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Attribute ratings and their impact on attraction and compromise effects

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Abstract
Consumers often face uncertainty in decision-making while assessing options presented as attribute-bundles as they are unable to assess their utility. This confusion is exacerbated by the presence of a "decoy," or an inferior option, which leads to the phenomenon of attraction effect, while the presence of an equally attractive alternative leads to the compromise effect. In this study, we show that if functional attribute values are converted into ratings on a common scale, consumers do not depend on attribute-based processing but choose an option by considering appropriate attribute-bundles based on the attribute ratings. This shift in decision-making process attenuates both attraction and compromise effects.

Keywords Attribute-based processing · Attraction effects · Compromise effects · Attribute ratings

1 Introduction

Imagine a consumer planning a laptop purchase and evaluating her options on two key attributes: RAM capacity and memory in GB/TB: option A (6 GB RAM, 1 TB) and option B (8 GB RAM, 750 GB), as shown in Fig. 1. In the absence of clear, pre-set preferences, she might be confused about her choice. The decision-making process becomes more interesting, when C (4 GB RAM, 1 TB), a "decoy," is introduced. Now, C is considered inferior to A (lower RAM capacity), and the presence

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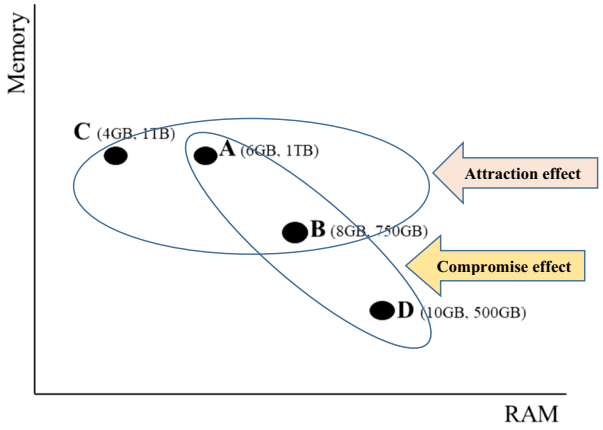

Fig. 1 Illustrating attraction and compromise effects

of C increases the choice of A. This is the asymmetric dominance (AD), or "attraction effect" (AE) (Huber et al., 1982; Simonson, 2014).

Although AE has been studied across several domains, recent replication attempts question the robustness of the effect. Frederick et al. (2014), henceforth FLB, show that attraction effect is largely an outcome of *numeric* stimuli. On the other hand, Milberg et al., (2014, p. 1420) assert, "…the number of missing or unpublished experiments with non-significant results that would be needed to bring the effect size to zero would be 5,440." Simonson (2014, p. 517) asserts, "Instead of running 38 studies (or 91 tests; see Yang & Lynn, 2014) to make the case for the unreality of the AD effect, FLB could have conducted a few studies to gain insights into the conditions that moderate the strength of the AD effect."

Following this discussion, we observe AE when numeric values are expressed as functional units (*mpg* for gas mileage for automobiles, weight in *lbs.* for laptop), in line with what FLB find, but when these functional units are converted into ratings (studies 1 and 2), AE is attenuated. Thus, how numeric values represent attributes, functional units versus ratings, influences the magnitude of AE. We extend this finding to explore compromise effect (CE) and find similar results: there is CE with functional units but is attenuated with ratings. In addition, we show that this attenuation results from a change in choice strategy—from attribute-based to attribute-bundling strategy when functional units are used, or the attributes are rated.

2 Theoretical background

2.1 Attraction effect and attribute-based processing of information

Researchers offer various justifications for AE: value-shift, trade-off contrast, and relative advantage models, which highlight how one makes comparisons across

alternative and attributes before making a choice. Below, we summarize these explanations.

2.1.1 Value-shift model

Parducci's (1974) range-frequency theory explicates the value-shift model. In Fig. 1, in the binary set (A and B), the target has the lowest value on RAM capacity, while in the trinary set the decoy C has the lowest value. Thus, in the presence of the decoy, the subjective evaluation of the RAM capacity is not as bad for the target as compared to when the decoy was absent. In essence, the decoy extends the range of the attribute value, and thus improves the target's subjective evaluation with respect to the competitor (Huber et al., 1982; Wedell & Pettibone, 1996). This increases the target's choice share, resulting in AE. Arguably, range extension improves the attractiveness of the target over the competitor and results from an Attribute-Based Processing of Information (ABPI), as the consumer makes attribute comparisons, one attribute at a time, and compares the alternatives.

