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Preference Ordering and the Epistemic Peril of Comparison

Jay Jian 

Academia Sinica, Taipei, Taiwan
Email: jay.s.jian@gmail.com

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Abstract

According to the orthodox *comparativist approach* in rational choice theory, the ultimate conative basis for an agent's preference ordering – and thus for their rational choice – is their *comparative evaluation* among competing options. However, it has been shown extensively in experimental psychology that an agent's judgments about an option can be distorted by the contrast effects from their contextual reference point, which can sometimes be provided by the very competing option that they compare with. Such contrast effects from competing option, I argue, raise a new problem for comparativism: Sometimes an agent's comparative evaluation might favor an option A over another option B only because their judgments about A's appealing intrinsic features are distorted by B's contrast effects. Such a comparative evaluation from contrast effects, however, is not only epistemically defective but also likely to lead to post-choice disenchantment with option A once the contrast effects from the competing option B are removed. While comparativists can either rationalize the choices made on the basis of comparative evaluations from contrast effects or idealize the type of comparative evaluations they appeal to, I argue that both strategies still face significant problems.

Keywords: Rational choice; preference ordering; comparison; contrast effects; comparative and non-comparative evaluation; joint and separate evaluation

1. Introduction

Consider the following case:

Chad cannot continue his new relationship while also keeping his old marriage. Indeed, choosing one will lead him to lose the other irrevocably. Although Chad cherishes his stable and mundane marriage when it is considered on its own, his endearingly quirky new relationship just seems a lot more appealing to him in comparison. Indeed, whenever he compares these two options, he would always evaluate the new relationship more favorably than the old marriage. He thus chooses the former and gives up the latter on the basis of his comparative evaluation between them.

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Once Chad's old marriage is out of the picture, however, his new relationship also loses its appeal immediately. For his new relationship no longer appears endearingly quirky enough to him when it is considered on its own, without the contrast from the mundanity of his old marriage. So Chad ends up choosing the new relationship but no longer evaluating it favorably.

But it seems that Chad would have been better off had he made his choice on the basis of his non-comparative evaluation of each option instead. For one thing, his judgments seem less distorted by contrast effects when he evaluates each option in separation. For another, while he does not find the new relationship appealing in itself, he does always cherish the mundane old marriage when it is considered on its own. As such, had he chosen the old marriage on the basis of his non-comparative evaluation, he would still evaluate it favorably even when its competing option is out of the picture.

Chad's case is characterized by the following conditions:

(1) One-Off Choice among Incompatible Outcomes: The agent can choose to bring about either outcome A or B for sure, with no risk or uncertainty. If the agent chooses to bring about A, then they will no longer be able to choose to bring about B in the future, and vice versa.

(2) Baseline Non-Comparative Evaluation: Whenever the agent evaluates the intrinsic features of outcome A in separation from all other competing outcomes, their non-comparative evaluation of A is unfavorable, i.e., negatively valenced. And whenever the agent evaluates the intrinsic features of outcome B in separation from all other competing outcomes, their non-comparative evaluation of B is favorable, i.e., positively valenced.

(3) Comparative Evaluation from Contrast Effects: Whenever the agent evaluates the intrinsic features of outcome A in comparison with those of outcome B, their comparative evaluation is in favor of A over B. For A's intrinsic features, when put in comparison with those of B, would appear particularly appealing to the agent due to the contrast from B. Call A the *value-dependent outcome* and B the *base outcome*, for B provides the contrastive base against which A appears appealing to the agent.¹

I will shortly explain why there can be such a divergence in an agent's comparative and non-comparative evaluation of the very same outcomes. But I believe this divergence raises a hitherto unnoticed yet important normative question: Chad's comparative evaluation favors continuing the new relationship over keeping the old marriage due to contrast effects. But his baseline non-comparative evaluation is instead more favorable about the latter than the former. So, which type of evaluation here can provide a better conative basis for his ordering and for his rational choice among these options?²

¹It does not matter for the purpose of my argument whether an agent's non-comparative evaluation of a proposition P can be ultimately reduced to their comparative evaluation about P and its negation (see Davis 1984; McDaniel and Bradley 2008: 283–5 for discussions on this proposal). For, as we shall see shortly, this is not really the type of comparative evaluation that the orthodox comparativist approach appeals to in grounding an agent's ordering.

²The distinction between these two types of evaluation has already been accepted and explored by some philosophers and experimental psychologists, albeit under different labels. For instance, Temkin has pointed out that the goodness of options can be assessed from either an "internalist" or a "comparativist" perspective (see Temkin 2012 : 371–2, 385–6), while some experimental psychologists have examined how people can

Of course, if Chad has discerned the divergence in his comparative and baseline non-comparative evaluations, then he might be able to predict that, after he chooses to bring about each outcome and considers it on its own, his non-comparative evaluation will be unfavorable about continuing the new relationship yet favorable about keeping the old marriage. So he might be able to form a further comparative evaluation in favor of the finely-individuated outcome of [keeping the old marriage while having a favorable non-comparative evaluation of it] over that of [continuing the new relationship while having an unfavorable non-comparative evaluation of it].³ Still, there are cases where Chad has not discerned his evaluative divergence and his potential post-choice evaluation of each outcome. And the same normative question still looms in these cases. Thus, in this paper, I shall exclusively focus on choice situations where the following condition also holds:

