

# Exploring the limits of decision theory, or refuting it?

A review of José Luis Bermúdez (2021), *Frame it again. New tools for rational decision-making*. Cambridge: Cambridge University Press, hard-back, 330 pages.

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## *Introduction*

When considering an experimental treatment given to 600 patients, does it make a difference whether 400 patients will die, or whether 200 patients will be saved? Should consumers prefer ground beef that is 25 percent lean, to ground beef that is 75 percent fat? As José Luis Bermúdez shows in his thought-provoking new book *Frame it again. New tools for rational decision-making* (2021), decades of research in the social sciences have taught us to look down on so-called framing effects as causes of poor reasoning and irrational decision-making. But is it always and necessarily irrational for decision-makers to be susceptible to how outcomes are framed?

Bermúdez's main aim is to argue against this dominant way of thinking about rational decision-making in the social sciences, which he traces back to a normative theory of decision-making which "goes by many names: –expected utility theory, Bayesian Decision Theory, rational choice theory" (p67). This theory is committed to the principle that our evaluation of outcomes and options should not change over different descriptions: in other words, framing (which is precisely that) is inherently irrational. Arguing that this framework is too narrow, Bermúdez discusses a rich variety of examples suggesting that there might be more to framing. For example, different framings might actually not be informationally equivalent: a study by Mandel (2013) suggested that people typically take the claim '400 people will die' to mean '*at least* 400 people will die'; the same applies to the claim '200 people will be saved'. Taking this into account makes the fact that people prefer the treatment framed in terms of lives saved, rationally quite intelligible.

The point that framing experiments involve communication between experimenter and participants, communication which is much richer than classic decision-theory seems to allow for<sup>1</sup>, provides a good example of Bermúdez' general strategy in the book. He brings in a wide array of considerations and ideas from other theoretical frameworks (linguistics, psychology, ethics), which he uses to argue for an expansion of the decision-theoretical approach to rationality. One of the most fascinating examples (taken from philosopher Frederic Schick) is an episode in George Orwell's essay "Looking back on the Spanish civil war". Here, Orwell describes how he refrained from shooting a Fascist soldier who ran across the parapet, "holding up his trousers with both hands as he ran". As Orwell remarks: "I had come here to shoot at 'Fascists'; but a man who is holding up his trousers isn't a 'Fascist', he is visibly a fellow creature, similar to yourself, and you don't feel like shooting at him" (Orwell 1970).

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<sup>1</sup> A point which, by the way was already made much earlier by for example Schwarz (1996).

Bermúdez uses this excellent example (one of many in the book) to show that our ability to look at a situation in different ways gives us information and forms of understanding that are often highly relevant for the decision at hand. In decision-theoretical terms: it can sometimes be rational to have what he calls *quasi-cyclical preferences*: to prefer A to B and B to C, even if one knows that  $A = C$ . Thus, even though Orwell prefers to shoot a Fascist (A) over lowering his rifle (B), he also (and according to Bermúdez, rationally so) prefers to lower his rifle (B) over shooting a fellow human being (C).

By analyzing this kind of examples from various empirical and theoretical perspectives, Bermúdez does a great job in pointing out the limitations of the traditional decision-theoretical conception of rationality. However, my worry is that his attempt might be more successful than he would feel comfortable with. By driving home the point that decision-theory seems to allow for only an extremely narrow conceptualization of rationality, value and preference, his arguments might ultimately not lead to an expansion of the decision-theoretical framework, but to its refutation.