2.1.2 Trade-off contrast model

The trade-off contrast model (Simonson & Tversky, 1992) suggests that attribute trade-off favors the target, rather than the competitor. For instance, in Fig. 1, if one shifts from option B (competitor) towards option A (target), there is a gain of 250 GB of memory capacity at the expense of 2 GB of RAM. However, if one shifts from the competitor to the decoy (C), there is gain of 250 GB of storage space but a loss of 4 GB of RAM capacity. Therefore, as one shifts from the two- to three-alternative set, the trade-off contrast between the attribute values favors the target. More importantly, such a comparison also highlights how consumers make choices taking one attribute at a time and comparing the available alternatives, essentially ABPI.

2.1.3 Relative advantage model

The relative advantage model (Tversky & Simonson, 1993) builds on prospect theory, which illustrates that losses loom larger than gains. In a binary-choice scenario, a move from the target to the competitor for a gain in one attribute would have a concomitant loss in another attribute. However, when a decoy is introduced in a trinary-choice scenario, there is a loss in attribute value when one moves from the decoy to the competitor and not the target. Thus, the target is the relatively safer, less risky alternative, which enhances its choice probability, leading to AE. Considering losses and gains across attributes values is in line with ABPI.

2.2 Attribute-based processing and compromise effects

In Fig. 1, if option D (500 GB,10 GB RAM) is introduced, it leads to an increase in the share of the middle option, termed as compromise effect (CE) (Dhar et al., 2000; Kivetz et al., 2004; Mourali et al., 2007; Wernerfelt, 1995). As losses loom

larger than gains, selecting the safe middle alternative minimizes losses, compared to deciding between two extremes, when the losses and gains are much more extreme (Mao, 2016; Tversky & Simonson, 1993). Indeed, past research suggests choosing the middle option minimizes the maximum potential loss when choosing an alternative (Neumann et al., 2016; Sheng et al., 2005). The count of losses and gains emanates from comparing attribute values across alternatives, or ABPI (Cataldo & Cohen, 2019), as one can only measure differences, when expressed in the same functional units. Similarly, Wernerfelt (1995) shows that while selecting a compromise alternative, consumers rank-order the attribute values before making a choice—suggesting an ABPI strategy.

Across both AE and CE, consumers' choice processes support past findings. Consumers often do not have well-defined preferences, and construct preferences when asked to make a choice by assessing option attractiveness (Bettman et al., 1998). As discussed above, across both AE and CE, option attractiveness is primarily judged by comparing attribute values across alternatives, as it is not possible to compare attribute values within alternatives, expressed as different functional units. Thus, preference uncertainty motivates consumers to assess option attractiveness within context, which triggers an ABPI, resulting in both AE and CE.

2.3 Attribute rating, attribute-bundle, attenuating attraction, and compromise effects

Attribute ratings provide a context-agnostic guide for consumers as to whether an attribute is good or bad. For example, we may not be able to judge how good auto fuel efficiencies are, when presented with values like 15 mpg (miles per gallon), 20 mpg, and 25 mpg and end up rank-ordering them as low, medium, and high. However, when miles per gallon are rated as 50/100, 60/100, and 70/100, we are better prepared to judge how good or bad these values are without referring to the context. Evidently, when attributes are presented as ratings on a common scale, 1–100, there is no apparent need to depend on attribute comparisons across alternatives to judge their performance, as observed in the context of functional values.

Thus, when the attributes are rated on a common scale, one is not dependent on ABPI to judge option attractiveness, thus making ABPI redundant. This frees the consumer to shift focus to assessing the overall evaluation of the options, resulting in the choice of an alternative that meets one's preference for a *particular attribute-bundle*. For example, suppose there are three options, which are rated on two attributes and have the following values: option A (90, 40), option B (80, 50) and option C (70, 60). Option B is the middle compromise alternative, which has average values on both the attributes, and thus should be chosen. However, with attribute ratings, one may find option A to have the preferred attribute-bundle, a high value on one of the attributes, or one may prefer option C with comparable attribute values, being determined by one's preference for a particular attribute-bundle—high on one versus comparable in both. Similarly, in AE, the attribute-bundles offered by target and competitor, having high and low values across two equally important attributes,

are equally attractive. Thus, there is no justification to choose the target over the competitor when one considers an attribute-bundling strategy.