(4) Lack of Belief about Post-Choice Evaluation: The agent lacks beliefs about the divergence in their comparative and non-comparative evaluations, as well as beliefs about the post-choice evaluations that they will come to have regarding the value-dependent outcome A and the base outcome B.⁴

As I will argue in this paper, it is difficult to settle the normative question over the proper conative basis for rational choice conclusively in favor of comparative evaluation, at least in choice situations where conditions (1)-(4) hold. This will, in turn, present an interesting new challenge to the orthodox comparativist approach widely adopted in rational choice theory. For this approach takes the ultimate conative basis for an agent's rational choices *in all choice situations* to be their comparative evaluations among competing outcomes, as long as these evaluations satisfy the basic rational conditions imposed by representation theorems.⁵ But we will see that even when these conditions are all satisfied, the agent's comparative evaluations can still figure as a worse conative basis for their rational choice in the choice situations I described.

I will first explain why an agent's comparative evaluations can sometimes diverge from their baseline non-comparative evaluations due to the influence of the contrast effects from competing option. I will then argue that it is difficult to privilege comparative evaluations arising from contrast effects as a better conative basis for rational choice, given their epistemic defect and tendency to lead to post-choice disenchantment (Section 2).

I, in turn, develop and consider two strategies to handle comparative evaluations arising from contrast effects. The first strategy is to argue that comparativism would only issue rational prescriptions on an agent's choices based on comparative evaluations that satisfy some idealized rational and epistemic conditions, which can serve to exclude

evaluate options either "separately" or "jointly" (see e.g., Bazerman et al. 1999; Bohnet et al. 2016; Erlandsson 2021; González-Vallejo and Moran 2001; Hsee et al. 2013; Li and Hsee 2019; Shaffer and Arkes 2009. Also see Hsee et al. 1999; Zhang 2015 for helpful overviews). Importantly, they have all acknowledged that the comparative and non-comparative modes of evaluation can sometimes give divergent rankings of options.

³See Broome (1991: 98–99) for discussions on a similar fine-individuation strategy for resolving the tension between Allais's preference and the Sure-Thing Principle.

⁴See Bykvist (2006), Hedden (2015), Lin (2020), and Pettigrew (2019) for proposals on how an agent should make choices in light of their future choice-dependent evaluations. Since my focus in this paper is on choice situations where the agent does not have predictions about their future choice-dependent evaluations, I shall largely ignore these proposals in what follows.

⁵Since I do not intend to take a stance on how preference should be best interpreted in this paper, I shall primarily talk about comparative evaluation rather than preference, but see Hausman (2012) for a book-length argument for a comparativist understanding of preference.

tainted comparative evaluations from contrast effects (Section 3). The second strategy is to concede that while comparativism cannot wholly exclude these tainted comparative evaluations through rational and epistemic idealization, the rational prescriptions issued from these evaluations are in fact unproblematic (Section 4). While I will not endorse either strategy, I will explain why both still face significant problems in addressing the contrast effects from competing option.

2. Comparative evaluation arising from contrast effects

Why can an agent's comparative evaluation diverge from their baseline non-comparative evaluation about the same outcomes? The basic explanation is that when two outcomes, A and B, are considered in comparison with each other, this can bring in new dynamics and change either their features or the agent's reception thereof. While the literature on option-dependence has already identified some of these dynamics, I believe there is a distinct and overlooked dynamic of contrast effects.⁶

To begin, as has already been noted in the literature, an agent might change their evaluation of an outcome A when a competing outcome B is introduced and taken into consideration, because B might improve the agent's epistemic access to A (see Luce and Raiffa 1957: 288; Sen 1993, 1995, 2004: 131, 169–70, 255; Temkin 2012: 389), change A's relational features (see Sen 1993, 1995, 2004: 130, 254), or change the types of features that are motivationally salient for them (see Dietrich and List 2015: 182–4).⁷ So, for instance, in comparing between the outcomes of continuing his new relationship versus keeping his old marriage, Chad might be able to better discern some hidden merits of the new relationship. Or the new relationship might acquire the relational feature of being a more exciting side relationship. Or Chad might come to acquire a new motivation to pursue a seemingly star-crossed relationship. These changes brought about by the competing option might, in turn, explain why Chad's comparative evaluation might favor continuing the new relationship over keeping the old marriage when both are considered in comparison, even though his baseline non-comparative evaluation might instead be more favorable about the latter when each is considered in separation.

But there is a distinct and overlooked dynamic that the competing outcome can bring in: an agent might also change their evaluation of an outcome A when a competing outcome B is introduced and taken into consideration, because B can distort the agent's judgment about A's intrinsic features through its contrast effects. In fact, there is already a large body of empirical research demonstrating how people's judgment about the features of a "target object" can shift due to the contrast effects from another "anchor object" that sets the contextual reference point for them.⁸ But it has not been noticed that the competing option in comparative evaluation can also figure as a contextual reference point, and that its contrast effects can actually lead an agent's comparative evaluation to

⁶Due to the widespread acceptance of comparativism, existing accounts of option-dependence have primarily focused on cases where the introduction and removal of a third option, C, change an agent's preference between two existing options, A and B. I have therefore slightly modified these accounts so that they also apply to cases where the introduction and removal of a competing option B changes the agent's evaluation of one single existing option A.

