

The framing of decisions “leaks” into the experiencing of decisions

Barry Schwartz^a  and Nathan N. Cheek^b 

^aHaas School of Business, University of California, Berkeley, Berkeley, CA 94720, USA and ^bPeretsman Scully Hall, Princeton University, Princeton, NJ 08544, USA
bschwar1@swarthmore.edu
nncheek@princeton.edu
<https://haas.berkeley.edu/faculty/schwartz-barry/>
<https://www.natecheek.com>

doi:10.1017/S0140525X22000905, e239

Abstract

We connect Bermúdez’s arguments to previous theorizing about “leaky” rationality, emphasizing that the decision process (including decision frames) “leaks” into the experience of decision outcomes. We suggest that the implications of Bermúdez’s analysis are broadly applicable to the study of virtually all real-world decision making, and that the field needs a substantive and not just a formal theory of rationality.

“[F]raming has an effect on decisions because it has an effect on experience.”

— Frisch (1993, p. 402)

Bermúdez argues that the objects of preference are framed outcomes, so that the frame is an ineliminable part of the objects under consideration. Further, this feature of preference is often a very good thing – frames highlight some dimensions and downplay others, and without them, many decisions might seem impossibly difficult to make. We think this is a wise and important insight, and it echoes points made by Keys and Schwartz (2007), who further emphasized that what people *experience* after making decisions are also *framed outcomes*. In Keys’ and Schwartz’s terminology, the decision process “leaks” into the subsequent experience of the decision’s results (see also Frisch, 1993; Kahneman & Tversky, 1984). This “leakage” can be complicated, as in many of the “complex and multi-faceted” cases on which Bermúdez focuses, but it can also be simple, as when a “95% fat free” yogurt tastes less rich than a yogurt labeled “only 5% fat” (Sanford, Fay, Stewart, & Moxey, 2002). Either way, “leakage” means that frames shape not just decisions but also experiences in substantive ways.

When framing “leaks” into experience, apparently inconsistent decisions made under different frames may actually be consistent with the experience of the decisions themselves. Most approaches to rationality seem to assume that heuristics and biases exert their effects while a decision is being contemplated, but that once the decision is made, experiencing the results of the decision will be “path independent.” The object of a decision will be experienced on its own, carrying no trace of how the decision was arrived at (but see Kahneman, 1994). Gilbert and Ebert (2002) compared this “illusion of intrinsic satisfaction” to the perceptual illusion of direct access to the world, describing the tendency to behave as if “hedonic experiences were due entirely to the enduring intrinsic properties of [decisions’] outcomes” (p. 511). But this variant of “naïve realism” is mistaken, as Bermúdez and Keys and Schwartz (2007) argue.

The ideas explored across many examples by Bermúdez have broad and deep implications for thinking about the rationality of decisions beyond cases focused on how options are described or otherwise framed. Research on choice overload, for example, has shown that people may feel worse about their choice if it was made from a larger assortment of options, even if they would have made the same choice from a smaller assortment (Iyengar & Lepper, 2000; Schwartz, 2016). And people in poverty may be more likely to pursue government assistance after reflecting on aspects of their identity they are proud of, even though the amount of their benefits is no different (Hall, Zhao, & Shafir, 2014). In the first case, regrets about the losses from tradeoffs among a larger number of alternatives “leak” into the prospective consumption of the chosen option. In the second, affirming the self prevents the potential stigmatization of accepting government benefits from “leaking” into the experience of receiving them. In both cases, factors that might seem outside the scope of rational deliberation obviously matter in a substantive, though perhaps non-normative, way.

What Bermúdez calls “quasi-cyclical preferences” and what we call “leakage” imply that there are important limits on what formal principles of rationality can tell us, since there are surprisingly few cases where the formal principles apply in their strictest form. Even seemingly inconsequential changes to the situation may “leak” into experience, affecting one’s subjective outcomes and hence the reasonableness of different choices. Formal rules of rationality may allow researchers to draw important normative conclusions based on minimal, widely accepted structural claims about rationality. However, once the importance of subjective experiences and the prevalence of “leakage” are taken into account, it becomes clear that much more needs to be known before anything approaching a satisfactory theory of rationality is in hand. What is needed is a *substantive theory of rationality* – a theory that considers the content and not just the structure of decisions, and that evaluates that content in light of the decision-maker’s goals, experiences, and life as a whole.

A substantive theory of rationality must consider the consequences of decisions, very broadly construed. It must consider short- and long-term consequences, consequences to the self and to others, consequences that are central to the decision at hand and those that may be peripheral. It also takes seriously the notion, raised by Bermúdez as well as Schwartz (1994), that there is no such thing (in the real world) as a decision in a vacuum. Frames, prior experiences, incidental environmental cues, and more will always be present in some form, and their effects may often “leak” into experiences. It seems irrational (and silly) to pay more for 7UP in a yellow-green bottle than for the same drink in a green bottle if the standard of rationality assumes the 7UP is experientially the same regardless of its container (Gladwell, 2005). But a more psychological and practical view of rationality might point out that paying more for a drink that tastes different – in this case, more like a mix of lemon and lime – may be reasonable if it better satisfies a person’s tastes.

What we suggest is that the entire field of judgment and decision making has to a large degree answered questions about how well our decisions conform to formal principles of rationality instead of questions about how well our decisions serve substantive rationality (Keys & Schwartz, 2007). The field is not necessarily confused about what questions are being asked, though perhaps it is somewhat confused about the questions that fundamentally matter for a full understanding of decision-making as it

is actually experienced in everyday life – the questions that the rest of us want answered. The main reason for this, we suspect, is that the “real” questions are much harder. But we hope that Bermúdez’s many insights will fuel a broader shift in how we as a field think about not only framing, but also rationality more broadly, spurring us address the “hard” questions as best we can.

