meals, the restaurant invites its guests to make donations on the basis of sincere evaluations of how much the meal is worth to them. From past experience, Victoria knows how long the meal will take and is looking forward to exactly 50 minutes of gustatory pleasure from it. She is indifferent between \$1 and any minute of this type of pleasure. And so, when she reaches into her hemp wallet, she takes out a \$50 note as her intended payment. (That would strike you as too dear only if you have not tasted their quinoa soufflé.) However, when Victoria has finished her grains and greens, she notices that the 50 minutes of pleasure are now in the past. Because of her future-bias, she considers these as equivalent to 10 minutes of future pleasure. Before the meal, she had decided that \$50 was the right amount that she had been willing to pay for the meal, and she has not changed her preferences since then. So isn't that the maximum amount that she is willing to pay for 50 future minutes of pleasure? She decides that it is, and since future pleasure exhibits constant marginal utility for her, she infers that \$10 is the maximum that she is willing to pay for 10 future minutes of pleasure. But she is indifferent between 10 future minutes and 50 past minutes. And so, she infers that \$10 is the maximum that she is willing to pay for 50 past minutes of pleasure. So she does not

11. Even though the volunteering case involves an other-regarding, moral decision, it still speaks to the issue of the attitudes we should take to our own well-being. This is because when we trade off benefits to others against costs to ourselves, we need to address the self-regarding issue of how we evaluate these costs.

put her \$50 note into the donations jar, but instead leaves only a \$10 note. Any qualms she might have felt are immediately assuaged by the restaurant owners' obvious delight that she has complied with their pricing policy.<sup>12</sup>

Once again, this is a case that illustrates that future-biased preferences are capable of guiding decisions. And once again, we should ask whether it is rational to be guided by them. Is it rational for Victoria to prospectively decide to pay \$50 but retrospectively decide to pay \$10?

### 2.5 Beyond intuition: a defense of my verdicts about these cases

About each of the cases, I asked whether Victoria's changes of mind are irrational. I am sure that by now you will not be surprised to hear that my answers are that these changes are irrational. Perhaps your intuitive judgments about these cases led you to give these answers too. If so, then we are already of one mind, and have together taken a large stride along the road to freedom from future-bias.

But perhaps your intuitions are otherwise. It might be clear to you that Victoria has behaved oddly, but unclear whether this oddness is a type of irrationality. Perhaps you think Victoria has a weird view of civic participation in aiming to make sacrifices that she sees as costly

12. In Berlin, some bars have operated with a similar pricing policy for over a decade. See Lanyado (2009). In addition, there are other real-world analogues of this case. In conversation, Craig Callender gave me the following example of how future-biased preferences can guide exchanges: In New York, without any prior agreement, sometimes strangers would shovel the snow in front of houses, then ring the bell and demand payment from the homeowners. This practice is bad for the homeowners in light of the fact that it pressurizes some into paying for the service, even though they would have refused it in advance. But the practice could also be bad for the shovellers in another respect, since it sets up a price negotiation when the arduous work is in the past. If the shovellers' negotiating strategy is guided by future-biased preferences, then the negotiation will place a lesser disvaluation on the hard work than it would if the negotiation happened in advance of this work. As a result, if the shovellers negotiated on the basis of future-biased preferences, and they aimed for a fair price, then they would aim for a lower price retrospectively than they would have done prospectively. This also should strike us as a mistake. The shovellers' evaluation of the costs of their labor should stay fixed, regardless of whether the labor is past or future. A fixed exchange rate is rationally appropriate.

after the fact, but it is unclear whether it is irrational for her to act on this view of civic participation. Perhaps you judge that the hippies' pricing policy is ill-advised, but it is unclear whether it would be irrational for Victoria to comply with it.<sup>13</sup> In case you harbor these sorts of doubts, let me move beyond an appeal to intuition, and argue for why my answers to these questions are the right ones.

