Theoria, 2026, 41(2), 231-244
https://doi.org/10.1387/theoria.26006

THEORIA
ISSN 0495-4548 – eISSN 2171-679X

Can quasi-cyclical preferences be rational?

(¿Pueden ser racionales preferencias cuasi-cíclicas?)

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Keywords

Preference
Decision
Rational
Rational choice
Action

ABSTRACT: One important dimension in the work of José Luis Bermúdez concerns broadening our ideal of deliberational rationality beyond the narrow confines of standard rational decision theory. In this vein, he (2020, 2022) presents two claims: (i) there are 'quasi-cyclical preferences'. (ii) Quasi-cyclical preferences can be rational. These claims contradict received wisdom in decision theory. I shall critically discuss both claims. In particular, I shall question whether there are quasi-cyclical preferences, and whether they can be rational. As for the latter issue, I shall consider three paradigmatic applications: time inconsistency, game theory, and discursive deadlock.

Palabras clave

Preferencias
Decisión
Racional
Elección racional
Acción

RESUMEN: Una dimensión importante del trabajo de José Luis Bermúdez se refiere a la ampliación de nuestro ideal de deliberación racional más allá del estrecho marco de la teoría de la decisión racional estándar. En esta línea, Bermúdez (2020, 2022) presenta dos tesis: (i) existen «preferencias cuasi-cíclicas»; (ii) las preferencias cuasi-cíclicas pueden ser racionales. Estas tesis contradicen ideas tradicionalmente aceptadas en la teoría de la decisión. Discutiré críticamente ambas tesis. En particular, cuestionaré si existen preferencias cuasi-cíclicas y si pueden ser racionales. Con respecto a esta última cuestión, consideraré dos aplicaciones paradigmáticas: inconsistencia temporal, teoría de juegos y bloqueos discursivos.

Gako-hitzak

Lehentasuna
Erabakia
Arrazionala
Hautu arrazionala
Ekintza

LABURPENA: José Luis Bermúdezen laneko alderdi garrantzitsu batek erabaki arrazionalaren teoria estandarraren muga estuetatik harago zabaltzen du deliberazio-arrazionaltasunaren gure eredua. Ildo horretan, bi baieztapen egiten ditu (2021, 2022): (i) «lehentasun kuasiziklikoak» daude; (ii) lehentasun kuasiziklikoak arrazionalak izan daitezke. Baieztapen horiek erabakiaren teoriaren jakinduria konbentzionalarekin kontraesanean daude. Kritikoki aztertuko ditut bi baieztapenak. Batez ere, zalantzan jarriko dut ea badauden lehentasun kuasiziklikoak eta ea arrazionalak izan daitezkeen. Azken auzi horri dagokionez, hiru aplikazio paradigmatiko aztertuko ditut: denbora-inkontsistentzia, joko-teoria eta diskurtso-blokeoak.

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How to cite: Dohrn, Daniel (2026). «Can quasi-cyclical preferences be rational?»; *Theoria. An International Journal for Theory, History and Foundations of Science,* 41(2), 231-244. (https://doi.org/10.1387/theoria.26006).

Received: 27 January, 2024; Final version: 06 November, 2024.
ISSN 0495-4548 - eISSN 2171-679X / © 2026 UPV/EHU Press

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1. What are quasi-cyclical preferences?

My aim is to critically discuss José Luis Bermúdez's proposal that there are quasi-cyclical preferences, and that they play a role in rational deliberation. Bermúdez introduces quasi-cyclical preferences by distinguishing them from *cyclical* or intransitive preferences. The latter are standardly taken to be irrational (2020, p. 79):

> There are good reasons to think that it is irrational to have preferences that are cyclical. A decision-maker has cyclical preferences when, for example, she simultaneously prefers o_1 to o_2, o_2 to o_3, and o_3 to o_1. A decision-maker with cyclical p*references will never be able to decide to do what she prefers most (assuming that transitivity holds). For each of* o_1, o_2, and o_3, *there will always be something she prefers to it.* (2022, p. 3, m.e., notation adapted)

Cyclical preferences are defined as follows: an agent has cyclical preferences if, among her options, she prefers o_1 to o_2, o_2 to o_3, and o_3 to o_1. Such preferences cannot properly guide decision-making. The following connection between preferences and rational decisions seems plausible: among any options o_1, o_2,... o_n, it is rational to choose o_i only if there is no option o_j that one prefers over o_i. Yet cyclical preferences leave the agent in a quandary: whatever option she chooses, there will be one she prefers, i.e. would rather choose. Thus, there is no option that could be rationally chosen.

Bermúdez introduces *quasi*-cyclical preferences in three main steps (2021, ch. 6). In a first step, he claims that preferences do not range over outcomes but *framed* outcomes:

> I suggest that the objects of preference are framed outcomes. There is no such thing as making choices over a purely extensional opportunity set, independent of any way of describing or framing the things in it. (2022, p. 3)

Preferences concern outcomes of one's actions given certain states of the world. Usually, preferences are assumed to concern outcomes as they are independently of how we represent them. In contrast, Bermúdez claims that preferences outcomes as represented or framed in a certain way.

In order to support this claim, Bermúdez points to framing effects that are well-established in the psychological research on heuristics and biases (2020, ch. 2). Against the widespread view that framing effects are irrational, Bermúdez emphasizes that they can be useful for decision-making. Given our limited purview of an indefinite number of options and their potential consequences, framing is a way of focusing attention on certain outcomes (2020, pp. 120-123). These arguments do not yet show that preferences themselves come framed, though.