⁷It has also been noted that the introduction of a competing option can also change the objective value of an existing option by changing its relational features (Dancy 2004: 203–6) or the evaluative criteria for assessing it (Temkin 2012: 372–3).

⁸Specifically, contrast effects occur when the consideration of the anchor object disposes people's subsequent judgments about the target object's features to shift *away* from that of the anchor. See Bahník et al. (2022) and Bless and Schwarz (2010) for helpful overviews of recent empirical work on contrast and assimilation effects.

diverge from their baseline non-comparative evaluation. Indeed, it seems to me that this divergence can at least arise in the following way.

Suppose an agent would strongly favor any outcome with a certain degree of intrinsic feature F above a precise or imprecise threshold; say, they would strongly favor acquiring a car that is expensive enough to be a status symbol for them. Given contrast effects, it is possible that the agent might not favor outcome A when it is considered in separation, whereas they might instead strongly favor A when it is considered in comparison with a competing outcome B with a very low degree of F – For outcome B's contrast effects as a contextual reference point can lead them to judge that the degree of F in outcome A is above the critical threshold. So, for instance, a snobbish agent might judge a Jaguar to be expensive enough to be a status symbol and strongly favor the outcome of acquiring it only because they are considering this outcome against the competing outcome of acquiring an extremely cheap Kia – even though they would not really make the same assessment if they considered the Jaguar on its own.⁹

Importantly, the competing outcome B here can be an outcome that the agent favors overall when it is considered in separation. For all that is required is that the degree of the appealing intrinsic feature F in outcome B is low enough to exert contrast effects on their judgment about the degree of F in outcome A and thereby lead them to favor A strongly when A and B are put in comparison. While the low degree of F in outcome B might incline the agent not to favor it, B may still possess other appealing features that may lead the agent to favor it overall when it is considered in separation. So, for instance, the extremely cheap Kia that exerts contrast effects on the agent's price judgment might still be spacious and fuel-efficient enough that the agent would still favor the outcome of acquiring it when it is considered on its own.

More generally, an agent's baseline non-comparative evaluation can sometimes be unfavorable about the value-dependent outcome A and favorable about the base outcome B, whereas their comparative evaluation can instead favor A over B. This can occur because B's contrast effects can distort the agent's judgment about a certain appealing intrinsic feature in A that they would greatly favor as long as it exceeds a certain threshold. Such contrast effects can, in turn, accentuate A's perceived attractiveness and thereby tip the balance in A's favor in comparative evaluation. This explains why an agent's comparative and non-comparative evaluations of A and B can sometimes diverge in the way described by conditions (2) and (3) that I outlined earlier.¹⁰

Note that this explanation may also extend to other structurally similar cases. B's contrast effects might also distort the agent's judgment about a certain appealing intrinsic feature in A that they would favor in strict proportion to its magnitude. And if the agent's non-comparative evaluation of B is only marginally more favorable than that of A, then B's contrast effects might also accentuate A's perceived attractiveness just enough to tip the balance in A's favor in comparative evaluation. Moreover, just as B's contrast effects can distort the agent's judgment about A, so too can A's contrast effects

⁹Such contrast effects on people's judgments about car price have in fact been demonstrated by Herr (1989) and Mussweiler and Englich (2005: 136–9) in their experiments.

¹⁰Note that this evaluative divergence may be seen as an instance of preference reversal, where the agent prefers A to B when evaluating both in comparison, yet prefers B to A when evaluating each in separation. In fact, the divergence observed in people's joint and separate evaluations has largely been interpreted in the empirical literature as a form of preference reversal (see e.g., Bazerman et al. 1999: 41–2; Hsee et al. 1999: 576–8; Li and Hsee 2019: 64–5; Sunstein 2018: 306; Zhang 2015: 213–5). Still, this interpretation has to presuppose that preference is not essentially comparative, which is an issue that I do not intend to take a stance on in this paper. That is why I choose to not frame the evaluative divergence here in this way.

distort their judgment about B. And these distorted judgments can concern not only their appealing but also their unappealing intrinsic features. As such, contrast effects might be able to give rise to the divergence in the agent's comparative and non-comparative evaluation in a variety of ways.

Crucially, this evaluative divergence raises a hitherto unnoticed normative question over the proper conative basis for an agent's ordering and rational choice. A normative theory of rational choice is supposed to issue prescriptions on an agent's rational choices based on their ordering of outcomes by favorability. This ordering can, in turn, be grounded in the agent's *comparative evaluations* between every two competing outcomes in comparison, provided that these evaluations satisfy the basic rational conditions specified in representation theorems. Or it can alternatively be grounded in the agent's *non-comparative evaluations* of each outcome in separation, provided that these evaluations have valences and strengths comparable on the same scale.¹¹ While it has been long assumed that comparative evaluations can help regiment the valences and strengths of non-comparative ones (see Bradley 2017: 71–2; Bermúdez 2009: 52–3; Joyce 1999: 45–6, 79), the former's susceptibility to contrast effects suggests that these two types of evaluations can in fact differ on the ordering of some outcomes.