### *Expanding decision-theory or refuting it?*

The assumption of decision-theory that, in my view, comes under threat is the idea that there is only one currency of value (expected utility) which both explains how we make choices and determines which choices count as rational (namely, those with maximal expected utility). As said, Bermúdez convincingly argues that different frames often point out genuinely relevant aspects of the situation: "if a theory of rationality requires a rational decision-maker to misperceive the complexity of a decision problem, then that seems to me to be a strike against the theory of rationality" (p117). In the real world, decision problems are not given: we must construct them. Therefore, Bermúdez proposes to expand the decision-theoretical framework by allowing expected utility curves to be different for different framings: "Before that currency can be brought to bear, decision-makers first need to fix the outcomes over which they have preferences and to which they assign utilities" (p121). I think this move is much more undermining to decision-theory than Bermúdez takes it to be. It reduces the role of expected utility curves to a merely descriptive tool, which might, at best, provide an explanation of how a Bayesian brain processes our decisions. But the questions *how we assign value* and *how to assign value* are no longer answered in terms of expected utility. Instead, all the real normative and explanatory work is done by the frames that shape our values and preferences. To be clear, I think the picture of decision-making Bermúdez sketches is convincing and plausible. It's just that I think that far from expanding decision-theory, what it actually shows is that there are fundamental problems with its main tenets.

### *Non-Archimedean reasoning*

After having shifted the normative workload from expected utility curves to the stage in the decision-making process in which reasoners frame the situation, Bermúdez's proposal in the final part of the book is that it is possible to rationally evaluate conflicting frames. As he argues, this might help reasoners to overcome the polarization and 'discursive deadlock' characterizing many contemporary political and moral debates (one of his clearest examples is the abortion debate, which involves clashing frames regarding the question whether or not a foetus is a person). As Bermúdez argues, such situations are often understood in terms of clashing values, leading to the conclusion that: "Values themselves cannot be rationally debated, which is why clashes of values cannot be rationally resolved" (p221). However, Bermúdez suggests that we value things *as framed in a certain way*. This opens up room for frame-sensitive reasoning: "to reason in other words, not just within a given frame, but also across frames" (p216). According to Bermúdez, this is possible because frames are more flexible and more susceptible to rational evaluation than values (p227).

However, I have doubts whether Bermúdez succeeds in making the idea of frame-sensitive reasoning work. My worry follows from the worry raised above: Bermúdez has left the safe harbour of the expected utility framework, but he doesn't seem to have decided on where to sail next: it is unclear what rational evaluation is now supposed to look like. As he argues, reasoning across frames demands participants to reflect on and evaluate the various frames at stake without relying on any kind of Archimedean point (p241). But on what grounds could we still call such 'non-Archimedean reasoning' rational?

Bermúdez discusses several criteria: next to a due diligence requirement, reasoners across frames should hold no contradictions. At first sight this does not seem to leave room for reasoning with two conflicting frames such as 'a foetus is a person' and 'a foetus is not a person'. Aren't these claims contradictory? However, Bermúdez argues that even though such claims can be true or false, they are *non-factual* in the sense that there are no standard methods and techniques available for assessing whether or not (for example) a foetus is a person. Because of this, it is possible to hold opposite propositions of this kind without being in strict contradiction (p228-9). According to Bermúdez, this shows *both* that it can be rational for an individual to hold both claims, and that it is possible to rationally discuss both claims as held by different individuals.

My problem with this suggestion is that even though it might be possible to hold clashing frames in mind, I do not see at all how such clashes could be *rationally* evaluated, let alone solved, without relying on some kind of Archimedean point that tells us what is rational and what is not. Bermúdez doesn't answer this question, except by suggesting that when reasoners are very stubborn in holding on to their own framings, this is irrational only "to the extent that their personal incomprehension and/or repugnance fails to map onto a collective incomprehension and/or repugnance" (p271). But suggesting this criterium as a test of rationality brings Bermúdez into dangerous waters: the mere fact that many people cannot overcome their belief that fetuses are (or aren't) persons, obviously doesn't mean they must be right.

To conclude, in this fascinating and well-written book Bermúdez does a great job in showing us the complexities of human decision-making, and the intriguing role frames play in the process. He gives us ample reason to ponder the limits of decision-theory as a normative framework of rationality—possibly to the point of leading to the conclusion that as such, decision-theory is beyond saving.

### *References*

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