Research Dialogue

Directions for judgment and decision making research based on comparison selection: Reply to Arkes, Johnson, and Kardes

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Abstract

Our target article proposed an alternative perspective for studying consumer judgment and decision making, focusing on the types and weights of comparisons consumers select. In this response we consider the major points made by each of the commentators and examine their implications for future work addressing our comparison-focused approach.

Keywords: Decision Making; Preferences; Choice and Judgment; Comparisons

Introduction

The three commentaries focused on different aspects of the framework we proposed. Briefly, we introduced a new perspective and approach to the study of judgment and decision making (JDM); it is based on the selection of comparisons embedded in JDM problems that consumers, study participants, and other decision makers face. That is, in addition to examining topical issues such as context effects, the construction of preferences, priming, fluency, or variety seeking, one can look for general principles of comparison selection that can be applied to a wide range of problems regardless of the specific subject or content. The ability to predict the focal comparisons given problem characteristics will, in turn, allow us to better predict and explain a wide range of effects.

Our framework focuses on two drivers of comparison selection: the comparison’s relative location under the task’s latitude-of-acceptance (LOA) and its fluency. The target article illustrated how our framework might be applied and suggested new (and different) research questions. Our hope is that the proposed framework and perspective will generate further research and lead to new insights into judgment and decision making. A key next question is how to realize this potential and extend and test this approach.

The question was addressed most directly by E. Johnson, as discussed below. Kardes raises an important question regarding our focus on comparisons, suggesting that “comparative process-\(\ldots\)” Arkes’ comment highlights the challenge of distinguishing our perspective from the traditional approach of focusing on specific topics.

Arkes

Arkes suggests that we “propose a framework that emphasizes the roles of context and fluency in perception and choice” and goes on to review prior research on context and fluency effects. Arkes also identifies essential components of our analysis that are not needed for integrating the context and fluency literatures. Although we did not intend to focus on or integrate the roles of context and fluency effects per se, these factors certainly play an important role in the likelihood that a given comparison will be selected.

One of Arkes’ main observations is that there is no need for a two-system view of JDM, since one system is sufficient to
obtain the same insights. We should note that the distinction that we make between types of comparisons in terms of fluency is quite different from that made by Kahneman (2011), Kahneman and Frederick (2002), and others (e.g., Sloman, 1996). Those dual process approaches focus on the mode of information processing (e.g., automatic versus controlled), whereas we focus instead on the factors characterizing comparisons of specific pieces of information. Briefly, although the degree of comparison fluency is a continuous variable, a simplified qualitative distinction between more fluent (Type 1) and less fluent (Type 2) comparisons helps clarify the impact of fluency on comparison selection. As explained in the target article, the fluency type (or degree) can be assessed based on the criteria shown in Table 1 (note that these criteria are not meant to be mutually exclusive or exhaustive).

**Kardes**

As Kardes correctly points out, any framework that uses comparisons as the key building block must address the degree to which and under what conditions decision makers engage in comparisons, as opposed to evaluating each option selectively (or holistically). Kardes reviews a wide range of studies and suggests that the comparative process is more effortful and therefore less common, whereas selective processing of a given option is the easier default that can be performed even by those who are less motivated (e.g., under low accountability).

Although we disagree with the premise that comparisons are infrequently performed and that this generalization limits the applicability of our analysis, it highlights the importance of clearly defining what we mean by a comparison. First, and perhaps less important, we disagree with Kardes’ interpretation of the findings that he reviews. While a great deal of prior research has shown that comparisons are often misguided or improperly performed by decision makers, that does not mean that those choices, for example, are made without comparing options. The mere fact that consumers often tend to pay too much attention to, misinterpret, or distort their evaluations in favor of the focal or selected options and observed outcomes does not mean that comparisons were ignored. Instead, all it tells us is that the comparisons were flawed in certain respects.

