

Bringing (Contingent) Loss Aversion Down to Earth — A Comment on Gal & Rucker's Rejection of "Losses Loom Larger Than Gains"

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Accepted by Sharon Shavitt, Associate Editor

Although we disagree with some of Gal and Rucker's (2018 – this issue) specific evidence and with their overstated conclusion regarding loss aversion, their overarching message makes a worthwhile contribution. In particular, loss aversion is less robust and universal than has been assumed while its most prominent empirical support — the endowment effect and the status quo bias — is susceptible to multiple alternative explanations. Instead of accepting loss aversion as true unless proven otherwise, we should treat it like other decision properties and psychological accounts that are contingent on various moderators and call for an analysis of psychological mechanisms. In this commentary, we suggest that gatekeepers, such as reviewers, tend to favor loss aversion and other widely accepted tendencies, while demanding a much higher support-threshold for alternative or newer accounts. Although building on prior theories and concepts is of course important, the bias in favor of incumbent assumptions can impede scientific progress, bar new ideas from the literature, and reinforce well-established but contingent notions that may apply under some conditions but not others.

Keywords Behavioral economics; Loss aversion; Judgment; Decision making; Behavioral decision theory; Contingent judgment properties

Introduction: the Limitations of the Extant Empirical Support for Loss Aversion

After reading David Gal and Derek Rucker's target article (2018 – this issue), we were skeptical, in large part because like most scholars in our field we have accepted loss aversion as unquestionably true and robust as any decision-making property can be. We still believe that the loss aversion tendency plays an important role in many decisions, but we agree that loss aversion is not omnipresent or universal, and when relied upon, should be subject to tests like other plausible accounts. Gal and Rucker (G&R) also correctly point out (see their table 1) that loss aversion has received "credit" (although not from Kahneman and Tversky) for phenomena to which it does not apply; for example, framing effects, such as the well-known Asian Disease problem, represent a reflection effect rather than loss aversion. Having said that, we do *not* find persuasive some of the specific evidence that Gal and Rucker rely on to reach their conclusion that losses generally do not loom larger than gains. In

particular, as discussed further below, G&R's claimed support for an endowment effect without loss aversion (using what is referred to as the "retention paradigm") is itself open to rival accounts. More importantly, G&R unconvincingly and superficially try to explain away the strongest illustration of loss aversion, namely, the typical extreme risk aversion exhibited in choices between a certain gain and a mixed, high expected-value gamble.

Further, some of the evidence proffered by G&R appears to actually support loss aversion; for example, G&R cite their own finding that people enjoy gaining things that are lost (e.g., finding a lost flashlight) more than they enjoy gaining new things (Gal & Rucker, 2017), which suggests that losses do loom larger than gains. Still, consistent with G&R's general message, treating loss aversion as another mortal generalization that requires psychological analysis and, like other psychological generalizations, is contingent and is sometimes violated offers progress and can bring down to earth what has been treated as almost an axiomatic, unquestionable (decision making) law of nature. As an aside, Gal and Rucker's "strong version" of loss aversion is a

Received 20 March 2018; accepted 20 March 2018
Available online 30 March 2018

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DOI: 10.1002/jcpy.1046

rhetorical strawman: we are unaware of any empirical phenomenon in the social sciences that *always* holds, and presenting it as a viable option may create the wrong impression that the “weaker version” they advocate represents a compromise view.

Tversky and Kahneman (1991, p. 1047) described the impact of loss aversion succinctly without elaborating on the underlying psychology: “The basic intuition concerning loss aversion is that losses (outcomes below the reference state) loom larger than corresponding gains (outcomes above the reference state).” The evidence presented in that 1991 article revolves primarily around manifestations of the endowment effect and the status quo bias, although other demonstrations of loss aversion are also presented. As G&R and other researchers have pointed out, both the endowment effect and the status quo bias have additional viable explanations, which make these phenomena less than ideal as the flagship sources of evidence for loss aversion. Furthermore, as they point out, the status quo bias and the endowment effect are violated under certain conditions.