Bermúdez takes a second step (2020, p. 81; 2022, p. 3). Comparable to opaque beliefs, framing the same outcome o_1 under two frames $F_A(o_1)$ and $F_B(o_1)$ opens up the possibility of preferring o_1 to a different outcome o_2 under one frame and preferring o_2 to o_1 under a different frame. For comparison, 'Hesperus' and 'Phosphorus' refer to the same celestial body, but we may refer to that body under the diverse descriptions 'Hesperus is the bright celestial body visible in the evening' and 'Phosphorus is the bright celestial body visible in the morning' (2020, p. 12). This opens up the possibility of rationally believing Hesperus to be distinct from Phosphorus. Quasi-cyclical preferences function analogously to such a case of *opaque* belief.[1] However, Bermúdez sees one important difference to the case of referentially opaque beliefs. Quasi-cyclical preferences are *referentially transparent*. $F_A(o_1)$ and $F_B(o_1)$ are known to be frames for the same outcome (2020, p. 98).

Bermúdez develops his case for quasi-cyclical preferences by careful analyses of classical fictional characters like Agamemnon in Aulis (2021, ch. 6) and Macbeth (2021, p. 108-112): "Macbeth prefers Fulfilling his Double Duty to Duncan [o_1] to Murdering the King [o_2]... Macbeth prefers Bravely Taking the Throne [o_2] to Backing Away from his Resolution to Make the

[1] A belief is opaque if the relationships of co-referentiality, e.g. between 'Hesperus' and 'Phosphorus', are not known to the believer.

Prophecy come True [o_1]."(2022, p. 5) The example gives us some idea of what frames are like. The frames in the example include a descriptive component (keeping one's allegiance to Duncan, killing Duncan, becoming king), but also something akin to a thick normative concept like fulfilling duty, murder, braveness. As we shall see, frames may also involve emotional components. On the one hand, it seems plausible to think of frames as holistic, potentially including anything that informs our attitude towards a certain outcome. Yet on the other hand, there are certain limits. For instance, one should not simply inscribe preferences themselves into the frames if an analysis of preferences as framed is to be informative.

In a third step, Bermúdez claims that quasi-cyclical preferences can be perfectly *rational*: "Such patterns of quasi-cyclical preferences can be *correct and appropriate* from the normative perspective of how one ought to reason." (2022, p. 1, m.e.) Quasi-cyclical preferences can be adequate responses to diverging reasons. They are instrumental in dissolving time-inconsistencies, game-theoretical dilemmata, and discursive deadlock (see my section 3.1., 3.2.1., 3.2.2., 3.2.3., respectively). Bermúdez imposes a minimum requirement of rationality on framing outcomes: "...it seems rationally permissible to view situations and outcomes under multiple frames, provided that those frames are complementary and consistent (i.e. they do not contradict each other) and that none of them are based on false beliefs or comparably dubious sources." (2020, p. 135) The requirement is that one ought not to accept frames which contradict each other or are based on false beliefs. In order to be rational, quasi-cyclical preferences must at least satisfy this minimum requirement. However, as Bermúdez's examples of Macbeth etc. show, this minimum requirement leaves us with a wide variety of combinations that are rationally permissible.[2]

In sum, Bermúdez takes three steps away from received wisdom. Preferences come framed. There are quasi-cyclical preferences. Quasi-cyclical preferences can be perfectly rational.

2. *Are there quasi-cyclical preferences?*

2.1. Are preferences frame-relative?

Bermúdez opposes orthodoxy about preferences as it has been developed from pioneering works like (Arrow 1951, ch. 2; Savage 1954, pp. 13-16 as discussed in Bermúdez 2020, pp. 118-121) onwards. The orthodox view is defended against Bermúdez e.g. by Guala (2022; Lau 2022; Weisel and Zultan 2022). Bermúdez and his opponents agree that there may be quasi-cyclical *wishes* or *desires*. For instance, Macbeth wishes to be king, even if this means murdering the king (Guala 2022, pp. 27). At the same time, Macbeth may wish not to murder the king, even if this means not to be king for him ("Wake Duncan with thy knocking! I would thou couldst!"). But orthodoxy denies that *preferences* are frame-relative, and therefore that there are quasi-cyclical preferences. The difference between Bermúdez and orthodoxy can be summarized thus:

> **Orthodoxy**: there are frame-relative emotional responses, reasons, desires, but preferences are not frame-relative.
>
> **Bermúdez**: there are frame-relative emotional responses, reasons, desires, *and preferences*.

I shall consider one exemplary argument of Bermúdez's against his orthodox opponents:

> We both accept that there are frame-relative emotional responses, reasons, desires, and so forth. I argue, though, that it will not always be possible to turn those frame-relative reasons into frame-neutral all-things-considered preferences. This will happen when the force and appeal of the rea-

[2] Bermúdez assumes that standards for factual truth are highly context-relative. For instance, prophecies count as fact-stating for Agamemnon assuming his whole community of reference accepts them, but evangelical Christians' belief in the Rapture does not count as factual given the standards of contemporary society (2021, p. 233-234). As a consequence, the requirement seems rather to be that a frame should not be based on beliefs that *seem* false by a communal standard.

> sons are tied to the frame in which they emerge, so that stepping back from the frame weakens their hold. (Bermúdez 2022, p. 57)[3]

The main argument Bermúdez here provides for making preferences frame-relative is that our reasons for certain preferences are inextricably frame-relative. There is no way for these reasons to influence the formation of preferences if not by informing frame-relative preferences. If we were to remove the frame and consider an outcome directly, these reasons would lose their grip on the formation of preferences.

There are several uncertainties about this argument. The first is whether the point is a psychological or a normative one: is the claim just that some reasons would lose their force, or is it that we would fail to do justice to certain reasons which should be taken into account? There is a related uncertainty: what is the consequence to be drawn from the observation that certain reasons are frame-dependent? Is there anything lost if we fail to appreciate these reasons?