To illustrate, consider a three-option case. Suppose now Chad can only choose to continue his new relationship, keep his old marriage, or cut himself off from both, which is an outcome that he dislikes the most, regardless of whether it is considered in separation or in comparison with other outcomes. In this case, the valence and strength of Chad's non-comparative evaluation of each option would place the old marriage at the top of his ordering. But his complete and transitive comparative evaluation between every two options would instead put the new relationship at the top, due to the contrast with the mundanity of the old marriage in his pairwise evaluation. This suggests that the contrast effects from competing option can generate a divergence in not only an agent's comparative and baseline non-comparative evaluations but also the orderings they ground. Importantly, in cases with such an evaluative divergence, which ordering here – or, if there is no all-things-considered preference ordering to be had at all, which type of evaluation here – can be a better conative basis for the agent's rational choice?

It is not clear to me that this normative question can be conclusively settled in favor of the agent's comparative evaluation from contrast effects, for two reasons. First, this type of evaluation is formed on the basis of distorted judgments about the intrinsic features of the value-dependent outcome A due to the contrast effects from the base outcome B. So it is epistemically more defective and hence less attuned to the true nature of the outcomes at hand.¹²

Second, in some choice situations, the value-dependent outcome A and the base outcome B can be two incompatible outcomes in a one-off choice. That is, the agent might only be able to choose to bring about one and be unable to choose to bring about the other in the future. And the agent might lack beliefs about how they would evaluate each after they bring it about. So conditions (1) and (4) described earlier can also hold in addition to (2) and (3). However, in choice situations where these conditions hold, choosing on the basis of comparative evaluation from contrast effects is more likely to result in post-choice disenchantment with the chosen outcome. At least this would be so for a pragmatic agent who would consider in their evaluation only “open outcomes” that

¹¹See Barrett (2019), Weirich (2004), and Pollock (2006: ch. 2) for the latter approach to ordering outcomes, and Temkin (2012: 358–6) for a similar proposal of ordering outcomes by their intrinsic values.

¹²See Dorsey (2021: ch. 6), Enoch (2005), Jian (2021), Parfit (2011: ch. 4), and Sobel (2009) for further discussions as to why conative attitudes based on epistemically defective judgments are worse conative bases for an agent's choice.

they can still choose to bring about or affect in the future. This is because, after a pragmatic agent chooses to bring about the value-dependent outcome A and turns the base outcome B into something that they can no longer choose to bring about, they would also no longer consider the non-open outcome B and be affected by its contrast effects in their subsequent evaluation of A, as we have seen from Chad's case. So they would end up choosing to bring about A but no longer evaluating A favorably, partly because their choice for A would also remove the incompatible option B and its contrast effects from their consideration, thereby self-defeatingly canceling the very condition in which they find A appealing.

Of course, I am not claiming that the agent's baseline non-comparative evaluation is wholly impervious to epistemic defect, or that choosing on its basis can never lead an agent to cancel the very condition in which they find its object appealing. But this type of evaluation is at least based on judgments unaffected by the contrast effects from competing option. It is also unconditioned on the influence of the incompatible competing option that pragmatic agents are going to remove out of their consideration eventually. So its non-comparative structure at least means that it is less vulnerable to the epistemic defect and the post-choice disenchantment that result from the influence and the removal of the contrast effects from competing option.¹³

These problems, I believe, raise a new challenge to the orthodox comparativist approach to the conative basis of rational choice, which takes an agent's comparative evaluations of outcome pairs to be the ultimate conative basis for its rational prescriptions on their choice. This approach is adopted by the influential accounts of rational choice developed by Jeffrey (1983: 83), Savage (1972: 69), and Von Neumann and Morgenstern (1944: 17).¹⁴ After all, comparative evaluation is more readily measurable through choice behaviors (Barrett 2019: 229; Bradley 2008: 91–2, 2017: 42–4; Pollock 2006: 22–3, 7–8). Furthermore, comparative evaluation readily entails a pairwise evaluative ranking of one option over another. So as long as it satisfies completeness, transitivity, and other rational conditions imposed by representation theorems, it would naturally ground an ordering of all options by favorability. It is these methodological considerations that have largely motivated the comparativist approach.

However, our discussion here reveals that comparative evaluation actually incorporates as its constituent part a crucial contextual reference point (i.e., the competing option) that is able to exert contrast effects on an agent's judgment and evaluation of an option. The three-option case further suggests that comparative evaluations arising from contrast effects can still ground a complete and transitive ordering of options. Indeed, when an agent's complete and transitive comparative evaluations diverge from their baseline non-comparative evaluations in the way described by conditions (1)–(4), it is not entirely clear whether the former can be a unique or better conative basis for rational choice, given their epistemic defect and tendency to lead to post-choice disenchantment.

In the rest of this paper, I will develop and consider two strategies for addressing this central challenge to comparativism. The first strategy is to contend that in cases where conditions (1)–(4) hold, comparativism would not really prescribe agents to choose the value-dependent outcome A over the base outcome B on the basis of their comparative

¹³I will later explain in more detail why these considerations can be relevant in determining which type of evaluation can serve as a better conative basis for our rational prescriptions.