Beyond the endowment effect and the status quo bias, there is certainly additional evidence for loss aversion (Kahneman & Tversky, 1979); for example, the tendency of most people to reject a gamble involving a 50% chance to win \$200 and a 50% chance to lose \$100 is less open to rival accounts. Unlike G&R, we do not find persuasive their interpretation of such choices in terms of the status quo bias, which hinges on the presumption that not accepting the bet is the status quo option; this assumption appears ad hoc and is unsupported. But various loss aversion findings do appear contingent and are sometimes violated, as discussed below, which reinforce the need to treat loss aversion as a normal tendency that is sometimes violated and call for greater attention to moderators, boundary conditions, and psychological mechanisms.

Loss aversion has had, and continues to have, a special status among the insights offered by the judgment and decision making (JDM) field, better known today as behavioral economics. In fact, loss aversion has been elevated to something akin to a law of nature that might be hard-wired from birth and may hold also for some other species. It represents a fundamental and all-encompassing driver of judgments and decisions — the weight of losses compared to gains. Monkeys show loss aversion (Chen, Lakshminarayanan, & Santos, 2006), and fMRI studies can find evidence from brain activity that has been interpreted as consistent with the presence of loss aversion (Tom, Fox, Trepel, & Poldrack, 2007). It is noteworthy that “monkey-evidence” by itself does

not prove that some decision phenomenon is universal, and the observation of seemingly similar JDM and choice phenomena among other species (Shafir, Waite, & Smith, 2002; Wong & Jennions, 2003) is open to various interpretations.

As G&R point out, we do not know much about the psychological mechanisms underlying loss aversion, which may be due in part to the perceived status of loss aversion as unquestionably true. As detailed below, we agree with G&R that loss aversion needs to be treated like other empirical generalizations and studied like other contingent phenomena that are sometimes violated.

Thus, consistent with a key implication of the G&R discussion, the question relevant at the present time for our field is not whether loss aversion occurs on average (we think it does), but what factors moderate its presence and magnitude, and relatedly, what are its boundaries? There are many other tendencies, perhaps not as sweeping, that may apply more often than not but have been treated all along as contingent and as calling for specific psychological explanations. Thus, conformity, the desire for fairness, preference for compromises and asymmetrically dominating options, variety seeking, and the desire for others’ approval are all observed in many cases, yet questions about their psychological mechanisms, applicability, moderators, and boundaries came to the fore as soon as they were introduced.

Conformity, for example, is not a surprising phenomenon, is perhaps overly intuitive, and it lacks the mystique of loss aversion. Indeed, Asch’s famous experiments (and other studies) notwithstanding, known violations of conformity (e.g., need for uniqueness) have probably stimulated more research than supportive findings did. Loss aversion, on the other hand, was quickly accepted as true and as a major contribution of prospect theory, and it has therefore become the default account for phenomena that might also be explained by other mechanisms. For example, we agree with G&R that the phenomena that are the primary sources of support for loss aversion — the endowment effect and status quo bias — have additional viable explanations (although loss aversion is probably one contributor).

Rival Accounts for the Endowment Effect

As indicated, the endowment effect has arguably been the most prominent illustration of the consequences of loss aversion. For example, Kahneman,

Knetsch, and Thaler (1991, p. 197) concluded: "This suggests that the main effect of endowment is not to enhance the appeal of the good one owns, only the pain of giving it up." Kahneman et al. (1991) went on to attribute the status quo bias and other phenomena to loss aversion: "These observations, and many others, can be explained by a notion of loss aversion."

Additional accounts and factors contributing to the observed discrepancy between sellers' and buyers' prices have been offered, for example, by Morewedge, Shu, Gilbert, and Wilson (2009) and by Plott and Zeiler (2007). Other contributors to the observed gap between buying and selling prices in the typical experimental setting involve transaction costs (e.g., social) and a lack of motivation to trade. Consider, for example, the following not-so-interesting explanation for the observed endowment effect. In a classroom and other settings, exchanging a few dollars to obtain or forego an inconsequential and unplanned new mug or pen can be socially awkward, even when both parties to the trade are anonymous, and not worth the hassle of the trade and figuring out just the right price to ask for/charge. So, sellers tend to just keep their endowment and are not motivated to be reasonable and become a few dollars richer, and buyers are not motivated to offer competitive prices. Overall, given the many plausible rival accounts, it is doubtful that the mug trade and similar endowment effect markets offer reliable and identifiable support for loss aversion. The status quo bias similarly reflects various factors such as transaction costs and the need to take action and be prepared to explain it (see Samuelson & Zeckhauser, 1988).