In fact, as reviewed by Simonson (2008), most demonstrations of decision irrationality can be explained based on people’s tendency to gravitate to the most fluent (to use our current terminology) and salient comparisons while simultaneously being “absolute-value challenged.” Indeed, consumers often cannot meaningfully perform absolute assessments (e.g., Hsee, 1996; Nowlis & Simonson, 1997), such as assessing in isolation the attractiveness of a camera with 3× zoom and 10 MP resolution that costs $200. By contrast, people usually find it rather easy to make relative assessments and therefore tend to cling to salient comparisons. For example, context effects such as asymmetric dominance, background contrast, contrast, assimilation, and compromise effects are due to the allure of comparisons based on salient stimuli and tradeoffs.

Perhaps more important, we define comparisons more broadly than Kardes, and most of what he treats as selective evaluations falls under our definition of comparisons. One of the examples we focused on in the target paper involves consumers’ WTP to save a certain number of birds from drowning. As we pointed out, such a problem does not present an external reference point. That, however, does not mean that no comparisons are made, given that consumers can and do tend to make comparisons to the most accessible and fluent internal reference point. In the case of the drowning birds problem, that comparison is likely to be between the saving birds cause and other causes and uses of one’s money.

Thus, based on our broad definition of comparisons, virtually any judgment and choice involves comparisons, though some are easier to make and are more task-centered than others. In other words, the question that Kardes raises is important for our analysis but can be settled based on our broad definition of comparisons.

The examples from prior research reviewed by Kardes suggest new directions for extending our framework and linking it to previously demonstrated effects. One of these examples refers to the contrast between choosing and rejecting options, which was explained based on the notion that decision making reflects a search for the best reasons (Shafir, Simonson, & Tversky, 1993). When choosing the better of two options, one of which is average on all dimensions and the other has advantages and disadvantages, advantages are more task-responsive and are thus closer than the disadvantage to the center of the task’s LOA. The reverse is the case when rejecting the worse of the two options. While such accounts of already documented effects are necessarily post hoc, it is our expectation that a focus on the selection of comparisons based on their proximity to the center of the task’s LOA and their fluency will enable us to predict new effects, in addition to offering a comprehensive account for many seemingly unrelated results.

**Johnson**

Johnson makes a number of important suggestions regarding potential process insights that are gained by going beyond attributes and choices and examining focal comparisons and the outcomes of these comparisons. His analysis outlines specific research directions that build on and can test a framework focused on the selection of comparisons. Among others, he notes that it is important to characterize the types of information produced by a comparison (e.g., which option wins and a ratio difference) and how such information is combined across attributes.

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**Table 1**

Factors influencing comparison fluency.

<table>
<thead>
<tr>
<th>Comparison fluency</th>
<th>Type 1 (more fluent)</th>
<th>Type 2 (less fluent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No transformations/calculations required</td>
<td>Calculations and/or transformations required</td>
<td></td>
</tr>
<tr>
<td>Alignable</td>
<td>Non-alignable</td>
<td></td>
</tr>
<tr>
<td>More perceptually salient</td>
<td>Less perceptually salient</td>
<td></td>
</tr>
<tr>
<td>More affective implications</td>
<td>Less affective implications</td>
<td></td>
</tr>
<tr>
<td>Simultaneous presentation</td>
<td>Sequential presentation</td>
<td></td>
</tr>
<tr>
<td>Within attribute</td>
<td>Across attributes</td>
<td></td>
</tr>
<tr>
<td>Encouraged by information format</td>
<td>Discouraged by information format</td>
<td></td>
</tr>
<tr>
<td>Based on local stimuli</td>
<td>Not based on local stimuli</td>
<td></td>
</tr>
<tr>
<td>High retrieval strength</td>
<td>Low retrieval strength</td>
<td></td>
</tr>
</tbody>
</table>
Johnson correctly points out that our framework is based on the premise that some comparisons are ignored whereas others are more salient. Accordingly, he argues that such a process-centered theory, which goes beyond choice prediction, calls for process data. In particular, we should measure the degree of attention paid to candidate comparisons, using such process tracing measures as eye tracking data, verbal reports, or perhaps memory/timing for comparison results.