¹⁴This is because these decision theorists have all taken preference to be the ultimate ground for an agent's ordering and characterized preference in terms of comparative evaluations rather than the relative strengths of non-comparative ones. But see Joyce (1999: 68–9) and Pollock (2006: ch. 2) for accounts that instead take the strengths of the agent's non-comparative evaluations to be the most fundamental.

evaluation from contrast effects. For comparativism would only issue rational prescriptions on the basis of somewhat idealized comparative evaluations. The second strategy is to acknowledge that while comparativism cannot wholly exclude comparative evaluation from contrast effects through idealization and would prescribe agents to choose A over B after all, this prescription is, in fact, unproblematic. Although I will not take a stance on which strategy to adopt, I will identify the central problems with each and conclude that both still face significant difficulties in addressing the central challenge to comparativism.

3. The idealization strategy

To address the contrast effects from competing option, one strategy for comparativists is to contend that comparativism would issue rational prescriptions only on the basis of comparative evaluations that satisfy some idealized conditions – which can serve to exclude tainted comparative evaluations that merely arise from contrast effects. In this section, I will examine two types of idealization and highlight the limitations of each.

To begin, while comparativism does invoke idealized comparative evaluations that satisfy the rational consistency conditions specified in representation theorems, it seems to me that such *rational idealization* is unable to entirely exclude comparative evaluations from contrast effects. For, as we have seen from the three-option case, Chad's comparative evaluations between continuing his new relationship, keeping his old marriage, and cutting himself off from both can be perfectly complete and transitive and able to order these outcomes from the most to the least favored. This is so even if one of these comparative evaluations (i.e., the one between his new relationship and his old marriage) is the mere product of contrast effects. Also, Chad's comparative evaluations between every two outcomes here can match his comparative evaluations between two otherwise similar lotteries that respectively give each of these two outcomes with the same probability, so he can satisfy the independence axiom as well. The same points here can still hold if we add more outcomes dominated by the new relationship and the old marriage. This suggests that Chad's comparative evaluations as a whole can satisfy the rational consistency conditions specified in representation theorems and thereby support a cardinal ordering – an ordering partly grounded in his tainted comparative evaluation between his new relationship and his old marriage.

Admittedly, there is one further rational constraint that comparativists can appeal to. They can contend that Chad's comparative evaluation between [continuing the new relationship] versus [*not* continuing the new relationship] fails to satisfy the condition of context-independence. For he would favor the former over the latter only when he is faced with the third option of keeping the old marriage and its contrast effects.¹⁵ However, note that Chad's comparative evaluation between [continuing the new relationship] versus [keeping the old marriage] can still be perfectly context-independent. For he can *always* favor the former over the latter whenever he compares between them due to contrast effects, regardless of which third option he is faced with. In fact, this is what my condition (3) posits. Crucially, on comparativism, it is this latter comparative evaluation that is supposed to ground Chad's ordering of the three outcomes at hand and serve as the conative basis for his rational choice among them.¹⁶

¹⁵See Dietrich and List (2015), Hausman (2013: ch. 9), and Sen (2004: 165–75) for further discussions on this constraint. Here, I follow the literature on context-independence and construe a third option, C, external to the agent's preference between A and B, as a contextual feature external to that preference.

¹⁶Of course, comparativists can choose to instead rely on the former type of comparative evaluation (i.e., the comparative evaluation between a proposition and its negation), which seems better insulated from

So the rational condition of context-independence still does not suffice to exclude this tainted comparative evaluation from the conative basis of comparativism's rational prescriptions.

Our discussion here suggests one general limitation with the appeal to rational idealization: Comparativism relies on, for its rational prescriptions, an agent's comparative evaluations between distinct competing outcomes, as well as lotteries that give these outcomes (e.g., between A and B, B and C, B and a lottery that gives A or C, etc.). But these comparative evaluations can sometimes merely arise from contrast effects, yet also satisfy the relevant rational consistency constraints. This is because contrast effects are epistemic defects that distort an agent's judgments about the features of two outcomes in comparison. But such epistemic defects can sometimes be incorporated and isolated *within* the agent's tainted comparative evaluation of the two outcomes at hand without undercutting the overall consistency *among* their comparative evaluations of all outcomes. That is why the sort of rational idealization set out in representation theorems seems to have difficulties in wholly eliminating tainted comparative evaluations from contrast effects.

Now, to counter the epistemic defects of comparative evaluation from contrast effects, comparativists can instead contend that the ultimate conative basis for comparativism's rational prescriptions is an agent's comparative evaluations between distinct competing outcomes – provided that these evaluations are based on correct and non-distorted judgments about the features of the outcomes involved. While such *epistemic idealization* directly excludes comparative evaluation from contrast effects, I believe that it also brings in further problems.

To begin, as most philosophers have recognized (see e.g., Bermúdez 2009: 13–4; Bradley 2017: 27–8; Broome 2013: 151–3; Hausman 2012: 36–7; Kiesewetter 2017: 160–3; Wedgwood 2017: ch. 7), rationality is supposed to prescribe choices that can make good sense from, and cohere well with, the internal perspective constituted by an agent's actual cognitive and conative attitudes at the time of choice, even if these attitudes might turn out to rest on incorrect judgments. Indeed, this seems to be one of the crucial differences between the prescriptions of rationality and those of normative reasons for action (see Broome 2013: 74–5; Sobel 1994: 787–90). However, if we are to issue rational prescriptions on the basis of the agent's epistemically idealized comparative conative attitudes, then it is not clear whether the “rational” choice we prescribe can wholly preserve its internalist character. For instance, if we invoke the idealized comparative evaluative attitude that Chad would form if his judgments were undistorted by contrast effects and thereby prescribe him to choose to keep the old marriage, then the prescribed choice would not really make good sense from, and cohere well with, his tainted actual attitudes at the time of choice.