G&R introduce new experimental procedures to support their conclusions that the endowment effect can occur in the absence of loss aversion. Having reviewed their procedures and the manner in which they were implemented, we are less convinced by the Gal (2006) and Gal and Rucker's (2017) specific studies, which rely on what appear to be unrealistic experimental manipulations that are susceptible to confounds and give rise to simple alternative explanations. Thus, we believe that G&R's attempt to reframe the retention of an option as an active choice makes the task illogical, artificial, and introduces other confounds. But we certainly agree that other factors besides loss aversion contribute to the endowment effect and status quo bias and may, under some conditions, be even more important.

The partial overlap between the endowment effect and the status quo bias, combined with the various contributors to each effect, makes it difficult

to isolate the impact of loss aversion. For example, is the pain associated with giving up something we thought we owned a reflection of loss aversion, of something else, or of some combination of factors? The challenge of isolating the impact of loss aversion is certainly a weakness of the loss aversion explanation. That being said, the fact that there are alternative explanations for the endowment effect and the status quo bias does not mean that loss aversion does not contribute to the endowment effect, and certainly does not support G&R's conclusion that it is a baseless generalization.

An Examination of Other Manifestations of Loss Aversion

As indicated, beyond the endowment effect and status quo bias, other evidence for loss aversion may be more persuasive and harder to rebut. G&R and Gal (2006) explain cases of extreme risk aversion based on their argument that such behavior is consistent with the status quo bias. As explained above, we do not find this interpretation of people's reluctance to take gambles with an even small probability of a relatively small loss persuasive. Thus, the evidence from Gal (2006) may very well be limited to the particular choice they (or Gal, 2006) tested and is incapable of supporting the general argument.

However, extremely risk/loss averse choices are less robust than has been assumed, which reinforces the need to treat loss aversion as a tendency that is violated under certain conditions and calls for greater attention to moderators and boundary conditions. In particular, research by Erev, Art, and Yechiam (for a review, see Ert & Erev, 2013) has demonstrated the degree to which the basic loss aversion property is contingent on a variety of factors, too many to ignore. As Ert and Erev (2013, Abstract) summarize:

Losses appear to loom larger than gains in some settings, but not in others. The current paper clarifies these results by highlighting six experimental manipulations that tend to increase the likelihood of the behavior predicted by loss aversion. These manipulations include: (1) framing of the safe alternative as the status quo; (2) ensuring that the choice pattern predicted by loss aversion maximizes the probability of positive (rather than zero or negative) outcomes; (3) the use of high nominal (numerical) payoffs; (4) the use of high stakes; (5) the inclusion of highly

attractive risky prospects that creates a contrast effect; and (6) the use of long experiments in which no feedback is provided and in which the computation of the expected values is difficult. In addition, the results suggest the possibility of learning in the absence of feedback: The tendency to select simple strategies, like “maximize the worst outcome” which implies “loss aversion”, increases when this behavior is not costly.

For example, Ert and Erev (2013) found evidence for loss aversion in choices between 500 Agoras with certainty (100 Agoras = one Israeli Shekel) and a gamble with a 50% chance to receive 1,500 Agoras and 50% chance to lose 500 Agoras. By contrast, they found no support for loss aversion in a similar (identical, in fact) choice between five Shekels with certainty and a gamble with 50% to win 15 Shekels and 50% to lose 5 Shekels.

Various other researchers have demonstrated cases where loss aversion is not observed or is observed under some conditions. For example, Simonson and Nowlis (2000) examined the impact of need for uniqueness (NFU; Snyder & Fromkin, 1977) and having to explain decisions on loss aversion. The following test of loss aversion was used¹: One group of respondents chose between (a) \$30 for sure and (b) 50% to lose \$100 and 50% to win \$300. A second group chose between (a) \$230 for sure and (b) 50% to win \$100 and 50% to win \$500. Thus, all sums were increased by \$200 in the second group, thereby removing the possibility that the gamble would result in a loss. Two moderators were examined: (a) whether respondents were asked to explain their choices, and (b) their NFU. The results showed (a rather modest) loss aversion for those who did not provide explanations and had low NFU, whereas there was (a pronounced) reversal of loss aversion for those who provided reasons and had high NFU. These results were replicated in a subsequent study. The reversal of loss aversion among high NFU people who provided reasons was explained based on the general theme of that paper whereby providing reasons, especially among high NFU individuals, leads to unconventional choices (e.g., a reversal of the compromise effect). There is little doubt that other violations of loss aversion have been documented, though as explained below, papers reporting some of them likely encountered resistance in the review process.