While I shall come back to these issues, I here only note the following: even if it is granted that some reasons have an impact only on preferences formed under frames and not on preferences with regard to unframed outcomes, it does not follow that preferences are framed. It only follows that, if preferences are formed in a frame-neutral way, certain reasons cannot play a role in forming them. To illustrate this highly principled point by the Macbeth example, one version that is consistent with the story is the following: assume for the sake of argument that Macbeth could not prefer *Not Killing Duncan* to *Killing Duncan* unless framed as *Keeping* vs. *Not Keeping his Double Duty*, but that preferences never come framed. It only follows that Macbeth cannot prefer *Not killing Duncan* to *Killing Duncan,* which is consistent with the story unless we make certain contestable assumptions about preferences.

Things would be different if reasons principally could only have an impact on preferences under frames: assuming that rational preferences must be sensitive to reasons, and that only preferences under frames are sensitive to reasons, it would be a requirement on the rationality of preferences that they are preferences under frames. It is not obvious that Bermúdez would be willing to endorse this stronger claim, though. On the one hand, Bermúdez says: "There is no such thing as making choices over a purely extensional opportunity set." (2022, p. 3) On the other hand, he says "…it will not *always* be possible to turn those frame-relative reasons into frame-neutral all-things-considered preferences." (2022, p. 57, m.e.) Not always, but presumably sometimes. Bermúdez does not unambiguously exclude rational frame-neutral all-things-considered preferences. In any case, the argument against the orthodox position does not support the stronger claim.

In sum, Bermúdez argues that some reasons can only have an effect on preferences if the latter are framed. The argument does not establish that preferences ever come framed. So far nothing excludes that preferences are always formed over an extensional opportunity set, although frames may be instrumental in pre-selecting the potentially indefinitely many options to be considered.

2.2. Against cuasi-cyclical preferences

Having articulated certain doubts about Bermúdez's positive argument for *frame-relative* preferences, I shall now present two arguments against the claim that there are *quasi-cyclical* preferences. The first concerns how to define the notion *preference.* The notion has become a *terminus technicus* in the current debate on rational choice. It is more theoretical and less rooted in folk psychology than the concepts of desires, wishes, and will (see Hansson and Grüne-Yanoff 2022). I shall present a plausible first take on its theoretical role in terms of the following link to agency:

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[3] A clarification on all-things-considered preferences is in order. Bermúdez responds to Guala (2022) "…that a rational agent can have more than one maximally all-things-considered preference ordering, in cases where there are reasons, emotional responses, desires, and so on, that cannot be considered together." (2022, p. 57) I think that *all-things-considered* preferences in Guala's (2022) understanding would require precisely to *consider together* reasons etc. A more careful statement of Bermúdez view might be that one can have inconsistent sets of all-things-considered preferences, where all reasons etc.. are considered or somehow represented but not all are *live* or *maximally salient* (on salience see Bermúdez 2020, p. 264; Pettigrew 2022, p. 36).

> **Necessary Condition**: Doing (acting so as to make real) o_1 rather than o_2 is a case of conscious, deliberate, voluntary agency only if one does not prefer o_2 over o_1.
>
> **Sufficient Condition**: one does not prefer o_2 over o_1 if one does o_1 rather than o_2 in a case conscious, deliberate, voluntary agency.

Quasi-cyclical preferences do not satisfy my two conditions. I shall raise two issues. The first issue regards the *Necessary Condition*: one cannot have a quasi-cyclical preference $F_A(o_1)$ over $F_B(o_2)$ and $F_C(o_2)$ over $F_D(o_1)$ and do o_1 rather than o_2 or o_2 rather than o_1 as a case of conscious, deliberate, voluntary action.

The second issue concerns the attribution of preferences. What guides us in telling whether someone prefers o_1 to o_2 or the other way round? How are we to identify preferences? For instance, how can we know that Macbeth prefers *Fulfilling his Duty* (o_1) to *Murdering the King* (o_2) although he acts against this preference, killing Duncan (o_2)?

One main criterion of ascribing preferences is overt action. As a first stab in this direction, I suggest the following heuristic criterion:

> An agent either prefers o_1 to o_2 or is indifferent between o_1 to o_2 and does not prefer o_2 to o_1 if the agent consciously, upon careful reflection, and voluntarily chooses o_1 over o_2 when she is placed so as to choose either o_1 or o_2 and does not ignore any fact that would influence her choice.

A criterion of this sort does not sit well with attributing quasi-cyclical preferences. Take again the example of Macbeth: as a matter of fact, Macbeth kills Duncan (o_2) rather than not killing him (o_1). Yet by assumption, he prefers both (i) *Fulfilling his Double Duty* (o_1) to *Murdering the King* (o_2) and (ii) *Bravely Taking the Throne* (o_2) to *Backing Away from his Resolution to Make the Prophecy Come True* (o_1). Only framed preferences (ii) conform to the choice. It seems plausible that we can attribute a preference for o_2 over o_1 to Macbeth. Given the transparency of framed preferences, these preferences correspond to (ii). Yet what reason do we have to attribute framed preferences (i) rather than mere wishes, desires etc.? In sum, quasi-cyclical preferences raise an attribution problem. One may still uphold them as a theoretical posit, but the question becomes why to posit them in Bermúdez's examples like the Macbeth case rather than doing with the resources of orthodoxy.