I give these answers because I think it is irrational for Victoria to waver in her stance. That is, what I consider irrational is her change in mind about how much time to spend volunteering, or about how much money to pay for a meal. It is the fact that she takes two different stances on these issues that I consider irrational. So my claim is not that it is irrational for her, *e.g.*, to "post-pay" for the meal. Rather, my claim is that it is irrational for her to be willing to pre-pay one amount and post-pay a different amount. It is this specific type of inter-temporal inconsistency that I argue is irrational.<sup>14</sup>

Let me be clear that I am not driven by the mistaken thought that we face a fully general requirement for our preferences to be diachronically consistent. No doubt, such a requirement would be far too strong, given the myriad ways in which we might blamelessly change our preferences. Rather, I am driven by a thought about how we should go about exchanging goods for hedonic experiences. When we make these exchanges, we should not ask, "How much is this experience worth to me, at this moment in time, given my future-biased preferences?" Instead, we should ask, "How much is it worth to me, *period*?" The reason why is that we need to be able to integrate these exchanges into an overall life-plan that we endorse as reflecting a settled stance on the right way to make these exchanges. When we spend a dollar now, we know that this means we won't have that dollar later. Yet our future selves are just as much us as our current selves and past selves. So rational prudence requires us to decide now how to spend this dollar

13. Thanks to an anonymous reviewer for raising these concerns.

14. That there are diachronic norms of rationality is a controversial assumption that has been recently criticized by Sarah Moss (2014, 2015) and Brian Hedden (2015a, 2015b).

in a way that we continue to approve of. This means that we are under rational pressure to come up with a common point of view, shared by our past, present, and future selves, about how to trade off hedonic experiences for goods. This rational pressure might be resisted if we think that there are breaks in personal identity between past and future selves. But otherwise rational prudence means transcending our temporal perspective, and forming a stable plan for how to trade off hedonic pleasures and other goods. When we design this overall plan, the appropriate approach is to compare the intrinsic value of the hedonic experience and the intrinsic value of whatever we exchange for it. It is on this basis that we should make these exchanges, and it is on this basis that we actually do make these exchanges. And of course this is to adopt a temporally neutral perspective.

To motivate this thought, we can consider similar trade-offs that we have made in our own lives. Frequently, enjoying pleasure comes at the opportunity cost of worthwhile activities that we could otherwise have engaged in. Nevertheless, all but the most ascetic of us indulge in pleasure from time to time, and consider ourselves justified in doing so. Sometimes we splurge on a fancy meal, knowing there are other demands on our finances. Sometimes we allow ourselves a lie-in at the weekend, knowing that there are chores to be done. If we are not suffering from weakness of will when we make these decisions, and the meals and lie-ins are as enjoyable as we expected, then we should remain retrospectively glad that we enjoyed these pleasures. We should not later regret our choices simply because the pleasure is in the past. It would strike us as a mistake to think that we should now prefer not to have indulged in these pleasures, simply because they are past. And in practice, we do not make this mistake.

That is why it is irrational for Victoria to vacillate in her view of how to spend an afternoon. She should weigh up the intrinsic merits of sunbathing and garden-work and form a single preference for one of these, then stick with this preference. Either the benefit of sunbathing is sufficient to justify forgoing the benefit from gardening, or it is not. If the pleasure of sunbathing is sufficient to justify forgoing gardening,

then she should not retrospectively wish that she had chosen sunbathing. If the pleasure of sunbathing is insufficient to justify forgoing gardening, then she should not choose sunbathing in the first place. In terms of exchange rates, Victoria has to decide what her exchange rate is between sunbathing and garden-work, and this exchange rate should stay fixed. I suggest that this is not only the common stance to take, but also the rationally appropriate one.

The preceding points concerned regret. Similar points concern action. When we actually come to exchange other goods for hedonic experiences, we are adept at transcending our temporal perspective, and instead fixing upon a temporally neutral way of making such an exchange. Just as we are appropriately unmoved by whether a pleasure is near or far in the future when we calculate how much of our resources to exchange for this pleasure,<sup>15</sup> similarly we are appropriately unmoved by whether the pleasure is past or future. Instead, knowing our limited resources can be spent in a variety of ways, we try to work out the best way of spending these resources over the course of our lives. Once we have determined this, it becomes our settled stance on the matter, regardless of whether the hedonic experiences are past or future. Forming this settled stance involves considering the intrinsic values of the hedonic experiences and not their temporal relation to us. That is, we are used to forming temporally neutral preferences and being guided by them when making these exchanges.