Despite the many cases where loss aversion is not observed, the notion that losses do *tend* to loom larger than gains is most likely correct; it certainly

resonates and “feels” consistent with personal experience, though intuitive reactions are a weak form of evidence. Moreover, the prominence of negative aspects and outcomes is consistent with a range of other phenomena. For example, the extensive literature regarding “negativity bias,” though typically applied in other contexts (e.g., for a review, see Kanouse, 1984) is consistent with the greater impact of negative aspects.

The Implications of Accepting Loss Aversion and Other Concepts as Universal, Broadly Applicable, and Beyond the Normal Need for Psychological Analysis and Support

An important contribution of Gal & Rucker is their discussion of the sociology of what led to the loss aversion consensus and its status as “no-psychological-explanations needed.” But our focus here is less on the origins of the loss aversion consensus and more on the implications of accepting with limited scrutiny loss aversion, and potentially other properties and frameworks, as indisputable truths that do not require the normal level of proof and testing of mechanisms. Speaking of the status quo bias, although building on existing knowledge is certainly important, it can also impede progress if it prevents us from properly and objectively testing other explanations.

Indeed, parsimony has its virtues and its costs. Similarly, “imperialistic” theoretical frameworks and nomological networks can offer benefits to the accumulation and structuring of knowledge; but they have their costs, because they put rival, new accounts at a disadvantage. These trade-offs are often ignored, with scholars and reviewers tending to favor the pre-established theory. For example, reviewers often instinctively reject and even resent attempts to explain findings in different ways, or argue that research that does not build on an established framework is atheoretical and needs to meet a higher than normal publication threshold.

This concern applies to loss aversion, particularly because, as Gal and Rucker (2018 – this issue) point out, it is the holy grail, is rarely questioned, and has been treated as not requiring the psychological theory expected of more mortal explanations. Like other fields, JDM consumer research tends to prefer well-established, parsimonious explanations that build on existing knowledge, constructs, and frameworks. This tendency is even more pronounced for gatekeepers in these fields, especially leading scholars and journal editors/reviewers. Similarly,

authors may opt to interpret even ambiguous findings, which could potentially be interpreted as inconsistent with loss aversion and other widely accepted concepts and theories, as providing further evidence supporting loss aversion (e.g., Tom et al., 2007).

New and potentially controversial explanations naturally receive more scrutiny and have a tougher time surviving the review process, which makes sense. But properties and concepts that are accepted as unquestionably true can serve as high entry barriers to new accounts. That tendency is not necessarily a bad thing, assuming the established account is generally true. However, for most normal accounts that are contingent on various interactions, favoring such theories can impede scientific progress by too quickly dismissing other explanations of observed phenomena.

The gatekeepers who may too quickly dismiss not-yet-established accounts are not just journal reviewers and prominent scholars, but also the authors themselves, who may be risk averse and therefore go with the default accounts even when they do not easily fit the findings. This problem is not limited to phenomena with no a priori theory. They also apply to predictions that were derived from theory in the first place, but for which the theory offers an inferior explanation (for an analysis of theory-based versus phenomena-based research, see Lynch, Alba, Krishna, Morwitz, & Gurhan-Canl, 2012). Consider, for example, the finding of Dhar and Simonson (1992) that the attractiveness of an alternative can be enhanced by making it the focus of the comparison between options (e.g., whether the focal option is frozen yogurt or fruit salad). Although loss aversion may be used to explain this effect, a simpler account is based on the effect of the direction of comparison on the weighting of the (generally positive) features of the focal option (e.g., Tversky, 1977). However, in a case like that, reviewers tend to prefer the established loss aversion account.

Conclusion

In conclusion, although we object to some of G&R's evidence and to their overbroad conclusions, we believe their overarching message is important. In particular, as G&R suggest, (a) loss aversion is less universal than has typically been assumed, and (b) we should not accept loss aversion (or any other psychological tendency) as true and beyond the normal need for the study of moderators and

psychological mechanisms. We also hope that academic gatekeepers, especially reviewers, will apply more balanced evaluation criteria when alternative explanations are better supported empirically than the presumption of loss aversion and other widely accepted concepts and theories.

Endnote

¹This particular test was suggested by Amos Tversky in a personal communication.

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