In the case of Macbeth, Bermúdez mentions the following exemplary piece of evidence that may be used to motivate the attribution of preferences that conflict with manifest actions. Macbeth's feeling of remorse shows that he continues to prefer (i) *Fulfilling his Double Duty* (o_1) to *Murdering the King* (o_2) even if he acts otherwise (ii). Retrospective emotions like *regret* as experienced e.g. by Macbeth after murdering Duncan are evidence that quasi-cyclical preferences persist beyond executing their target actions: "One sign that decision-makers have retained quasi-cyclical preferences would be their experiencing regret or similar retrospective emotions." (Bermúdez 2020, p. 112, on the rationality of regret p. 265)

I agree that retrospective emotions like regret might be construed in terms of retaining quasi-cyclical preferences if one already grants such preferences. Macbeth regrets having murdered Duncan because under the frame *Fulfilling his Duty* he would have preferred and he still prefers not to murder Duncan. Yet I doubt that retrospective emotions provide independent evidence for quasi-cyclical preferences. On a more neutral ground, regret can as well be explained in terms of a change of preferences (Macbeth now prefers not to have murdered Duncan)[4] or in terms of persisting conflicts of wishes or desires, which have to be resolved in order to form preferences (Guala 2022). In this alternative, Macbeth does not change his preferences, but his regret is explained by opposing wishes or desires.

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[4] I follow Pettigrew (2022, p. 36), who differentiates his view of Bermúdez's cases of quasi-cyclical preferences (e.g. Macbeth): if the relevant preferences are supposed to record judgements of *betterness*, the agent should be interpreted as being indifferent (no option being *absolutely* better). If they are supposed to explain behaviour, one's reasoning and one's behaviour manifest a shift from one set of non-quasi-cyclical preferences to another. Macbeth's killing Duncan displays an absolute preference for killing Duncan tout court over not killing him, and his subsequent regret displays a shift of the preference ordering towards not killing Duncan.

I shall address two more general concerns about my argument: First, it may sound overly behavioristic. Responding to Guala (2022), Lau (2022), Weisel and Zultan (2022), and Pettigrew (2022), Bermúdez (2022, Section R4.2) emphasizes that he thinks of preferences as psychological states. He explicitly rejects thinking of preferences first and foremost as revealed in overt actions (Bermúdez, 2022, pp. 56-57, see Samuelson 1938). Yet one can agree that preferences are psychological states and reject the revealed-preferences view while still maintaining a certain connection to agency as in my link to agency and my heuristic criterion. My suggestion imposes only weak constraints on the attribution of preferences. There may be plenty of non-revealed preferences. Of course, there is a danger that the debate becomes a merely verbal dispute, each party simply using 'preference' differently. To lead the dispute in a more constructive way, I prefer to ask what the most fruitful use of 'preference' is. As a consequence, my doubts become whether Bermúdez's use is more fruitful than one that maintains the abovementioned links to agency.

A related worry is that my link to agency begs the question against Bermúdez, by requiring agents' preferences to range over unframed outcomes rather than framed outcomes. Yet first, the supposed link to agency is compatible with the claim that preferences are framed. Overt actions may impose informative constraints on the attribution of preferences whether framed or not, even if they underdetermine frames. Moreover, I use the link to agency only to argue against the claim that there are quasi-cyclical preferences. Secondly, my dialectical aim here is not to refute Bermúdez's conception by arguing from a common ground that Bermúdez would have to accept, but to elaborate a competing plausible view of preference. In doing so, I make assumptions that Bermúdez rejects. It then remains to be seen which conception is the most convincing one.

I think the action-guiding role described by my links to agency has to be filled, and the concept of a preference is the most convincing candidate for filling it. One may try to reconcile the action-guiding role with acknowledging quasi-cyclical preferences by assuming that the action-guiding role is limited to normal or ideal cases of preferences or to normal or ideal cases of agency, but that would require accepting that quasi-cyclical preferences are not the normal case.[5]

I have raised some doubts about the claim that preferences are frame-relative, and that they sometimes are quasi-cyclical. I shall now put aside these more principled doubts and consider whether quasi-cyclical preferences (if such there are) could be rational.[6]

3. Are quasi-cyclical preferences rational?

3.1. Principled discussion

Again, I shall begin with critically assessing a positive argument of Bermúdez's for the rationality of quasi-cyclical preferences and then discuss some general doubts of my own:

> (H3) Framing effects and quasi-cyclical preferences can be rational in circumstances where it is rational to have a complex and multi-faceted response to a complex and multi-faceted situation.
>
> [...]

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[5] Bermúdez (p.c.) has responded that in the case of quasi-cyclical preferences our doing may fall short of conscious, deliberate, and voluntary agency. This move may assuage my doubts about the very existence of quasi-cyclical preferences, but it may be problematic with regard to their purported rationality. Conscious, deliberate, and voluntary agency is closely connected with categories like rationality and responsibility. If our action falls short of conscious, deliberate, and voluntary agency, it falls into a limbo between rational and responsible action and mere behaviour, as when someone acts under the influence of drugs or mental illness. It is not clear what happens in this case to the claim that quasi-cyclical preferences can be rational.

[6] Doubts about their rationality have been articulated by Fisher (2022): whenever an agent realizes that the outcomes under different frames are the same, she already considers them in a frame-neutral way, incurring a rational commitment to form all-things considered preferences (see Bermúdez's response 2022, p. 56).

> But those quasi-cyclical preferences have emerged from a decision-maker seeking to satisfy the basic rationality requirement of doing justice to the complexity of the situation. They inherit the rationality of the process that generated them. (2022, p. 6)

On the one hand, Bermúdez here suggests a procedural criterion of rationality. It is sufficient for preferences to be rational to arise from a rational process. On the other hand, the rationality is not described in terms of criteria for due processing. Rather there is a direction of fit from our preferences to an independent situation. Sometimes quasi-cyclical preferences are the adequate response to the situation.