That is why it is irrational for Victoria to decide in advance that five hours' volunteering is the right amount of time to spend, but then decide immediately afterwards that it is too little. Rationality requires her to be consistent with respect to how she disvalues the experience of volunteering. Put another way: rationality requires her to settle on a fixed exchange rate between the discomfort of picking up trash and

15. That is, we are unmoved by this feature in itself. Because of the uncertainty of the future, the prospect of a proximate pleasure is typically more of a "sure thing" than the prospect of a distant pleasure. It is typically rational to prefer the more likely pleasure, all else equal. My claim is only that, holding fixed how likely each pleasure is, we are indifferent between the near and distant pleasures. And appropriately so.



the good of civic participation in cleaning a river. Similarly, that is why it is irrational for Victoria to be willing to pay \$50 for 50 minutes of gustatory pleasure in advance, but only \$10 afterwards. She is rationally required to come to a settled stance on how much the meal is worth to her in dollar terms, by considering only the absolute amount of pleasure involved in the meal, and not its temporal location relative to her. Consequently, for the purposes of this decision, 50 past minutes of gustatory pleasure should be considered equivalent to 50 future minutes of gustatory pleasure. She should not make this sort of self-regarding decision on the basis of future-biased preferences. Rationality requires her to form a temporally neutral evaluation of this type of pleasure.

If you agree with me so far about the foregoing analysis, then we can set to one side various orthogonal details of the cases. We need not worry about whether it makes a difference that the good realized by cleaning the river is an altruistic one. Inconsistently valuing the pain of cleaning the river would be a rational defect even if it were Victoria's own private river. Similarly, we should not be side-tracked by considerations of morality concerning the restaurant case. That case was framed as a self-regarding decision because Victoria complied with the restaurateurs' wishes for how they should pay her. That detail aimed to screen off considerations about how to treat the restaurateurs.<sup>16</sup> But regardless of what we think of whether her choice is

16. The restaurateurs want to charge Victoria only the amount such that she is indifferent between this amount and the dining experience. It is this feature that gives rise to the problem with Victoria's decision-making, precisely because this amount changes over time. If they had collected her donation before the food arrived, then she would sincerely have paid \$50, and they would have wanted to accept this amount as the true worth of the future meal to her. If they had collected the donation after the meal, then she would sincerely have paid \$10, which would again have been the amount that they would want to accept. Either way, the restaurateurs are treated fairly, since Victoria acts sincerely, plays by their rules, and indeed helps them realize their quirky conception of the restauranting good. Consequently, the reasons that require Victoria to be consistent in her evaluation are not moral reasons, but reasons of rationality.

moral,<sup>17</sup> we can set the issue of morality to one side, because the key issue is Victoria's change in mind about how to value the meal. It is acting on this change that is in itself irrational, regardless of how it affects other people.

Let me summarize how I have been arguing that we should analyse the cases involving Victoria. In each case, I have been motivating the thought that it is irrational for Victoria to switch her valuation of a pleasurable or painful experience. Instead, I argued that she should have fixed exchange rates between hedonic experiences and other goods, based on the intrinsic values of these things. For instance, I argued that Victoria should form a single fixed stance about whether the pleasurable sunbathing or beautiful lawn is best for her. Similarly, I argued that Victoria should have a single stance about how much uncomfortable volunteering she is willing to engage in for the sake of a cleaner river. Again, I argued that she should have a single stance about how much a pleasurable meal is worth to her in dollar amounts. My grounds for these arguments appealed to the ways in which we ourselves approach these sorts of exchanges. When we consider exchanging a hedonic experience for a good, we aim to form an overall stance on whether the exchange is justified or not. We do not consider whether the hedonic experiences are near or far from us in time, or whether they are past or future. Instead, we transcend our temporal perspective when deliberating about these exchanges by considering only the intrinsic value of the experience. My argument is based on the claim that this is not only the way that we all do think about these exchanges, but it is also the way that we think it is rationally appropriate to do so.

17. Should we consider the hippies' pricing policy ill-advised, and hence think that Victoria morally ought to refuse to play by their rules? My own inclination is that morality posits no such duty in financial exchanges. Indeed, it seems to me that it would be disrespectful for Victoria to act for the sake of the restaurateurs by substituting her judgment for their judgment about the right way to fix the price.

### 3 The rational requirement to have coherent preferences

Now we might think that even if the foregoing is true, it fails to speak to our original topic of the rationality of future-biased preferences. This is because future-biased preferences were defined as preferences for future pleasure over past pleasure (and vice versa for pain). It was no part of this definition that one not have temporally neutral preferences between pleasures and *other* goods. So one might object that the rationality of future-biased preferences is not impinged by a rational requirement to have temporally neutral preferences between hedonic experiences and other goods. Instead, one might counter that one is rationally required to have a temporally neutral preference between a hedonic experience and, say, money, and nonetheless prefer that this experience is not over yet. In this way, one might try to confine future-bias just to the realm of hedonic experiences, while allowing that hedonic experiences should be exchanged for other goods in a temporally neutral fashion.