In summary, rating of attribute values will make ABPI redundant, shifting focus to the consideration of a preferred attribute-bundle in choice. Consequently, as choices are aggregated across consumers, there is no reason why the attribute-bundle of the dominant target in attraction effect or the average values of the middle option in compromise will garner the majority share, thereby attenuating both AE and CE. In other words, *expressing attribute values on a common scale (e.g., 1–100, 1–7) makes it easier to compare alternatives at the option level*, which is not possible with functional values, resulting in the choice of an alternative with a preferred attribute-bundle, attenuating both AE and CE.

In the following section, we report four studies that support our conjecture. In study 1, we show that when attribute-bundles are presented as functional units, it leads to both AE and CE. But, when the same functional values (henceforth, functional values and units are considered synonymous) are converted into rating (1–100), both AE and CE are attenuated. In study 2, we use a different scale, 1–7, to see whether the findings are generalizable. In studies 3 and 4, we try to establish the underlying process mechanism through a thought-listing task.

3 Experimental studies

3.1 Ratings versus no ratings

3.1.1 Study 1

The current set of studies were carried out to demonstrate when functional values are used, we get both AE and CE, but when the same values are converted into ratings, both AE and CE are attenuated. A total of 875 individuals participated in the study. We ran two pretests and three studies to identify the attribute-bundles that lead to AE and CE. Two product categories, i.e., smartphones and laptops, were chosen for this study as these are frequently used by all age groups. Participants were initially invited to assign importance to a set of relevant attributes (Appendix A, Table A1), and two of the "most desirable, and equally-important" attributes were chosen, as unequal attribute importance could lead to prominence effect (Evangelidis & Levav, 2013). For laptops, these were RAM size (GB) and processor capacity (GHz), while for smartphones, display size (inches) and battery capacity (mAh) were chosen.

Different attribute-bundles were designed keeping in mind the market reality and were tested for AE and CE across both product categories. We tested five sets each of laptop and smartphone to see which of those exhibit AE. Similarly, we tested three sets (different) for each of laptop and smartphone to check which of those exhibit CE. The attribute-bundle, which exhibited the largest increase in share of the target (Appendix A, Table A3)/middle alternative (Appendix A, Table A5), was chosen for later studies when functional values were converted into ratings on a common scale (1–100) (Appendix A, Tables A7 and A8).

In case of attribute-bundles with functional values, the largest increase in share of the target, when the decoy was introduced, was as follows: smartphones, 50.00 to 68.88%, $p=0.05$; laptops, 73.33 to 90.24%, $p=0.03$ (Appendix A, Table A4), and for CE, the results varied between the two products: smartphones, 31.25 to 55.55%, $p=0.12$; laptops, 50.0 to 76.47%, $p=0.05$ (Appendix A, Table A6).

However, when attribute-bundles were presented as ratings (please refer to Table A2 for a description of the conversion process), i.e., the functional values were converted to ratings (AE Table A7, CE Table A8), the change in share of the target was not statistically significant, attenuating AE (smartphones, 51.28 to 51.02%, $p=0.49$; laptops, 38.46 to 50.00%, $p=0.13$, Table A9). Similar results were observed for CE: introduction of the third alternative did not significantly increase choice shares of the middle alternative—smartphones, 65.90 to 71.87%, $p=0.29$; laptops, 93.18 to 90.90%, $p=0.37$ (Table A9).

3.1.2 Study 2

To check the robustness of the findings and to investigate the *interaction between information format and context effect* (AE/CE), we conducted study 2 (details included in Appendix B) where functional values were converted into ratings on a scale of 1–7. In addition, we followed a different procedure for the conversion of functional values to ratings. We observed similar attenuation of AE and CE even under such conversion. The difference in the target shares across the functional and rating information format is significant ($p<0.05$) to confirm the interaction between the information format and target shares for the AE products and for laptops for the CE conditions. This interaction (in AE and CE conditions) is displayed in Fig. 2.

