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The Impact of Research Design on the Compromise Effect

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This work investigates the impact of research design on the results of the compromise effect, using meta-analytic evidence. The findings suggest that experimental characteristics have a major impact on the obtained extremeness aversion results, while sample characteristics have little impact. We discuss implications and methodological recommendations based on our analysis.

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EXTENDED ABSTRACT

The compromise effect, which is a symmetric extremeness aversion context effect (Simonson and Tversky 1992), has been referred to as one of the most relevant and robust behavioral phenomena in marketing (Kivetz, Netzer, and Srinivasan 2004). However, even though the compromise effect has been proven to be sizeable and robust across many scenarios, recent articles have raised concerns: in a critical essay, Simonson (2008) initiates a debate about the external validity of work dealing with constructed preferences, making no exemption for extremeness aversion. He argues that the ease of demonstrating certain preference reversals may have caused many scholars to overstate the role of constructed preferences. Simonson (2008) receives support from Kivetz, Netzer, and Schrift (2008) and Dhar and Novemsky (2008) for many of his arguments.

In this study, we attempt to advance the debate on the meaning of different methodologies for this research area. Using meta-analytic evidence, we examine the impact of research design variables on the results of the compromise effect. We test moderators related to sample and experimental characteristics, such as the influence of attribute-types, choice set comparison types, extension types, the range effect (i.e. distance of options from the middle), sample size and choice tasks (e.g. within- Vs. between-subject designs).

For our analysis, we synthesized 83 cases from 13 studies and modeled the difference between the log-odds ratios (Lipsey and Wilson 2001; Van Houwelingen, Arends, and Stijnen 2002) of the middle option in the experimental condition (middle option share/ others' share) and that in the control condition (share of option that becomes middle option/ other's share) for the absolute and relative shares (two effect sizes from one case). To account for the dependencies of the two effect sizes that stem from the same observation and for the dependency of each case on the corresponding study, we estimated a bivariate multilevel model: the first level consists of the two outcome measures, the second level of the observations, and the third level of the studies that provide the observations. We carried out maximum likelihood estimation for the 3-level model, using the inverse sampling variances as weights.

The results of the meta-analysis confirm that extremeness aversion significantly affects choice behavior and is likely to result in context effects. Across 83 comparisons of choice sets, the introduction of another option leads on average to both absolute and relative share increases of the product that becomes the compromise option when controlling for research design effects. This means that the included studies represent evident violations of the IIA principle, which assumes the relative share of options to stay constant across choice sets. Strategically, the significant increase in relative share demonstrates that the introduction of another product is assumed to take more share away from the other extreme product than from the more similar compromise option.

On average, extremeness aversion also enhances the absolute share of the middle option. However, this effect is more likely for the comparison of two triplets than for the addition of another option to a binary choice set. Nevertheless, we can conclude that there are compromise effects that can violate the regularity axiom, in particular for durable product categories.

In line with previous work (Simonson and Tversky 1992), the present study demonstrates asymmetry in extremeness aversion for

price and quality. Relative share changes are likely to be smaller for choice tasks that involve price-quality trade-offs, whereby this impact is moderated by the extension type. For high-extensions, the relative share of the compromise option after the treatment tends to be greater than for low-extensions. Hence, on average, the introduction of a high-quality product takes away more share from the other extreme than the introduction of a low-quality product does. These findings are in agreement with the concept of loss aversion, which was argued to be less strong or not evident for price (Novemsky and Kahneman 2005a, 2005b).

In addition, the results of our model do not suggest a range effect of options on the compromise effect strength. This finding is in agreement with the work of Tsetsos, Usher, and Chater (2010), who find mixed results for the choice of a compromise option as a function of the distance between extreme options in computational simulations.

According to our meta-analysis, there are no significant differences between undergraduates and other sample groups or between within- and between-subject designs for the compromise effect. Sample size appears not to significantly affect the size of the compromise effect either.

Overall, the results suggest that experimental characteristics have a major impact on the obtained extremeness aversion results, while sample characteristics have little impact. We conclude with a discussion of the practical implications of the individual research design effects for future studies. We hope that this work offers a fertile ground and helpful recommendations for further studying extremeness aversion.

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