But this objection fails to take into account the rational requirements that govern the global relationship between our preferences. One such requirement is to have transitive preferences.<sup>18</sup> Since we face a global requirement to have transitive preferences, we cannot rationally contain future-bias merely within the realm of our preferences between hedonic experiences. To meet this global requirement, the

18. I do not have anything new to say in defense of the claim that there is such a requirement. But I hope that relying on it will leave my argument acceptable to most readers, as most people find the claim highly plausible, and consequently it is widely, though not universally, accepted. In particular, the requirement is a founding tenet of standard decision theory, since the requirement that one's preferences are transitive is one of the axiomatic requirements of rationality that have to be met in order for one's preferences to be representable by a utility function. Within decision theory, one way of arguing for this rational requirement is to show that someone with cyclical preferences is vulnerable to being turned into a "money pump" — they will be willing to accept a series of trades that leaves them worse off financially and better off in no respect, even though they foresee that this is the ultimate outcome of accepting these trades. I suggest most people are inclined to accept the rational requirement of transitivity when considering other preferences. If so, it would be ad hoc to suspend it in the case of future-bias. For the original money pump argument, see Davidson, McKinsey, & Suppes (1955).

future-bias would have to spread so that it infected our preferences between hedonic experiences and other goods.

We can illustrate this with the restaurant example. We supposed that, at the beginning of her meal, Victoria is indifferent between paying \$1 and a minute of the meal's gustatory pleasure. Now consider the three states of affairs that Victoria could find herself in:

- (a) Victoria has just had a minute of past gustatory pleasure, and no longer has a dollar
- (b) Victoria has not had, and will not have, a minute of gustatory pleasure, but has a dollar
- (c) Victoria is about to have a minute of future gustatory pleasure, and no longer has the dollar

In the previous section, I argued that Victoria's exchange rate between the pleasure and money should not vary depending on whether the pleasure is past. Consequently, if Victoria is indifferent between (a) and (b), then she should also be indifferent between (b) and (c). But now consider the requirement to have transitive preferences. Since indifferences are a type of preference, this derivatively requires Victoria to have transitive indifferences. Given her indifference between (a) and (b), and her indifference between (b) and (c), transitivity requires that she be indifferent between (a) and (c). But it is impossible to be indifferent between (a) and (c) and yet have future-biased preferences. Victoria's future-biased preference for pleasure is a preference for a minute of future pleasure over a minute of past pleasure. Thus, the requirement to have transitive preferences entails that Victoria's preferences between hedonic experiences and her preferences between hedonic experiences and other goods must be future-biased or temporally neutral together.

We can put the same point in terms of our exchange rates between different goods. As we saw earlier, our preferences set exchange rates between these goods. These exchange rates are fixed by the amounts of each good that we are indifferent between. For example, if someone

is indifferent between a dollar and 100 yen, then she will be willing to trade a dollar for 100 yen, and vice versa. Similarly, Victoria's indifference between a dollar and a minute of gustatory pleasure means that she is willing to trade a dollar for a minute of this pleasure or vice versa. Now we can think of the transitivity requirement on preferences as a requirement to have exchange rates that cohere with each other. It is a requirement to ensure that we do not have a pattern of overall preferences that would incline us to "sell" a good at one price only to "buy" it back immediately after at a lower price. So if one's exchange rates equate a dollar with 100 yen, and a euro with 100 yen, then to meet this requirement, one would have to set a 1:1 exchange rate between euros and dollars. One cannot retain an isolated preference for a euro over a dollar just within the realm of financial exchanges between euros and dollars. Similarly, if Victoria's exchange rates equate a minute of future pleasure with \$k, and a minute of past pleasure with \$k, she would have to set a 1:1 exchange rate between past and future pleasure. She cannot retain an isolated preference for future pleasure over past pleasure just within the realm of exchanges between future and past pleasures.