3.1.3 Study 3

The purpose of study 3 was twofold: (1) to establish the robustness of the finding that attribute ratings attenuate AE with a different set of product categories, and (2) to establish the underlying mechanism through a thought-listing task. Participants were recruited from a large, US Mid-Western University, and were provided course credit for participation. The study was a 2 (decoy: *present* versus *absent*) × 3 (products: *mouthwash*, *digital album*, and *restaurant*) mixed design with product categories being the within subject's factor and data was collected as a part of a larger study. Each product was described on two attributes and rated on a scale from 1 to 10 (please refer to Table C1, Appendix C). The products were randomly shown to the participants with each participant making three choices. Once they finalized their choices, they were asked to list the thoughts that went through their minds as they decided on a particular alternative. The final section included demographic questions.

Results A total of 119 students participated in the study (average age 21.2 years, females 39.5%). Overall, combining the choices yielded no significant attraction effect (decoy 41.79% versus no-decoy 42.99%, $z=0.21$, $p=0.41$).

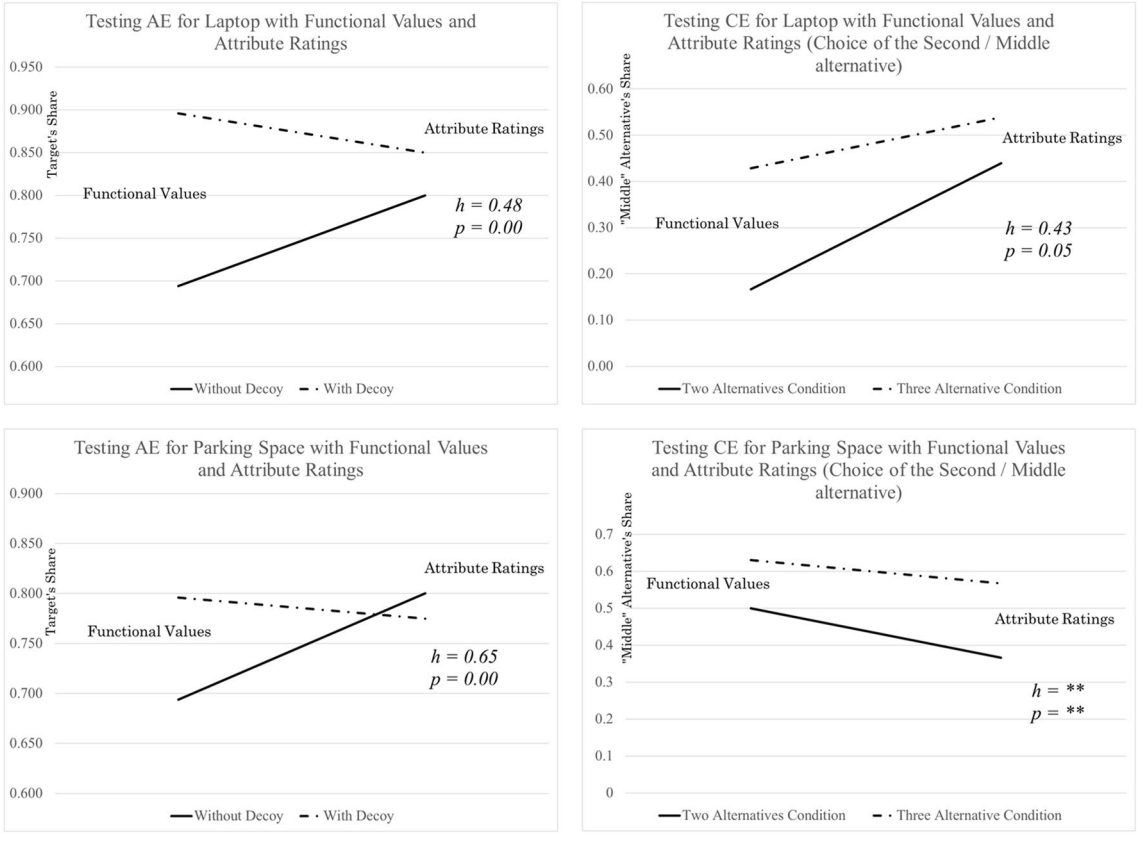

Fig. 2 Demonstrating the interaction between information presentation and target/middle alternative share in study 2. Note: Effect size (and corresponding *p*-value) not reported as the CE increased in this case

Thought analysis Past research indicates that under conditions that typically lead to the attraction effect, dominance is used as a primary reason for making a choice (Simonson, 1989). However, as discussed earlier, when attributes are presented as ratings, one follows an attribute-bundling strategy. For example, in choosing a cordless phone, described on two attributes, battery life and sound quality, one may prefer to have an option with high sound quality and a reasonable battery life, or vice versa. Thereby, some set of consumers will prefer the target that may have high sound quality and others prefer the competitor that has a high battery life, or in other words chose an alternative with a preferred attribute-bundle.