We agree with Johnson that a model that is designed to explain judgment and choice based on focal comparisons calls for process data, including data regarding the selection, processing, and outcomes of comparisons. In particular, our main constructs, LOA and comparison fluency, might be observed using the types of process measures that Johnson suggests. Thus, for example, the LOA construct suggests that some of the comparisons embedded in a problem are task-relevant and receive attention, whereas others are ignored. Furthermore, as we illustrated in the target article, the task relevance of comparisons is context dependent. For example, in a within-subject version of the drowning birds problem (i.e., having to indicate the willingness-to-pay for two different numbers of birds), the comparison of the saving birds cause with other causes is likely to receive less or no attention in the decision process.

Similarly, while we identified a number of factors that affect comparison fluency, future research might examine the interaction among these factors. For example, suppose that a given comparison is characterized by conflicting fluency drivers (e.g., attribute values are readily available for all options [i.e., are alignable] but they require transformation). Such common situations raise the question as to whether there are general rules regarding the hierarchy of fluency drivers whereby particular factors usually dominate others.

Another important question mentioned by Johnson refers to the impact of the outcomes of comparisons on the considered comparisons. In particular, comparisons that do not help resolve preference or judgment may still affect the subsequently considered comparisons and the manner in which these comparisons are performed. For example, after comparing two toasters with very similar features, a consumer may pay more attention to toasters in the local context (e.g., on display) or those stored in memory that have different features.

We should, however, acknowledge the limitations of process measures such as those mentioned by Johnson. In addition to being less suitable for detecting comparisons of external stimuli with internal reference points and preferences, their ability to inform us about the weights of comparisons or reveal distortions and biases is often limited. However, in combination with other measures (e.g., experimental tests), such process measures are capable in many cases of producing data based on which one can estimate the importance and use of particular comparisons as well as other characteristics of comparison processes.

Finally, we should reiterate a key premise of our framework: if we know the focal comparisons and their hierarchy, we will often be able to predict on that basis alone which judgment or choice is likely to be made. For example, if a simultaneous choice task elicits a comparison of choices for multiple periods, that comparison rates highly in terms of fluency and the consumer is more likely (than a consumer making choices sequentially) to select a variety of options.

Of course, even the objective of predicting choice on the basis of selected comparisons calls for process data. Such process evidence is needed to validate and improve a framework of comparison selection. In particular, as indicated, process measures can provide important insights into the impact of at least some of the pertinent comparisons, the manner in which these comparisons are made, and their impact on the resulting responses to the problem. Furthermore, such process measures will allow us to identify a more comprehensive, refined, and widely applicable set of factors that determine the hierarchy of comparisons under the LOA as well as their fluency.

Conclusion

Looking ahead, we recognize the challenges associated with an attempt to introduce and promote a different approach to the study of judgment and choice. One challenge that we have begun to address involves the operationalization of the key elements of the proposed view. This task is easier with respect to comparison fluency than for the task LOA construct. While the notion and operationalization of comparison fluency builds on a great deal of prior research, the top-down component of our framework, the task’s LOA, calls for further refinement and more precise rules regarding the range and centrality of potentially relevant comparisons, given the characteristics of the task and the candidate comparisons.

Assuming these details of our framework can be addressed, getting more researchers to adopt this way of thinking and use it in order to seek general insights and rules that are not topic and problem specific will remain challenging. There is probably no disagreement that identifying general principles that account for a wide range of phenomena can be superior to topic- and problem-specific accounts that narrowly apply just to particular problem circumstances. But any attempt to offer such a departure from common practice will need to prove its merit and applicability in order to be widely adopted and studied.

References