To assess this argument, I shall follow Bermúdez's use of examples from the literary classics. However, I shall consider an example that I find more apt than Bermúdez's examples of Macbeth and Agamemnon. The problem with the Macbeth example is that we have a contrast of very different frames, on the one hand a moral obligation and on the other hand a selfish ambition. The problem with the Agamemnon example is that an assumed obligation to appease the Gods by sacrificing one's daughter is alien to modern sensibilities.

I shall consider a different example, which a contemporary reader can better connect to. In volume one of Victor Hugo's *Les Misérables*, Jean Valjean is faced with a tragic choice: on the one hand, he may turn himself in to save a ruffian who faces an unjust punishment for minor offences committed by Jean Valjean himself in the distant past. On the other hand, he may keep up his disguise. Doing so would mean to continue serving a whole community that depends on his entrepreneurship and charity and in particular to save the innocent Fantine and her child from misery and death. There is no satisfying choice. Valjean turns himself in, and this is intimated to be the morally right choice, but the consequences are dire: the community is ruined and Fantine dies. Before turning himself in, Valjean spends the whole night describing the situation under different frames. This is a typical case of the sort Bermúdez has in mind.[7] Under the frame *Serving the Community (not turning oneself in)* trumps *Saving the Ruffian (turning oneself in)*. Under the frame *Taking Responsibility for Past Offences (turning oneself in)* trumps *An Innocent Being Punished instead of Oneself (not turning oneself in)*.

The case illustrates how framing and reframing options can be a rational procedure for doing justice to a complex situation. The question is whether this is also a case in which the formation of quasi-cyclical preferences would be rational. Judging from Bermúdez argument, if it is *ever* rational to form quasi-cyclical preferences, it seems rational for Jean Valjean to form quasi-cyclical preferences in responding to the situation. He responds to an intractable moral quandary.

However, there are three caveats about this response. The first caveat concerns the hypothesis that preferences come framed. None of the examples, including the one from Victor Hugo, support the hypothesis that preferences come framed rather than the weaker hypothesis that framing has an influence on forming preferences, which then concern outcomes directly.

The second caveat concerns the hypothesis that Jean Valjean may form quasi-cyclical preferences. According to orthodoxy, it is not adequate to describe Valjean as having quasi-cyclical preferences. Rather he may be faced with conflicting reasons, demands, desires, wishes, and so on. So far there is no reason to ascribe specifically quasi-cyclical preferences to him. I shall put aside this caveat as I am granting for the sake of argument that there can be quasi-cyclical preferences.

The third caveat concerns more specifically the rationality of quasi-cyclical preferences. In reconstructing Bermúdez position, I tentatively distinguish between two distinct respects in which preferences can be labelled as 'rational'. The first may be called *input*-rationality, i.e. rationality of the processes that influence decision-making. In this sense, one may argue, following Bermúdez, that Jean Valjean's practice of framing and reframing is an adequate way of responding to his morally complex situation, and this practice may rationalize forming not only conflicting desires or wishes in responding to conflicting demands, but also forming quasi-cyclical preferences.[8]

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[7] Hugo thinks of this situation as typical of the *condition humaine*. Valjean's nemesis Javert experiences a perfectly parallel situation in volume five.

[8] I share the concerns of an anonymous reviewer as to whether it is useful to invoke quasi-cyclical preferences in explaining input-rationality: we seem to already have a number of terms to refer to the products of the preliminary phase of exploration – 'pro tanto' reasons, or 'partial

The second respect in which preferences can be rational may be called *output*-rationality. Output-rationality has to do with the action-guiding role of preferences as captured by the link to agency discussed in the last section. Quasi-cyclical preferences do not satisfy a corresponding rationality requirement that is acknowledged by Bermúdez himself. According to Bermúdez, cyclical preferences of o_1 over o_2, o_2 over o_3, and o_3 over o_1 are irrational because, for any decision o_1, o_2, and o_3, there is an alternative that is preferred to it. Now the same goes for quasi-cyclical preferences. Consider again Jean Valjean's assumed preferences:

Serving the Community (not turning oneself in) trumps *Saving the Ruffian (turning oneself in)*. *Taking Responsibility for Past Offences (turning oneself in)* trumps *An Innocent Being Punished instead of Oneself (not turning oneself in)*. As a matter of fact, Jean Valjean decides to turn himself in. Yet by assumption, he prefers not to turn himself in to turning himself in under the frames *Serving the Community* and *Saving the Ruffian*. Analogously if he had taken the alternative decision not to turn himself in.

Generalizing, whenever one has quasi-cyclical preferences $F_A(o_1)$ over $F_B(o_2)$ and $F_C(o_2)$ over $F_D(o_1)$, one cannot choose one action without violating the demands of rationality: if one chooses o_1, there is an alternative o_2 that one prefers to it (albeit under a certain frame), and if one chooses o_2, there is an alternative o_1 that one prefers to it (albeit under another frame), and one knows this. In sum, by Bermúdez's own lights, quasi-cyclical preferences are just as irrational as cyclical preferences as far as output-rationality is concerned. To use his own words, A decision-maker with quasi-cyclical "*preferences will never be able to decide to do what she prefers most (assuming that transitivity holds). For each [choice] there will always be something she prefers to it.*" (2022, p. 3)