In summary, the goal of analyzing the listed thoughts was to explore whether consumers engage in ABPI or choose an alternative with a preferred attribute-bundle. Consequently, the listed thoughts were categorized into (1) dominance-related thoughts, which highlights an ABPI, (2) thoughts highlighting preference for a particular attribute-bundle, and (3) others (that do not belong to either 1 or 2).

The 201 listed thoughts were categorized by a co-author and an unrelated person. The degree of agreement was high ($p = 0.86$), and Cohen's kappa was *0.62* suggesting substantial fit between the two coders. Disagreements were sorted by discussion. Eleven and 95 thoughts were coded as one and two, respectively (Appendix D). Supporting our conjecture, the analysis of thoughts shows that participants overwhelmingly used an attribute-bundling strategy: thoughts coded as two were substantially higher than thoughts coded as one ($z = 10.06$, $p < 0.00$).

3.1.4 Study 4

Similarly, the purpose of study 4 was to show that consumers presented with attribute ratings result in the attenuation of CE with a different set of products. Participants were recruited from the online panel of a large US Eastern University for course credit. The study was a 2 (number of alternatives: *two* versus *three*) × 6 (products: *grills*, *printer*, *mouthwash*, and *cordless phone*, *digital camera*, and *MP3 player*) mixed design with product categories being the within subjects' factor and data was collected as a part of a larger study. Orange juice with functional values was included as a filler brand in the three-alternative conditions to prevent boredom in making choices from six product categories and with three alternatives in each category. Each of the products was described on two attributes rated on a scale from 1 to 100 (Table C2, Appendix C). The products were randomly assigned to participants with each participant making six choices. Following a choice, they were asked to list the thoughts that went through their mind as they made a choice. Finally, they answered demographic questions.

Results Sixty-six students participated in the study (average age 21.2; females 51.5%). Following past research (Simonson & Tversky, 1992), the share of the second alternative was calculated in the three-alternative set. In the two-alternative set, the share of the second alternative is 64.44% while in the three-alternative set it was 55.55%. Unlike past research, instead of an increase, there was a significant drop

in the share of the middle alternative from two- to three-alternative set ($z = 1.67$, $p = 0.46$). The other dependent variables were not relevant for our study and were excluded from further analysis.

Thought analysis As discussed earlier, consumers engaging in ABPI led to compromise effect. Simonson (1989) states, "If a decision maker is uncertain which of the two attributes is more important, a selection of a compromise alternative that can be seen as combining both attributes might be easiest to justify" (p. 161), which results in choice of the middle compromise alternative. Simonson (1989, p. 170)) also asserts that, "With sets that include a compromise alternative, there is no need to distinguish between lexicographic and non-lexicographic decisions because, almost by definition, decisions to select the compromise alternative are unlikely to use a lexicographic rule." Thus, in CE, both the attributes are equally important in making a choice. On the other hand, and as discussed before, when attributes are presented as ratings on a common scale, consumers will follow an attribute-bundling strategy. This is different from past research; compromise effect is an outcome of equal attribute importance. Consequently, the listed thoughts were coded into (1) thoughts highlighting equal importance of both the attributes, (2) thoughts highlighting the importance of one attribute over the other or an attribute-bundling strategy, and (3) others (Appendix D).

As for study 4, the 214 listed thoughts were categorized by a co-author and an unrelated person. The degree of agreement was high ($p = 0.92$), and Cohen's kappa was 0.83 suggesting an almost perfect fit between the two coders. Disagreements were sorted out by discussion. There were 142 thoughts coded as two, 62 coded as one, and ten coded as three. Supporting our conjecture, thoughts coded as two were substantially higher than thoughts coded as one ($M_{\text{Two}} = 65.42\%$ versus $M_{\text{one}} = 30.37\%$, $z = 7.32$, $p < 0.00$).

4 Discussions

The results of these studies suggest that when attributes are presented on a common scale, both AE and CE are attenuated. The studies were progressively conducted to test the underlying process. Thought analysis results affirm that when consumers review attribute ratings on a common scale, they prefer attribute-bundle for making a choice. This research differs from those of past research using functional values, where both attraction and compromise effect experiments result in ABPI (Cataldo & Cohen, 2019).

