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## **Integration of Same and Oppositely Valenced Affective Stimuli Under Simultaneous Presentation Conditions**

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EXTENDED ABSTRACT - The distinction between cognitive and affective stimuli has been made repeatedly (see, e.g., Bagozzi, Gopinath and Nyer 1999; Cohen and Areni 1991; Zajonc and Markus 1982). Although considerable effort has been placed on the examination of how cognitive information is integrated (see, e.g., Kardes 2001), research regarding affect integration is still in its infancy.

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# Integration of Same And Oppositely Valenced Affective Stimuli Under Simultaneous Presentation Conditions

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## EXTENDED ABSTRACT

The distinction between cognitive and affective stimuli has been made repeatedly (see, e.g., Bagozzi, Gopinath and Nyer 1999; Cohen and Areni 1991; Zajonc and Markus 1982). Although considerable effort has been placed on the examination of how cognitive information is integrated (see, e.g., Kardes 2001), research regarding affect integration is still in its infancy.

Where affect integration has been the focus of study, the context is one in which there is strong control of the sequence with which the affective stimuli are presented. Further, prior research directly examining affect integration (e.g., Ariely 1998; Ariely and Carmon 2000; Baumgartner, Sujan and Padgett 1997; Kahneman et al. 1993; Fredrickson and Kahneman 1993; Redelmeier and Kahneman 1996; Varey and Kahneman 1992) has focused exclusively on the integration of affective stimuli of common valence (i.e., the integration of positively valenced stimuli or negatively valenced stimuli, but not both together). This research explores each of these current limitations.

### Theory Development In Brief

Previous research examining the sequential presentation of affective stimuli demonstrates support for a "peak-end" rule, whereby the peak affect in the sequence and the affect at the end have a disproportionate contribution to the overall affect experienced. However, in a simultaneous format there is no clear "end" stimulus, as all the affect generating stimuli are presented together. In addition, in cases where oppositely valenced stimuli are present, it is not clear what the "peak" stimulus is.

Let us take the simple case where there are multiple stimuli in a message that are of a common valence (i.e., all negative or all positive, but not a mixture of the two). As noted earlier, while it may be possible to identify the "peak", the "end" point is not evident. Hence, it is anticipated that the global affect generated is a function of the peak value alone.

In a case where both negatively and positively valenced affective stimuli are present, it is no longer clear what the peak is. As such, both touchstones of prior affect integration literature are removed from the equation. It is believed that under these circumstances the affect integration mechanism will be compensatory in nature. This differs considerably from the peak mechanism proposed for univalence integration under simultaneous presentation conditions, as well as for the non-compensatory mechanisms associated with affect integration for mixed valence stimuli under sequential conditions.

### Experiment 1

The purpose of this study was to look at the integration of commonly valenced stimuli in a simultaneous presentation context. As such, it permits an examination of the extent to which findings from prior research employing sequential presentation of affective stimuli transfer to a context where multiple affective stimuli are simultaneously presented. Although stimuli of opposite valence were never combined in the same experimental condition, both positively and negatively valenced stimuli were considered in

different conditions. For positively valenced affective stimuli, the following between-subject conditions were employed: High-Positive Alone, Low-Positive Alone and Mixed-Positive (i.e., High-Positive jointly presented with Low-Positive). For the negative affect conditions, a parallel set of stimuli were employed: High-Negative Alone, Low-Negative Alone and Mixed-Negative.

In order to present a context where the simultaneous presentation of different types of affective stimuli seemed credible, an advertisement for a camera noting the use of that particular brand of camera for photo-journalistic purposes was created. Affect was manipulated via the content of images presented in the advertisement. Pre-testing of the images was conducted, examining affective reactions on an 11 point scale, anchored "extremely negative (-5)" and "extremely positive (5)".

Each advertisement was 8.5" X 11", printed on plain white paper. The image(s) were presented in the top portion of the advertisement, with the text and the brand name of the camera presented in the lower portion. Each image was 3.5" X 3.5". In cases where one image was present, it was centered horizontally, and began 5.5" from the bottom of the page. Where two images were present, they were placed side by side, also 5.5" from the bottom (note that in all conditions where two images were present, counterbalancing was employed). Participants viewed the target stimulus for 30 seconds and then responded to a battery of affect measures.

### Experiment 2

Whereas the first study held the valence of the integrated affective stimuli constant, this experiment examined the impact of juxtaposing oppositely valenced affective stimuli. The procedure and dependent variables remained identical to the first experiment. The experimental advertisement remained unchanged, with the exception of the images used. The following five between-subject conditions were employed: Positive Alone (Pos), Negative Alone (Neg), Positive-Positive (PosPos), Negative-Negative (NegNeg), and Mixed Valence (i.e., containing both positively and negatively valenced affective stimuli). In all cases, the images used were moderate in intensity.

### Results

Results of Experiment 1 indicate that a peak mechanism is operating when affective stimuli of one valence are simultaneously presented. That is, when a moderately positive (negative) and highly positive (negative) stimuli are simultaneously presented, responses were no different from when a highly positive (negative) stimulus was presented alone. It appears, therefore, that affective response to the simultaneous presentation of same valence stimuli is a function of the most extreme stimulus present. This is entirely in line with the findings from the sequential affect integration literature. That is, for same valence simultaneous presentation, a peak mechanism seems to explain the affect integration mechanism.

Experiment 2 replicates the findings of experiment one, in that a peak mechanism is shown to operate when affective stimuli of the same valence are simultaneously presented. When stimuli with

different valences (i.e. one positive and one negative) are simultaneously presented, however, the picture is quite different. Here we find almost a purely compensatory mechanism in place. That is, the mixed valence conditions were more negative than the positive conditions and more positive than the negative conditions. The position of the image on the page was not found to have an impact in either experiment.

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