#### **4 The general argument against future-biased preferences and its role in the dialectic**

Leaving our discussion of particular cases, I am now in a position to state my central argument in its general form. What the previous examples illustrate is that when it comes to trading hedonic experiences for other goods, it is rationally appropriate to use a temporally neutral exchange rate. For example, Victoria should exchange a certain amount of money for a minute of gustatory pleasure, regardless of whether the pleasure is in the future or the past. Similarly, she should exchange a certain amount of discomfort for the goal of civic participation in an attempt to clean a riverbank, regardless of whether this discomfort is in the future or past. Generalizing from these cases, we arrive at the first premise of my argument, which is the claim that you are rationally required to be indifferent between some amount of a

good and a hedonic experience, regardless of whether the experience is past or future:

P1. For any good and any particular hedonic experience, if you are indifferent between some amount of the good and the experience when the experience is in the future, then you are rationally required to be indifferent between the same amount of the good and the experience when it is in the past.<sup>19</sup>

The second premise is the aforementioned rational requirement to have transitive indifferences, which is grounded in the broader requirement to have transitive preferences:

P2. If you are indifferent between A and B, and indifferent between B and C, then you are rationally required to be indifferent between A and C.

Putting these two premises together, we know from the first premise that your indifferences between a hedonic experience and another good should not be affected by whether the experience is past or future. And we know from the second premise that your indifferences should cohere. So we can conclude that you should be indifferent between a hedonic experience being in the future and the experience being in the past:

C. Therefore, you are rationally required to be indifferent between a particular hedonic experience when the

19. For those who are interested in the issue of whether rational requirements have "narrow" or "wide" scope, I suggest that it is most plausible to think of these requirements as having wide scope over the relevant conditional. In other words, you are under a rational requirement to make true the conditional 'if you are indifferent between some amount of the good and the experience when it is in the future, then you are indifferent between the same amount of the good and the experience when it is in the past'. Similarly, I suggest it is plausible to think of the rational requirement in premise 2 as having wide scope over the relevant conditional. For discussion of wide- and narrow-scope rational requirements, see Broome (2005, 2013); Kolodny (2005).

experience is in the future and the same hedonic experience when it is in the past.

But of course this indifference simply amounts to having a temporally neutral view of pleasures and pains. It is inconsistent with future-bias, which is a preference for a hedonic experience when the experience is in the future over a preference for the same hedonic experience in the past. So the conclusion entails that future-biased preferences are irrational.

This completes my presentation of my argument. Next, I will respond to two related objections. I will try to do so in a way that illuminates how this argument fits into the broader dialectic about the rationality of future-bias.

The first objection that I wish to consider is that the argument simply begs the question against a defender of future-bias. Most likely, the worry will be that the first premise begs the question because if future-biased preferences were rationally permissible, and we were rationally required to have acyclic preferences, then it would be rationally permissible to vary one's exchange rates, according to whether an experience is past or future. Consequently, the defender of future-bias may conclude that it is entirely rational for Victoria to be prepared to pay more for a future meal than a past meal. After all, a future meal offers her pleasure that is still to come, and she prefers future pleasure to past pleasure. Consequently, the exchange rate that she will set between future pleasure and money will be different from the rate that she will set between past pleasure and money. Consequently, a defender of future-bias will not accept the first premise, and hence will not be moved by the argument. The objection maintains that consequently the argument fails to usefully advance the debate about the rationality of future-bias.

The second objection runs on related lines. It begins with the concession that each of my argument's premises has some plausibility. But it notes that the argument's conclusion is intuitively implausible. After all, when we reflect on a case like Parfit's operations case, we are

strongly inclined to judge that it is rationally permissible to prefer that the painful surgery is already over. This leads to the objection that it is more plausible that a premise in my argument is false than that its conclusion is true. If so, then we should not turn our backs on future-bias. Instead, we should revise our intuitive judgments about the types of cases that we encountered earlier. For example, we should now hold that Victoria ought to exchange more money for a meal that is about to come than for a meal that she has already consumed.