Rational agency is blocked if there is no way of resolving quasi-cyclical preferences. Pettigrew (2022, p. 36) interprets Bermúdez as suggesting the following resolution (see e.g. Bermúdez 2020, p, 264): an agent with quasi-cyclical preferences may act as suggested by the most salient framing. For instance, Valjean might turn himself in because the framing *Saving the Ruffian* happens to be more salient than the framing *Serving the Community*. Pettigrew claims that this solution is better interpreted as settling for one coherent set of preferences (turning oneself in over not turning oneself in) rather than acting on quasi-cyclical preferences. While I remain neutral about Pettigrew's interpretation, I want to add two points: first, both the formation of quasi-cyclical preferences and the resolution of the resulting quandary for action are explained by one frame becoming momentarily more salient than the other. Such an explanation seems incomplete. For instance, it leaves open which factors lead to the situation in which Valjean just forms quasi-cyclical preferences, and which factors lead to the situation in which he already acts on the set of preferences made salient. Second, acting on quasi-cyclical preferences becomes subject to accidental circumstances in a way that conflict with our expectancies for rational action. It just so happens that one framing rather than the other is salient so as to guide one's action. At this point, one may resort to techniques of *salience management*: there are frames that should be considered. Hugo intimates that turning oneself in is the right decision. Similarly, Shakespeare intimates that killing Duncan is the wrong decision for Macbeth. However, the question becomes how to settle for the right framing, the one that should be raised to salience. If there is an answer to this question, and if the technique can be implemented, there is no rational role for quasi-cyclical preferences any more.

Taking stock, quasi-cyclical preferences may be rational in a minimal sense given by input-rationality. Yet they are inevitably irrational in a sense acknowledged by Bermúdez himself. They cannot be rational in guiding our decisions. I find it plausible (and it seems that Bermúdez agrees given his discussion of cyclical preferences) that full-blown rationality requires both input- and output-rationality. The point of preferences arguably *is to mediate the rational transition from reasons, desires, motives, wishes to action, from input rationality (doing justice to the complexity of the situation) to output rationality (doing justice to the requirements of rational agency)*. As a consequence, quasi-cyclical preferences could not be fully rational.

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evaluations', for example. It is doubtful that there is any advantage in using the term preference at this stage, given that preferences in the technical sense are 'all things considered' evaluations. Yet I find it dialectically convenient to for the sake of argument grant input-rationality as a concession to Bermúdez in order to bring out my main point.

3.2. APPLICATIONS

Besides the principled discussion, Bermúdez presents three concrete examples where quasi-cyclical preferences may play a rational role. Since my argument from the last section was fully general, that rational role can at most lie on the input side. Still it is instructive to go through these three examples as they help us appreciate Bermúdez's position.

3.2.1. Time-inconsistencies

Bermúdez's first example is time-inconsistent preferences as exemplified by *hyperbolic discount functions* (2020, ch. 7; 2022, section 4):

> *Exponential discount functions*: [...] the impact of a day's delay will be the same tomorrow as 25 years in the future. For that reason, exponential discounting is described as time consistent.
>
> *Hyperbolic discount functions* are time-inconsistent, because the ratio of the discount function is not constant. The difference between having $10 today and receiving $11 tomorrow is much greater than the difference between having $10 100 days into the future and having $11 in 101 days. (2022, p. 6)

A hyperbolic discount function is characterized by a change in the discount function that tells you how much the value of a later reward decreases compared to that of a sooner reward. One standard explanation for hyperbolic discount functions is that *Smaller Sooner* rewards SS (10$ today instead of 11$ tomorrow) are *emotionally hot,* as contrasted to *Larger Later* rewards LL (11$ tomorrow instead of 10$ today). A reward of 10$ today is emotionally hotter than a reward of 11$ tomorrow, but a reward of 10$ 100 days in the future leaves us as cool as a reward of 11$ 101 days in the future.

Bermúdez suggests the following strategy of counteracting time-inconsistent preferences:

> Agents can ensure that hot representations of SS are counter-balanced and kept in check by cooler representations that emphasize, for example, the long-term consequences of succumbing to temptation. Likewise, they can represent LL in ways that engage the hot system, thus steepening the LL discount function and preventing the SS discount function from crossing it. (2022, p. 7)

Bermúdez suggests a reframing strategy in terms of reversing the emotional 'temperature' by representing outcomes differently. One may frame LL as *Resisting Temptation* (LL). The rational result can be quasi-cyclical preferences, or so it seems: one prefers *Resisting Temptation* (LL) over *Succumbing to Temptation* (SS) and *Emotionally Hot* (SS) over *Emotionally Cool* (LL).

Coming to my assessment, I take the irrationality of hyperbolic discount functions for granted. I admit that reframing can be a perfectly rational strategy of overcoming time-inconsistencies. However, the same does not go for forming quasi-cyclical preferences.

First, one does not have to accept that preferences come framed to endorse the reframing strategy suggested by Bermúdez. The strategy may be implemented as follows: one starts from a preference for SS over LL because the former is emotionally hot. One then counters the effect of one's emotions by reframing SS as a case of succumbing to temptation and LL as a case of resisting temptation. The consequence of reframing is that one's preferences change so as to become time-consistent. One drops one's former preference of SS over LL and forms a new preference for LL over SS.

Second, by the same argument, even if one grants that there are framed preferences, there is no reason why the reframing strategy should not be performed completely without ever forming quasi-cyclical preferences. One reframes one's options so as to overcome the effect of one's original emotions in regulating their 'temperature'. If one succeeds, one will end with replacing preferences *Emotionally Hot* (SS) over *Emotionally Cool* (LL) by something akin to preferences *Resisting Temptation* (LL) over *Succumbing to Temptation* (SS).

Third, even if we accept the hypothesis that preferences come framed, quasi-cyclical preferences are not a rational reaction to the situation. The rational reaction would be to adopt a preference for *Resisting Temptation* (LL) over *Succumbing to Temptation* (SS) but to drop a preference for *Emotionally Hot* (SS) over *Emotionally Cool* (LL) that gives rise to time-inconsistencies.