4.1 Alternative explanation

When both the attributes are equally important and the attribute values are expressed as ratings, a simple addition of ratings could help derive the overall value of an alternative. Such a process could eliminate the need for attribute-based processing,

thereby attenuating AE and CE, which are primarily outcomes of comparing attribute values within an alternative or attribute-based processing. However, results of our experiments do not find consistent support for such a mechanism. Presumably, if addition of attribute ratings drives choice, we should have an even split in the percentage of people choosing an alternative from a two-alternative set as the addition of values yields the same results. This is not consistently found across both AE and CE conditions. In addition, in some cases, the share of one of the alternatives from a set consisting of two was as high as 90%, which is not a feasible outcome of adding attribute ratings with equally weighted attributes. On the other hand, it signals a preference for a particular attribute-bundle, which obtains the majority share, though in terms of utility both the alternatives are equally attractive.

In study 2, we used laptop, described on two attributes—memory and weight. When these attributes are converted from functional units to ratings, a high rating of the attribute "weight" signifies a low value, as the conversion process shows (detailed in Appendix B). For example, a rating of 1 signals that the laptop is very low in weight. Thus, utility/performance values and attribute ratings for the attribute weight are negatively correlated, making addition of ratings to arrive at an overall score more difficult. Thus, a simple addition of attribute ratings is not a feasible process mechanism and is not applicable when utility and ratings are negatively correlated.

In addition, the decoy option also garnered some share, which is not feasible if addition of utilities was strictly followed. In a similar vein, in the three-alternative condition of compromise effect experiments, the addition of utilities should result in a 33% share for each alternative, which was not observed across studies 1 and 2. Even when respondents have an option to compare alternatives holistically by simply adding ratings, they prefer a different strategy—preference of a particular attribute-bundle, which results in disproportionate share of a particular alternative having the preferred attribute-bundle, which we find in our research.

In summary, expressing attribute values on a common scale results in a change in choice strategy from attribute-based processing to choosing an alternative with a preferred attribute-bundle.

5 Theoretical contributions

Our study contributes to several areas of behavioral decision-making. First, as FLB show, when attribute values can be experienced, or when some meaning can be extracted from them (as when one is shown pictures, rather than numbers), attraction effect is attenuated. In this research, we demonstrate that when alternatives are presented as ratings on a common scale, it attenuates the attraction effect. Ratings carry comparable meaning of what the attribute values represent, which removes the need for attribute-based processing of information to derive meaning within context. As the results demonstrate, attribute ratings result in choice of the alternative with a preferred attribute-bundle attenuating the AE.

Second, extant research shows that when alternative-based processing is induced experimentally, it results in attenuation of attraction effect (Cataldo & Cohen, 2019). Our research builds on this by showing that even when alternative-based processing

is not induced, consumers may resort to such information processing when attributes are presented as ratings on a common scale. When attributes are presented as ratings on a common scale, attribute-based processing, which typically underlies attraction effect, is made redundant, and instead, one chooses a preferred attribute-bundle for making a choice by comparing attribute value within an alternative like alternative-based processing.

Finally, extant literature suggests that when alternative-based evaluation is induced, it impedes compromise effects (Cataldo & Cohen, 2019). Even though we did not induce alternative-based processing in our studies, consumers engaged in a choice process that is akin to alternative-based processing of information, which attenuates compromise effect. A recent meta-analysis (Neumann et al., 2016) showed compromise effect to be a very robust effect; however, we show that when both the attribute values are rated, compromise effect is attenuated.

5.1 Possible limitations and future research directions

In our study, we have used a thought-listing task where respondents recalled and recorded their decision-making process to show that when alternatives are presented with ratings of attributes on a common scale, there is a change in choice process from attribute-based processing to choosing an alternative with a preferred attribute-bundle. While thought-listing results were significant, an alternative could be to test this effect directly, such as the Mouselab program, which provides another measure of how information is acquired and evaluated (Dhar et al., 2000). An eye-tracking study might also be used to measure whether participants engage in attribute-based or alternative-based processing of information while making a choice, which results in the preference of a particular attribute-bundle. Future research may further validate our findings by using any of these methods and lend further support to these findings.