My response to both objections is to clarify the argument's ambitions in the debate about future-bias. Let me begin with the second objection. Whether this objection should move you will depend on the relative strength of your judgments about plausibility, and there is nothing that I can say to influence you in this regard. Moreover, I anticipate that there will be several people whose judgments are as the objection states. I think that this is a reasonable response, and I will not insist that if someone reflects on my argument *by itself*, then she is rationally obliged to accept the conclusion as true. What I do insist on is that encountering this argument should lead anyone to reduce his or her credence in the claim that future-bias is rationally permissible. This reduction is significant in light of the broader dialectic. As I mentioned at the outset, it may well be that the intuition in favor of the rationality of future-bias is so strong that there is no single knock-down argument that can overturn this intuition. Instead, what would be needed is a battery of arguments against the intuition. What I hope to establish here is that this argument makes a significant addition to the battery that is emerging in the literature.<sup>20</sup> I will have established this if the argument does indeed lead you to reduce your credence in the proposition that future-bias is rationally permissible. So long as you find the argument's premises plausible, then the argument gives you reason to do so.

The same should be true for the defender of future-bias. This constitutes my response to the first objection — that the argument begs

20. See Brink (2011); Dougherty (2011); Greene & Sullivan (2015).

the question. The argument has persuasive force so long as, when we bracket cases like Parfit's operations case, and consider *in isolation* the cases involving Victoria, we judge that Victoria should be disposed to make these exchanges between hedonic experiences and other goods in a temporally neutral way. If a defender of future-bias agrees with these judgments, then the argument requires her to recalibrate how confident she is that future-bias is rationally permissible. She cannot avoid this recalibration simply because she could reason from her prior conviction in favor of future-bias to a rejection of the first premise. This would amount to a form of argumentative bootstrapping: this strategy would immunize her conviction against any valid arguments that might undermine the conviction.

For these reasons, I maintain that the argument does move forward the debate about future-bias. What it does is to draw our attention to the argument's premises and their connection with the conclusion. These have been overlooked in discussions of future-bias, which have so far focused only on our preferences between hedonic experiences and not on our preferences between hedonic experiences and other goods. I suggest that by overlooking the connection between future-bias and exchanges between hedonic experiences and other goods, we have failed to appreciate a tension between two aspects of our psychology and our practices. This tension has arisen because our thinking has become compartmentalized. On the one hand, when we think about how we exchange hedonic experiences for other goods, in cases like those involving Victoria, we are inclined to form temporally neutral preferences. But on the other hand, when we think about whether we would like a hedonic experience to be past or future, in cases like Parfit's operations case, we are inclined to form future-biased preferences. The argument aims to expose this compartmentalization, by illustrating this tension. In doing so, it should undermine our confidence that the future-biased compartment is rational.

### 5. Why is our thinking compartmentalized?

I wish to end by addressing the key question that next emerges: Why should there be this tension between different parts of our psychology? I suggest the answer is that there are two views that we can take of hedonic experiences, which correspond to two views that we can take of ourselves and our lives. The first view arises from the fact that, necessarily, action must be performed from a particular perspective, with both a personal and a temporal dimension. This perspective influences our affective reactions. Psychologists interested in future-bias have found that prospection of future events elicits more affect than is elicited by retrospection of similar events.<sup>21</sup> Given that affect quite generally guides our preferences, it is not surprising that that this temporal asymmetry in affect leads us to value future pleasures and pains differently from past pleasures and pains.<sup>22</sup> Consequently, we end up with intuitions in favor of the rationality of future-bias when we consider cases like Parfit's operations case. The reason why is that such a case makes salient to us the perspectival aspect of our agency.

But there is another aspect to our ethical identities. Although we necessarily adopt a temporal perspective whenever we act, we are also able to transcend this perspective, and consider ourselves as agents

21. In short, prospection is phenomenally more intense than retrospection. When we contemplate an experience in the future, this contemplation arouses stronger feelings in us than contemplation of a qualitatively identical experience in the past would arouse. When we anticipate a future painful experience, this anticipation generates in us more negative affect than retrospection would. For pleasurable experiences, the same is true for positive affect — although interestingly to a lesser extent. For example, Leaf Van Boven and Laurence Ashworth (2007) find that when people consider future holidays, menstrual cycles, or annoying noises, they self-report greater affect than others feel when considering these experiences in the past. This is what Christopher Suhler and Craig Callender (2012) call the "affective asymmetry". See also (Hare 2013).