Fourth, as we have seen, quasi-cyclical preferences cannot guide rational action. One cannot rationally choose LL over SS because one at the same time prefers SS over LL under the emotional frame. As a consequence, quasi-cyclical preferences do not serve to overcome time-inconsistency. Rather they leave one in a quandary. One retains the time-inconsistent preferences under the emotional frame. One admittedly may refrain from acting on them, but firstly, doing so is not a result of preference rationally guiding action given that one also prefers otherwise, and secondly, one may as well refrain from acting on the rational preferences. Since time-inconsistency is mainly a problem for one's agency, this shows that quasi-cyclical preferences are not a solution.

3.2.2. Game theory

Bermúdez's second application are cases from *game theory* like the following (2020, ch. 8-9, 2022, section 5): there is a car stuck in the snow. Each of the two inmates is faced with the option of digging or not digging. The pay-offs from each perspective are as follows:

Car stuck in the snow

	Stay	Dig
Stay	0;0	4;1
Dig	1;4	2;2

A Nash equilibrium in game theory is a set of strategies such that each player's strategy is a best response (in terms of expected outcome for oneself) to the strategies of the others. There are two pure-strategy Nash-equilibria: 4;1 and 1;4. Given the other digs, you should stay. Given the other doesn't dig, you should dig. However, it has been observed that many people cooperate, i.e. choose the option that both dig (2;2). How can that be rational if the best response is different?

In order to explain how it can be rational to choose cooperation, Bermúdez suggests that reframing and resulting quasi-cyclical preferences may play a role. He distinguishes two frames:

> **'I'-frame:**
>
> In the "I"-frame, agents look only at their own payoffs, employing the type of best response reasoning that seeks a Nash equilibrium.
>
> 'We'-frame:
>
> A team reasoner thinks about the payoff table from the perspective, not of an isolated individual, but instead from the perspective of a team member, or group member. (2022, p. 9)

Bermúdez distinguishes a self-centred *I*- and a fairness-oriented *We*-frame. Under the *I*-frame my preferences as an inmate are the following:

> *I*
>
> 1. (1I) I stay, you dig (4;1) > (2I) I dig, You dig (2;2) >
> 2. (3I) I dig, you stay (1;4)
> 3. (4I) I stay, you stay (0;0)

Under the *We*-frame, my preferences are as follows:

We

1. (2WE) I dig, you dig
2. (1WE) I stay, you dig = (3WE) I dig, you stay
3. (4WE) I stay, you stay

In this picture, considerations of fairness lead me to reframe my options and to rationally develop quasi-cyclical preferences under an *I* and a *We*-frame.

Coming to my assessment, again I admit that reframing can be a perfectly rational strategy of sustaining cooperation in game situations. However, again the same does not go for forming quasi-cyclical preferences.

First, one does not have to accept that preferences come framed to endorse the reframing strategy suggested by Bermúdez. The strategy may be implemented as follows: one starts from preferences corresponding to the preferences under the *I*-frame, arising from self-centred considerations of maximizing one's outcome given the action of others. One counters the effect of self-centred considerations by considerations of fairness that lead to new preferences corresponding to those under the *We*-frame.

Second, by the same argument, even granting that there are quasi-cyclical preferences, there is no reason why the reframing strategy should not be performed completely without ever forming quasi-cyclical preferences. One reframes one's options so as to replace preferences under the *I*-frame by preferences under the *We*-frame.

Third, even if we accept that preferences come framed, nothing guarantees that quasi-cyclical preferences ever form the rational reaction to the situation. One may argue that considerations of fairness trump self-centred ones (or vice versa), or that both are incommensurable. In the former case, one should drop one's preferences under the I-frame (or vice versa). Even in the latter case, it does not follow that quasi-cyclical preferences are the right response. The rational reaction may be not to form any preferences, or retain the ones one has formed previously to adopting a new framing for want of a better option.

Fourth, as we have seen, quasi-cyclical preferences cannot guide rational action. One may end up with cooperating, but this is not a rational consequence of quasi-cyclical preferences. One may by parity of reasoning as well end up with not cooperating. Quasi-cyclical preferences do not serve to overcome lack of cooperation in game situations, but they leave one in a quandary.

3.2.3. Interpersonal conflict

Bermúdez's third application are situations of interpersonal conflict (2020, ch. 10, 2022, section 3):

> [...] to tackle discursive deadlock it is not enough for a frame-sensitive reasoner simply to understand that a particular action or outcome can be framed in multiple ways. She needs to frame it herself in multiple ways simultaneously... It is at this point that rational framing effects can enter the picture. Different ways of framing, say, restrictions on gun ownership, are associated with different preferences. For that reason, someone who internalizes the competing frames that give rise to discursive deadlock will often end up with quasi-cyclical preferences. (2022, p. 13)

According to Bermúdez, reasons are often inseparably baked into frames. One cannot do justice to these reasons without to a certain extent adopting the frames, i.e. accepting the presuppositions that come with these frames. One cannot make the frames one's own without rationally responding to the reasons baked into them. The rational response to these reasons sometimes consists in forming preferences according to them. The resulting framed preferences put

together with the framed preferences one had before may lead to forming quasi-cyclical preferences. Such quasi-cyclical preferences are rationally formed in responding to reasons within frames. Sometimes such a procedure of endorsing frames so as to form quasi-cyclical preferences may be the rational way of dealing with situations of discursive deadlock and interpersonal conflict.

