Affective Evaluations Are More Ordinal

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Because of its evolutionary roots, the affective system of evaluation is inherently more ordinal in its architecture than the cognitive system. That is, the affective system focuses more on the relative ranking of target objects on the evaluative dimension than on their absolute values on the same dimension.

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EXTENDED ABSTRACT

There is growing evidence that affective responses provide an alternative means of assessing value. We advance the hypothesis that, compared to the cognitive system, the affective system assesses value in a relatively more ordinal (less cardinal) fashion. We base this hypothesis on the rationale that our ancestral affective system was originally meant to support behavioral choices, which requires primarily ordinal (rather than cardinal) assessments. The relatively greater “ordinality” of the affective system helps explain various apparent biases in affective judgments of value, such as their greater reference-dependence and scope-insensitivity (see Pham, 2007).

Support the ordinality-of-affect hypothesis was obtained across three studies involving both outcome and process-level data. First, affective assessments of value have more ordinal distributions than more cognitive assessments of the same targets. Second, process-level data indicate that, when asked to assess evaluative targets based either on feelings or on cognitive assessments, affect-oriented participants tend to evaluate targets jointly as if ordinarily ranking them, whereas cognition-oriented participants tend to evaluate each target separately. Finally, affect-oriented participants appear to have stronger memory for rank-order information than cognition-oriented participants.

The purpose of the first study was to provide process-level evidence that the affective system assesses values in a more ordinal fashion. Participants were shown the pictures of target individuals of the opposite sex and asked to rate them either as potential dates (a more affective assessment) or as potential teammates for a project (a more cognitive assessment). (Previous studies and pretests had shown that these instructions indeed varied the reliance on affective vs. cognitive information.) As predicted, participants assessing the targets as potential dates tended to generate their own order to rate these targets, suggesting that relative ordering of the targets was an important consideration to these affect-oriented participants. In contrast, participants assessing the targets as potential teammates tended to simply follow the order in which the targets were presented, suggesting that the relative ordering of the targets was less important to these cognition-oriented participants. In addition, compared to participants in the potential teammates (cognition) condition, participants in the potential dates (affect) condition had more accurate memory for the relative location of the pictured target individuals, suggesting that comparisons across targets were more likely in the potential date (affect) condition. Finally, compared to participants in the potential teammates (cognition) condition, participants in the potential dates (affect) condition re-ranked the targets more consistently, suggesting than relative ranking was a more important determinant of their assessments. These process results suggest that affect-oriented participants tended to evaluate the targets jointly as if ordinarily ranking them, whereas cognition-oriented participants tended to evaluate these targets separately.

The purpose of studies 2a and 2b was to document a previously unrecognized property of affective evaluations that logically follows from the proposition that affective evaluations are more ordinal. Specifically, if affective evaluations are indeed generated by an ordinal, rank-ordering process, people making affective evaluations should tend to distribute targets more uniformly along the full evaluative scale. We call this phenomenon distributive scale use, which we demonstrate both in a field study and in a lab study.

In the field study, men and women participants took part in a “speed-dating” event in which they had a series of “mini-dates” with opposite-sex participants. After each date, each participant rated the other person in terms of physical attractiveness, a presumably more affective judgment, and intelligence, a presumably more reason-based judgment. Individual-level analyses of these ratings revealed that ratings of attractiveness indeed exhibited more distributive scale use—that is, had more ordinal distributions across potential dates—than ratings of intelligence, which had more interval-scale-like distributions.

Another lab study replicated and generalized these in the context of responses to magazine pictures. Compared to the field study, more direct measures of affective versus cognitive evaluative responses were obtained by instructing respondents to record either the pleasantness of the feelings elicited by each picture or the judged quality of each picture using previously validated instructions (Pham, Cohen, Pracejus, and Hughes, 2001). More refined distributions of these two types of responses were additionally obtained by increasing both the number of target stimuli (pictures) and the number of levels of responses on which they could be assessed (a 1-100 real-time electronic dial-turning scale). Again, individual-level analyses of these responses revealed that feelings elicited by the pictures had more ordinal distributions than the judged quality of these pictures, which had more interval-scale-like distributions.

Overall, the results of these three studies are consistent with the hypothesis that the affective system of valuation is more ordinal and more attuned to rank-order information than the cognitive system of evaluation.

REFERENCES