Financial support. This research received no specific grant from any funding agency, commercial, or not-for-profit sectors.

Conflict of interest. None.

References

- Frisch, D. (1993). Reasons for framing effects. *Organizational Behavior and Human Decision Processes*, 54, 399–429.
- Gilbert, D. T., & Ebert, J. E. (2002). Decisions and revisions: The affective forecasting of changeable outcomes. *Journal of Personality and Social Psychology*, 82, 503–514.
- Gladwell, M. (2005). *Blink: The power of thinking without thinking*. Little Brown.
- Hall, C. C., Zhao, J., & Shafir, E. (2014). Self-affirmation among the poor: Cognitive and behavioral implications. *Psychological Science*, 25, 619–625.
- Iyengar, S. S., & Lepper, M. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of Personality and Social Psychology*, 79, 995–1006.
- Kahneman, D. (1994). New challenges to the rationality assumption. *Journal of Institutional and Theoretical Economics*, 150, 18–36.
- Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American Psychologist*, 39, 341–350.
- Keys, D. J., & Schwartz, B. (2007). “Leaky” rationality: How research on behavioral decision making challenges normative standards of rationality. *Perspectives on Psychological Science*, 2, 162–180.
- Sanford, A. J., Fay, N., Stewart, A., & Moxey, L. (2002). Perspective in statements of quantity, with implications for consumer psychology. *Psychological Science*, 13, 130–134.
- Schwartz, B. (1994). *The costs of living: How market freedom erodes the best things in life*. Norton.
- Schwartz, B. (2016). *The paradox of choice: Why more is less* (2nd ed.). Ecco Press.

Incomplete preferences and rational framing effects

Shlomi Sher^a and Craig R. M. McKenzie^b

^aDepartment of Psychological Science, Pomona College, Claremont, CA 91711, USA and ^bDepartment of Psychology and Rady School of Management, University of California, San Diego, La Jolla, CA 92093, USA
Shlomi.Sher@pomona.edu, <https://www.pomona.edu/directory/people/shlomi-sher>
cmckenzie@ucsd.edu, <https://pages.ucsd.edu/~mckenzie/>

doi:10.1017/S0140525X2200111X, e240

Abstract

The normative principle of description invariance presupposes that rational preferences must be complete. The completeness axiom is normatively dubious, however, and its rejection opens the door to rational framing effects. In this commentary, we suggest that Bermúdez’s insightful challenge to the standard normative view of framing can be clarified and extended by situating it within a broader critique of completeness.

Bermúdez raises an important challenge to the traditional view that rational choice must be invariant to framing. We are sympathetic to his primary conclusions – that framing effects need not

be irrational, and in some cases rationality may require sensitivity to different frames. However, we believe that these conclusions can be put on a firmer foundation by deriving them from a more general critique of *completeness* (defined below), a core axiom in traditional models of rational choice. This reformulation clarifies the scope of the analysis (i.e., regarding the conditions under which rational actors may exhibit framing effects) and sharpens its applications (e.g., regarding game-theoretic equilibria).

First, a terminological clarification: In relating normative principles to empirical findings, it is useful to distinguish between *descriptive frames* and *conceptual frames* (cf. Druckman, 2001). The former refers to the overt description of a choice problem that is given to an agent (e.g., beef described as “80% lean”). The latter refers to the agent’s internal representation of the problem – that is, their conception of relevant options, values, and reasons. In framing experiments, the descriptive frame is manipulated. The conceptual frame is a theoretical construct, which is sometimes invoked by theorists in explaining the descriptive frame’s observed effects.

The normative principle of *description invariance* concerns descriptive frames. It says that equivalent descriptions should not lead to different decisions. However, the normative validity of description invariance depends on two critical implicit assumptions: (1) descriptive frames must not “leak” distinct, choice-relevant information; and (2) rational preferences must be complete (Sher & McKenzie, 2011).

In prior work (Sher & McKenzie, 2006), we have argued that some widely studied descriptive frames are not information equivalent, violating (1). But for the purposes of this commentary, we assume that information is constant across descriptive frames, and examine the second implicit assumption.

The completeness axiom states that the normative ranking of alternatives is everywhere well-defined: For any options, a , b , either a is definitely better than b vis-à-vis the agent’s values ($a > b$), b is better than a ($b > a$), or the two options are precisely equivalent ($a \sim b$). Completeness has unreasonable normative implications – for example, monetary indifference points for all goods must be defined to infinite precision. Accordingly, some economists and philosophers have argued that, despite its mathematical convenience, the completeness axiom is not a plausible requirement of rationality (e.g., Aumann, 1962; Raz, 1985). In recent years, economists have developed increasingly sophisticated models of rational choice that allow for incomplete preferences (e.g., Mandler, 2005).

Rejecting the completeness requirement immediately opens the door to rationally permissible framing effects. In a finite choice menu, there may be distinct alternatives, a , b , unranked relative to one another, neither of which is outranked by any other option in the menu. If a is chosen under one descriptive frame and b under another, choices are frame-dependent but never suboptimal.

Why are rational preferences sometimes incomplete, and when may rational framing effects occur? Incomplete normative rankings may trace back to two distinct sources – value imprecision and value conflict. (Owing to space limitations, we omit Schick’s [1997] value “ambiguity,” which may be regarded as a third source of incompleteness.) In cases of *imprecision*, the agent’s underlying values are coarse-grained (e.g., a mug worth between \$5 and \$10, with no well-defined indifference point). Framing effects in one-shot choice are then normatively neutral, neither good nor bad, provided that definitely outranked options