In light of this tension between epistemic idealization and the internalist character of rational choice, one possible move is to retreat to some comparative conative attitudes that do not need epistemic idealization at all. Perhaps comparativists can argue that while an agent's actual comparative conative attitudes regarding outcomes can turn out to rest on distorted judgments about their features, the agent can also have some actual

the contrast effects from competing option. However, it is not clear to me whether the negation of a proposition can always amount to a single competing outcome that the agent can choose in their choice situation. So, for instance, Chad's *not* continuing the new relationship is entailed by both the outcomes of keeping the old marriage and of cutting himself off from both. More importantly, this type of comparative evaluation can ground a cardinal ordering only if it can come with a quantitative strength comparable on the same scale (see Schulz (2015) for a proposal along this line). But the appeal to this kind of degreed comparative state would undercut one of the main motivations for comparativism that we just saw.

“intrinsic” comparative conative states that are so basic as to be invulnerable to epistemic defect. And it is such non-fallible actual comparative conative states that ultimately ground an agent’s ordering and utility functions on comparativism and serve as the ultimate conative basis for its rational prescriptions. There are two types of conative states proposed in the literature that might fit the bill. But I am not sure whether they can fully address the problems of contrast effects within the comparativist framework.

To begin, on a broadly hedonic view of utility (see e.g., Frey 2010: ch. 2; Kahneman 2000; Kahneman and Krueger 2006; Kahneman and Thaler 2006), options can be said to have “experienced utilities” grounded in the hedonic states that they bring about, and I admit that such hedonic states can indeed admit of no epistemic error. Still, these states are not the ones typically relied on by comparativists in grounding the agent’s ordering and utility functions. Indeed, it is not clear to me how the consistency axioms in representation theorems are supposed to govern comparative hedonic states, unless we adopt a revisionary interpretation of these axioms. Moreover, choices prescribed on the basis of these states also seem to stand in tension with the internalist character of rational choice, at least in cases where the agent has an incorrect estimation of the hedonic state that each option would produce.¹⁷

Alternatively, on a multi-attribute view of utility (see e.g., Keeney 1992; Keeney and Raiffa 1993; Nelson 1999), an agent’s ordering and utility functions are ultimately grounded in their preferences over different degrees of evaluatively relevant attributes. While such attribute preferences seem more basic and intrinsic than outcome preferences, it seems to me that they are equally susceptible to the influence of contrast effects in comparison. Suppose again that there is an agent who would only value instantiations of attribute F above a certain precise or imprecise threshold, yet equally disvalue all instantiations of F below it (say, they would value the attribute of being expensive only when its degree is high enough to make its object a status symbol). Now, it is possible that when this agent evaluates [d1 degree of F, e1 degree of G] and [d2 degree of F, e1 degree of G] each in separation, they might take the F in each attribute bundle to fail to meet the critical threshold and therefore equally disvalue each. Yet when they evaluate both in comparison, contrast effects might instead lead them to take the F in one bundle to reach the threshold and therefore prefer it to the other. Thus, insofar as the type of attribute preference formulated in the multi-attribute view of utility is based on the agent’s cognition of degrees of attributes in bundles (see Keeney 1992; Keeney and Raiffa 1993 for this construal), it also seems vulnerable to the contrast effects in comparison.¹⁸

Our discussion here also suggests some difficulties with the appeal to epistemic idealization: if we are to issue rational prescriptions on an agent’s choices based on their epistemically idealized comparative conative attitudes regarding outcomes, then the internalist character of the “rational” choices prescribed would be compromised. While we can instead appeal to the agent’s actual comparative conative attitudes regarding types of objects that are more basic than outcomes, as long as these attitudes rely on the agent’s

¹⁷See Kahneman et al. (1997) for further discussions on the distinction between experienced and decision utility.

¹⁸Even if we concede that attribute-preference can admit of no epistemic defects if we instead construe it as a type of comparative conative state between the instantiation and non-instantiation of an all-or-nothing attribute, Pollock (2006: ch. 2) has argued that this type of state can ground an agent’s ordering of outcomes only if we make some unrealistic assumptions about their computational capacity. While Schulz has pointed out that this problem can be addressed if we construe attribute-preferences as coming with quantitative strengths (2015: 248–50), the appeal to this kind of degreed state would again compromise the main motivation for comparativism.

cognition of their objects, they would still seem to be vulnerable to the contrast effects inherently involved in comparison. Still, compared to the central limitation with rational idealization, it seems to me that these problems are more likely to be overcome. Perhaps there are some epistemically idealized comparative conative attitudes that can serve as the conative basis for the agent's rational choice while still somewhat preserving its internalist character. Or perhaps there are some types of actual intrinsic comparative conative states that are largely insulated from contrast effects. Still, due to space constraints, I have to leave this issue here and explore another strategy for addressing comparative evaluation from contrast effects – which is to argue that the rational prescriptions issued on the basis of this type of evaluation are in fact unproblematic.