In our studies, in the rating format, both the attributes were presented on the same scale (either 1–100 or 1–7). Future research should consider if mixing these ratings impacts the AE and CE as the decision-making becomes a bit more complicated. Future research may further validate our findings by using any of these methods and lend further support to the findings in our paper.

Supplementary Information The online version contains supplementary material available at https://doi.org/10.1007/s11002-024-09716-8.

Data Availability Data for the experimental studies will be made available on request.

Declarations

Ethical approval The fourth author has received a formal clearance from the corresponding university's Institutional Review Board (IRB) for conducting this study.

Consent to participate All participants/respondents for this study were informed of the objective of this study before responses were collected (consent page preceded the questionnaire).

Conflict of interest The authors declare no competing interests.

References

Bettman, J. R., Luce, M. F., & Payne, J. W. (1998). Constructive consumer choice processes. *Journal of Consumer Research, 25*(3), 187–217.

Cataldo, A. M., & Cohen, A. L. (2019). The comparison process as an account of variation in the attraction, compromise, and similarity effects. *Psychonomic Bulletin and Review, 26*(3), 934–942.

Chang, C. C., Chuang, S. C., Cheng, Y.-H., & Huang, T. Y. (2012). The compromise effect in choosing for others. *Journal of Behavioral Decision Making, 25*(2), 109–122.

Dhar, R., & Simonson, I. (2003). The effect of forced choice on choice. *Journal of Marketing Research, 40*(2), 146–160.

Dhar, R., Nowlis, S. M., & Sherman, S. J. (2000). Trying hard or hardly trying: An analysis of context effects in choice. *Journal of Consumer Psychology, 9*(4), 189–200.

Evangelidis, I., & Levav, J. (2013). Prominence versus dominance: How relationships between alternatives drive decision strategy and choice. *Journal of Marketing Research, 50*(6), 753–766.

Frederick, S., Lee, L., & Baskin, E. (2014). The limits of attraction. *Journal of Marketing Research, 51*(4), 487–507.

Huber, J., Payne, J. W., & Puto, C. (1982). Adding asymmetrically dominated alternatives: Violations of regularity and the similarity hypothesis. *Journal of Consumer Research, 9*(1), 90–98.

Kivetz, R., Netzer, O., & Srinivasan, V. (2004). Alternative models for capturing the compromise effect. *Journal of Marketing Research, 41*(3), 237–257.

Mao, W. (2016). When one desires too much of a good thing: The compromise effect under maximizing tendencies. *Journal of Consumer Psychology, 26*(1), 66–80.

Milberg, S. J., Silva, M., Celedon, P., & Sinn, F. (2014). Synthesis of attraction effect research: Practical market implications?. *European Journal of Marketing*.

Mourali, M., Böckenholt, U., & Laroche, M. (2007). Compromise and attraction effects under prevention and promotion motivations. *Journal of Consumer Research, 34*(2), 234–247.

Neumann, N., Böckenholt, U., & Sinha, A. (2016). A meta-analysis of extremeness aversion. *Journal of Consumer Psychology, 26*(2), 193–212.

Parducci, A. (1974). Context effects: A range-frequency analysis. *Psychophysical judgment and measurement*, 127–142.

Sheng, S., Parker, A. M., & Nakamoto, K. (2005). Understanding the mechanism and determinants of compromise effects. *Psychology and Marketing, 22*(7), 591–609.

Simonson, I. (1989). Choice based on reasons: The case of attraction and compromise effects. *Journal of Consumer Research, 16*(2), 158–174.

Simonson, I. (2014). Vices and virtues of misguided replications: The case of asymmetric dominance. *Journal of Marketing Research, 51*(4), 514–519.

Simonson, I., & Tversky, A. (1992). Choice in context: Tradeoff contrast and extremeness aversion. *Journal of Marketing Research, 29*(3), 281–295.

Tversky, A., & Simonson, I. (1993). Context-dependent preferences. *Management Science, 39*(10), 1179–1189.

Wedell, D. H., & Pettibone, J. C. (1996). Using judgments to understand decoy effects in choice. *Organizational Behavior and Human Decision Processes, 67*(3), 326–344.

Wernerfelt, B. (1995). A rational reconstruction of the compromise effect: Using market data to infer utilities. *Journal of Consumer Research, 21*(4), 627–633.

Yang, S., & Lynn, M. (2014). More evidence challenging the robustness and usefulness of the attraction effect. *Journal of Marketing Research, 51*(4), 508–513.