22. For discussion of the significance of recent work on affect for moral philosophy, see Railton (2014). For empirical work on affect and decision-making, see Schwarz & Clore (1988, 1996); Schwarz (1990); Loewenstein, Weber, Hsee, & Welch (2001); Slovic, Finucane, Peters, & MacGregor (2002); D'Argembeau & Van der Linden (2004); Bechara & Damasio (2005).

that are extended over time.<sup>23</sup> Consider Brink's (2003, pp. 224–225) remarks in this regard:

[A]gents (or the lives of agents) are essentially temporally extended. To be an agent is to be a being that is distinct from particular appetites and emotions, who can distinguish between the intensity and authority of her appetites and emotions, deliberate about the appropriate objects of her appetites and emotions, and regulate her conduct in accordance with these deliberations. This makes an agent a temporally dispersed creature.<sup>24</sup>

Here, Brink notes that our rationality allows us to take a step back from our desires and reflect on how much reason we have to satisfy them. A natural extension of Brink's thought is that our rationality similarly allows us to take a step back and eliminate the effects of our perspective. By analogy, as David Hume (1751) and others have noted, when we

23. We can observe this temporal extension on both a micro and a macro scale. On the micro scale, we need only observe Brink's point that nearly all actions take time. It is impossible for a momentary "person-slice" to perform an action like brushing her teeth, since this action takes time; instead, this action is achieved through multiple "person-slices" each playing their part in a way that allows a temporally extended agent to perform the action. This is a point about temporal parts — if we like that sort of metaphysical view of time — that is easily seen by considering spatial parts. One should not say that a spatial part of the person, such as her hand, does the brushing. Rather the right thing to say is that multiple spatial parts each coordinate in a way that allows the agent as a spatial whole to perform the action. Thus, the temporally extended nature of action requires our temporally extended nature of agents, and our view of ourselves reflects this. Meanwhile, on the macro scale, we adopt long-term projects and goals that shape the courses of our lives. Indeed, it is typically these broader commitments that we take to be the most important of our attachments, and the ones that give meaning to our lives. For example, we have a prudential concern with how our careers go, precisely because we appropriately see ourselves as temporally extended agents. Moreover, these commitments have this role even when the goals involve changing who we are. As Brink (2011) observes, prudential concerns with self-improvement can be made sense of only on the assumption that we see ourselves as temporally extended agents.

24. See also Brink (1997).

are personally invested in a scenario, we can transcend our personal perspective and consider the scenario from an impartial point of view. Similarly, we are able to transcend our temporal perspective. Insofar as we are trying to see ourselves as temporally extended agents, and not just a momentary stage of such an agent, it is appropriate for us to do so. By conceiving of ourselves as temporally extended agents, we form temporally neutral preferences for goods that are based on how these goods contribute to how well our temporally extended lives go. For example, Victoria decides how much to spend on a pleasurable meal based on her estimation of how much this meal will contribute to the overall quality of her life. The quality of our lives is a temporally aperiodic matter. As such, the contribution that the meal makes to the quality of Victoria's life remains fixed regardless of whether the meal is in the past or the future. In turn, this means that the exchange rate that she sets between money and the meal should ignore the temporal location of the meal with respect to the present moment. To use Henry Sidgwick's (1874) memorable phrase, so far as the timing is concerned, she should see these events from "the point of view of the universe".

Indeed, by focusing on our self-conception as temporally extended agents, we can lessen some of the intuitive grip of Parfit's operations case.<sup>25</sup> When we imagine ourselves waking with amnesia in the hospital, it is natural to focus first on the way in which the prospection of possible future pain elicits in us dread, while the retrospection of possible past pain leaves us relatively unmoved. But we can overcome this asymmetry to the extent that we focus on the thought that our past selves *really were us*, and try to imagine what it would have been like for us to experience this pain. By identifying with our past selves as much as our future selves, and imagining their pains equally vividly, we can form an unbiased view of the experiences of both selves, by considering only what it is like to undergo these experiences, and not the experiences' temporal location to the present moment in time. Thus, to the extent that we can focus on our identities as temporally

25. Thanks to an anonymous reviewer for suggesting I revisit the case here.

extended agents, we can transcend our temporal perspectives and can come to have an equal concern with both our past and our future pains.

It is because there are these twin aspects of our identities that we end up with attitudes towards hedonic experiences that are in tension. The perspectival aspect of our agency leads us to future-bias, and our self-conception as temporally extended agents leads us to temporal neutrality. It is the latter that I suggest should take priority. Although it is metaphysically inescapable that we exercise our agency from a temporal perspective, fundamentally we are temporally extended agents. We should correct distortions of our perspective, when this perspective generates inclinations that we do not endorse as reflecting who we really are. In part, this means rejecting future-biased preferences as irrational.<sup>26</sup>

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