4. The rationalization strategy

To begin, as we have seen earlier, in choice situations where conditions (1)–(4) hold, comparativism would prescribe agents to choose to bring about the value-dependent outcome A rather than the base outcome B on the basis of their comparative evaluation from contrast effects. At least this would be its prescription when the agent's comparative evaluations satisfy all rational conditions specified in representation theorems and when we do not resort to epistemic idealization (let us suppose that this is so in what follows). This prescription, however, appears problematic because the agent's comparative evaluation here is not only based on more distorted judgments about A's intrinsic features. It is also more likely to lead to post-choice disenchantment with A when B's contrast effects are out of the picture.

Still, despite these problems, comparativists can argue that the prescription on choosing the value-dependent outcome A cannot really be said to be problematic from the perspective of rationality. After all, from the agent's tainted perspective at the time of choice, this prescribed choice does indeed make good sense to them and coheres well with their comparative evaluation from contrast effects. Indeed, it seems that this prescribed choice cannot really be faulted by the consideration of epistemic defect as long as we accept the internalist character of rational choice.

Furthermore, comparativists can contend that the agent's post-choice disenchantment with the value-dependent outcome A is nothing but their unfavorable non-comparative evaluation of A itself: after the agent chooses to bring about A, they would no longer evaluate it favorably when it is considered on its own. However, it is also true that, after the agent chooses to bring about A, they can still evaluate A favorably when it is considered against the competing outcome B that they could have brought about. Indeed, this would be so as long as the agent has a consistent comparative evaluation in favor of A over B due to contrast effects. As such, it is also not clear whether the consideration of post-choice disenchantment can really count against the prescribed choice for outcome A without begging the question against comparativism.

This suggests an alternative strategy for comparativists to address comparative evaluation from contrast effects, which is to contend that the choices prescribed on its basis are actually unproblematic. For its epistemic defect does not really undercut the rationality of the choices prescribed, and the outcome chosen can still continue to be cast in a favorable light from its perspective even after the agent's choice.

This alternative strategy, however, still strikes me as unsatisfactory. Start with the consideration of the epistemic defect. Recall that in choice situations where conditions (1)–(4) hold, there are two competing conative bases for the agent's rational choice: their baseline non-comparative evaluation is favorable about the base outcome B itself yet unfavorable about value-dependent outcome A itself, whereas their comparative

evaluation instead favors A over B due to contrast effects. Admittedly, the choice prescribed on the basis of the latter evaluation cannot be said to be *less rational*, given the internalist character of rational choice. Still, insofar as this evaluation is based on more distorted judgments about A's features and less attuned to A's true nature, the choice prescribed on its basis still seems *less justified* from an epistemic perspective. And such epistemic inferiority, it seems to me, can still carry some weight in determining which type of the agent's internal evaluation here can serve as a *better* conative basis for our rational prescriptions on their choices – unless we want to claim that any type of internal evaluation capable of grounding a consistent ordering can serve as an equally good conative basis for rational choice. That is why I am not entirely sure whether we can dismiss the consideration of epistemic defect by insisting on the internalist character of rational choice.

Now turn to the consideration of post-choice disenchantment from the removal of contrast effects. Admittedly, it is true that such disenchantment primarily manifests itself through the agent's unfavorable non-comparative evaluation of the value-dependent outcome A itself. But one worry is that such disenchantment might still appear in the form of comparative evaluation in some choice situations. Suppose that, after the agent chooses to bring about either outcome A or outcome B, they can still make the choice to either maintain the status quo (live with the consequence) or revert back to a state as close as possible to the state that they were in before making the choice (undo the consequence). In this type of choice situation, it seems possible for an agent to exhibit their post-choice disenchantment through their comparative evaluation in favor of undoing rather than living with the value-dependent outcome A. Or suppose the agent is to choose between not two outcomes to bring about, but two tradable items to acquire. And suppose their comparative and non-comparative evaluations about the value-dependent option A and the base option B also diverge in the same way described by conditions (2) and (3). In this type of choice situation, it is also possible for an agent to exhibit their post-choice disenchantment with A through their comparative evaluation in favor of trading A away at little or no cost rather than living with A. So it is not entirely clear to me whether the consideration of post-choice disenchantment simply begs the question against comparativism.

Admittedly, it is true that the agent's consistent comparative evaluation in favor of outcome A over B can continue to cast A in a favorable light and thereby address their post-choice disenchantment with A. However, a further worry is that this way of addressing post-choice disenchantment potentially compromises the forward-looking view of rationality widely endorsed in the literature on diachronic rationality. On this view, rational agents are supposed to evaluate outcomes without looking backward to what happened in the past, which can include not only the sunk cost they have incurred but also the competing outcome they have foregone in the past.¹⁹ But the agent's consistent comparative evaluation in favor of A over B precisely addresses their post-choice disenchantment with A by invoking its *past* competing option B and conjuring up B's contrast effects.