One of Bermúdez's examples is gun regulation (2020, p. 219; 2022, p. 11). A pro-gun activist prefers *Freedom (no regulation)* to *Interference (regulation)*, whereas an anti-gun activist prefers *Safety (regulation)* to *Increased Violence (no regulation)*. I shall try to illustrate Bermúdez's argument about the connection of reasons, frames, and preferences by developing the example: In order to understand how the pro-gun activist comes to have a preference *Freedom (no regulation)*, the anti-gun activist may have to accept the libertarian presupposition that no regulation means freedom from government interference, and that such freedom is valuable. Of course, one may argue for or against this presupposition, but such arguments have to stop somewhere. At some point, one may simply have to take the libertarian view for granted or the reject it altogether. The latter option may lead one to end in deadlock. The reason for opposing regulation is entangled with the libertarian presupposition. One cannot adopt the presupposition without thereby having a reason to oppose regulation, and that particular reason to oppose regulation depends on sharing the presupposition.

To overcome discursive deadlock, it may be necessary for the opponents to appreciate each other's framing. Sometimes doing so may require one to a certain extent to adopt the other's frames and include the resulting preferences into one's own system of preferences. Thus, the opponents may rationally end up with quasi-cyclical preferences, preferring both *Freedom (no regulation)* to *Interference (regulation)* and *Safety (regulation)* to *Increased Violence (no regulation)*.

Coming to my assessment, there are analogies to the examples considered in the last section, but there are also significant differences. I shall start with the differences: With regard to the preceding examples of time-inconsistency (3.2.1.) and game-theoretical dilemmata (3.2.2.), so far I have found no real argument why the rational role of frames ever has to go together with the formation of quasi-cyclical preferences. In contrast, Bermúdez's discussion of discursive deadlocks provides such an argument: sometimes one cannot do justice to reasons baked into a frame without letting the frame have an impact on one's preferences. To appreciate an opponent's position, one may have to endorse her frame together with its impact on the formation of preferences.

However, there is a further important difference: while the preceding examples of time-inconsistency and suboptimal outcomes in games give us concrete puzzles of rationality, discursive deadlocks are no puzzles of rationality. Time-inconsistency is assumed to be irrational. In games, individual rationality systematically leads to outcomes that are suboptimal by one's own lights. There is at least an appearance of irrationality in systematically and foreseeably ending with suboptimal outcomes (provoking Lewis's 'Why Ain'Cha Rich?', Lewis 1981). In contrast, discursive deadlocks are simply cases where different people disagree. This may lead to conflicts which one would prefer to avoid, but there is no systematic failure of rational behaviour in achieving the outcome that is best by one's own lights. There is no principled *rational* pressure to dissolve discursive deadlocks. It may sometimes be better to dissolve them, but then again it may not. Sometimes the only thing to do may be to agree that one disagrees.

Having outlined two significant differences to the preceding examples, I shall now outline commonalities. Two of the four points that I made for each of the preceding examples also apply to interpersonal conflict:

First, one does not have to accept that preferences come framed to endorse the reframing strategy suggested by Bermúdez. Switching among different frames is sometimes useful in solving discursive deadlock, but it may implemented without forming framed preferences. One strategy that may lead to better mutual understanding is for the pro-gun and the anti-gun activist to put themselves into their opponents' shoes and to *simulate* the latters' frames without making them their own. Even if they make them their own to some extent, these frames may have an impact only on motives, desires, and so on, but not on one's preferences.

Admittedly, if Bermúdez is right about the connection between frames, reasons, and preferences, such options may only lead to a limited understanding of each other's positions. One cannot do full justice to the other's reasons, but one may

still do justice to them to a certain extent, avoiding the contagious effects of adopting an alien frame on one's own preferences. Yet it is not a matter of course that Bermúdez is right about the connection. If orthodoxy is right, preferences do not come framed. Moreover, it is not a matter of course that one cannot do full justice to reasons in the sense of appreciating their value and force without permitting them an influence on forming one's preferences. The opponents in the gun debate may completely understand the mindset of their opponents without feeling in any way moved to adapt each other's preferences. For instance, the anti-gun activist may gain understanding of her opponent simply by reflecting on the libertarian presupposition that freedom comes with lack of government interference, confronting it with a liberal (e.g. Rawlsian) conception of freedom, and so on.

Second,[9] even if we accept the hypothesis that preferences come framed, and even if we accept that one cannot completely do justice to another person's reasons without developing quasi-cyclical preferences, I see no reason why adopting quasi-cyclical preferences would help dissolve interpersonal conflicts. Rather one would end up with adding an *intrapersonal* to an *interpersonal* conflict. Take the example of the pro-gun and the anti-gun activist. If only one of them ends up adopting the other's frame and resulting quasi-cyclical preferences, she could not rationally opt any more for or against safety regulations, there being always an option she prefers to the one she chooses. If she were to try to act according to her preferences, she would end in a quandary, giving her opponent the upper hand and betraying her own original political convictions. If both of them end up in this way, again there is no rational solution to the deadlock. They end up deadlocked within themselves. Of course, both may end with choosing the same option, for instance because the same frame happens to prevail in both cases, but only at the price of one of them failing to act according to her convictions. Alternatively, they may continue to disagree, remaining in discursive deadlock.

4. Summary

Taking stock, Bermúdez rightly highlights the importance of framing effects and of framing and reframing strategies. Framing and reframing surely is psychologically effective and can contribute to rational deliberation. Yet it does not follow that quasi-cyclical preferences exist, or that there is a rational role for quasi-cyclical preferences to play.

Acknowledgements

This research was funded by the Department of Philosophy "Piero Martinetti" of the University of Milan under the Project "Departments of Excellence 2023-2027" awarded by the Ministry of University and Research (MUR). I am grateful to José Luis Bermúdez and two anonymous referees for helpful comments.

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[9] This point corresponds to the fourth point in the previous sections, respectively.

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