Specifically, this kind of "backward-looking comparative evaluation" seems to violate the spirit of the separability norm in the forward-looking view, which requires agents to evaluate outcomes ahistorically, as if agents were to face them anew in a new decision

¹⁹The full import of this forward-looking approach is captured by various rational norms governing an agent's evaluations in a diachronic context; see McClennen (1990: ch. 8), Hammond (1988), Rabinowicz (2020), and Sud (2014) for further discussions on these norms.

problem.²⁰ Of course, this norm, as it is formulated in the literature, is supposed to govern only the agent's evaluation of the outcomes yet to be brought about by their current choice. However, the agent's evaluation of the outcomes already brought about by their earlier choice can still be relevant to how they are to assess their current situation and move forward, especially when they can still choose to undo or affect these outcomes to some extent. And evaluating these outcomes against their past competing outcomes would still seem incongruent with the kind of ahistorical evaluation required by separability.

Note that my claim here only applies to the agent's assessment of the *outcome* that they brought about and ended up with, rather than their earlier *choice*. Given the internalist character of rational choice, the agent can indeed rightly assess their earlier choice for A over B as rational by looking backward to their past perspective at the time of choice. But what is problematic, at least on the broadly forward-looking view of rationality, is for the agent to assess the outcome A that they brought about and ended up with by looking backward to past considerations, such as the sunk cost they have incurred or the competing option that they have foregone.

Of course, as you might object, if the agent does not have beliefs about their post-choice evaluations of the outcomes they can choose to bring about (as stipulated by condition (4)), then it would be perfectly fine for our rational prescriptions to only take into account their evaluations at the time of choice. And if their comparative evaluation at the time of choice does favor the value-dependent outcome A over the base outcome B, then the rational prescription of choosing A cannot really be faulted by their unexpected subsequent disenchantment with A. This is so regardless of whether such disenchantment can also appear in the form of comparative evaluation and regardless of whether it can be addressed by backward-looking comparative evaluation. So the worries with post-choice disenchantment, as you might complain, are simply red herrings.

However, recall again that in the choice situations that we are focusing on, the agent at the time of choice has two competing conative bases for their rational choice: their baseline non-comparative evaluations and comparative evaluations from contrast effects. While it is true that the choice prescribed on the basis of the latter cannot be said to be *less rational*, it is still more likely to lead to post-choice disenchantment for a pragmatic and forward-looking agent. As such, the choice prescribed on its basis would still seem *less justified* from a prudential perspective. Indeed, if the agent's post-choice disenchantment appears in the form of a further comparative evaluation in favor of undoing the chosen outcome rather than living with it, then the choices prescribed would appear even less justified from a prudential perspective. And such prudential inferiority, it seems to me, can still be a valid consideration in determining whether the agent's comparative evaluation can serve as a better conative basis for our rational prescriptions. That is why I am unsure whether the issue of post-choice disenchantment can be simply dismissed as a red herring.

More generally, the normative question at stake here is whether an agent's comparative evaluation or non-comparative evaluation can provide a *better* conative basis for their rational choice. And it seems to me that the "betterness" here has to be largely determined by considerations beyond rationality itself. In fact, if the consideration of measurability can count in favor of comparative evaluation on this

²⁰More specifically, as McClennen (1990) characterises it, separability is violated when the agent evaluates outcomes differently than they would "in a situation whose history is different but whose present set of alternatives and outcome is exactly the same (207)." See Machina (1989), Sud (2014: 128), and Rabinowicz (2020: 532) for further discussions on this norm, and McClennen (1990: 120–2) for its formal formulation.

question, then it is unclear why the considerations of epistemic and prudential inferiority cannot equally count against it. So while comparativists can insist that the particular choices prescribed by comparativism cannot be faulted as less rational, this type of defence does not seem to adequately address the central challenge from comparative evaluation arising from contrast effects. Indeed, even if we concede that this type of defence can succeed in fending off the potential epistemic and prudential problems with comparative evaluations, it still fails to provide independent justification for treating these evaluations as the *uniquely* privileged conative basis for rational prescriptions. And I take this to be the central limitation of the second strategy.

5. Conclusion

The contrast effects from competing options raise a new challenge to comparativism. This challenge is in fact twofold. For one thing, the dynamic of contrast effects means that an agent's comparative evaluation of two options in comparison might diverge from their baseline non-comparative evaluations of each option in separation. This divergence, in turn, suggests that comparative evaluation might not be the *unique* conative basis for our rational prescriptions on the agent's choices. For another, contrast effects also mean that comparative evaluation is more likely to rest on distorted judgements and lead to post-choice disenchantment. These normative considerations further suggest that comparative evaluation might not even be a *better* conative basis for our prescriptions on the agent's choices.

While I have developed and considered two strategies for comparativists to address this challenge, I find that neither offers conclusive support for privileging comparative evaluations over non-comparative ones. So it remains to be seen whether there are other alternative strategies to tackle contrast effects. Importantly, what we have seen here is that comparative evaluation actually possesses some distinctive features in virtue of its comparative structure, such as its closer connection to choice behaviours and its greater susceptibility to contrast effects. So there may be other structural features that could provide further support for it. This means that there is a lot more interesting work to be done on this underexplored issue of the proper conative basis for rational choice.²¹

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Jay Jian is a tenure-track research fellow at Academia Sinica, the national academy of Taiwan. He received his DPhil and BPhil degrees in Philosophy from the University of Oxford. His research focuses on rationality, agency, and their intersection. He can be reached at Email: jay.s.jian@gmail.com.