What is Evaluative Learning?

Evaluative Learning (EL) can be defined (see De Houwer et al., 1997) as the transfer of affective value from one stimulus to another, resulting from their mere contingent (e.g., visual) presentation. Typically, an affectively neutral stimulus (NS) is paired with (a strongly) liked or disliked stimulus (associated stimulus material or AS). This “causes” the NS to acquire the same affective valence as the AS it was paired with, while the valence of NSi paired with other NSi remains unchanged. EL has been characterised as a “Contamination by Contact” phenomenon.

What are the advantages of this paradigm for research on Implicit Learning (IL)?

Learning is truly incidental because Ss are not instructed to explicitly learn stimulus pairs. Further, Baeyens et al. (1992) and form (age, colour palette, size, orientation). Stimulus material (high ratings were rather evaluated closest to 0 were used as Neutral stimuli (NSi). 12 stimulus pairs were all set to 0, since similarity between N1 and N2 could not be expected to give rise to consistent evaluative shifts.

RESULTS

For each stimulus Pair Type (NSi associated with W, N2 and AS). This “causes” the NS to acquire the same affective valence as the AS it was paired with, while the valence of NSi paired with other NSi remains unchanged. EL has been characterised as a “Contamination by Contact” phenomenon.

What is the aim of the present study?

In a previous study (Reuter & Cleeremans, 2000) we had failed at replicating Baeyens et al.’s (1998) EL study. We observed no evaluative shifts of NSi at all. This led us to examine EL in the light of a recent alternative account. Field et al. (1999), have indeed shown that evaluative shift depends on perceptual similarity of NSi to exemplars of either positive or negative stimuli rather than on their temporal association. In the present study, we aimed to measure perceptual similarity on an individual and per stimulus pair basis in order to directly assess whether evaluative shifts depend on PERCEIVED similarity between NSi with liked/disliked ASi.

MATERIAL and METHOD

Subjects: 18 students from the ULB participated for a small fee. Each subject was tested individually.

Material: 70 pictures of human faces (35 male and 35 female faces) were used as stimulus material. They varied in content (age, colour palette, size, orientation). Stimulus dimensions were set to 276 x 208 pixels.

Procedure: Our experimental procedure was based on EL studies conducted by Baeyens et al. (1992). Stage 1 - Baseline Assessment. Ss were presented with 70 randomly ordered images of human faces with a rating scale positioned on the right. The scale ranged from -100 (dislike) through 0 (neutral) to +100 (liked), in intervals of 10. Ss were instructed to rate each image on an affectively neutral evaluation (ER) of the human faces by pointing the mouse cursor at the scores on the scale and then clicking. After giving task instructions, the experimenter left the room, where Ss would rate the faces unobserved.

Stage 2 - Acquisition: The 6 (2 x 3) pictures that had received the highest and lowest baseline scores were used as Best (B) and Worst (W) stimuli respectively. The 18 pictures that were never evaluated closest to 0 were used as Neutral stimuli (NSi). 12 stimulus pairs (6 Neutral-Neutral, 3 Neutral-Liked, 3 Neutral-Disliked) were constructed by randomly assigning an NSi to an NS (N1-N2), B (B-B) or W (W-W). Each stimulus pair was shown 10 times in random order. Ss were told to attend to the centre of the computer screen they would see pairs of human faces, sequentially presented, and to evaluate the perceptual similarity of the face pairs on a 7-point Likert scale. Stage 3 - Post-Acquisition Assessment: Finally, Ss were told to give their current, spontaneous affective evaluation of the whole set of 70 pictures again, using the same response system as in stage 1. This measure is called EL.

Henceforth, we will use the following labels:

- NB: neutral stimuli followed by best stimuli
- NW: neutral stimuli followed by worst stimuli
- NB: neutral stimuli followed by neutral stimuli
- N2: neutral stimuli followed by neutral stimuli
- W: worst stimuli followed by worst stimuli
- NW: worst stimuli followed by neutral stimuli

RESULTS

For each stimulus Pair Type (NSi associated with W, N2 and AS). This “causes” the NS to acquire the same affective valence as the AS it was paired with, while the valence of NSi paired with other NSi remains unchanged. EL has been characterised as a “Contamination by Contact” phenomenon.

DISCUSSION

Our results, in accordance with Field et al.’s (1999), suggest that evaluative learning effects - if they are observed - may be explained as the result of nonassociative antecedents inherent to the stimulus material and the common lack of control for similarity between associated stimuli. Moreover, our measures of the similarity structure of our current stimulus material (high ratings were rather infrequent) may give us a hint at why our previous and present study can not replicate the classic associative evaluative shift results.

Our data thus sharply contrast with those of Baeyens et al. (1989) concerning the influence of perceptual similarity/dissimilarity on evaluative learning. However, we think that our direct measures of perceived similarity of the associated stimuli and their demonstrable effect on evaluative shifts, taken together with Field et al.’s (1999) results suggest that evaluative shifts are more likely to correspond to a “generalise - to - close - neighbours” than a “generalise - to - all” phenomenon. The similarity structure of the stimuli used by Baeyens et al. (1989) was very different from that of our stimuli (which was also the case for De Houwer et al. (1997)). Further, the very strong affective value of the stimuli used by Baeyens et al. (1989) may have “overpowered” any influence of similarity on evaluative shifts. In our recent study (Reuter & Cleeremans, 2000), we observed no evaluative shifts of NSi at all, which led us to examine EL in the light of a recent alternative account. Field et al. (1999), have indeed shown that evaluative shift depends on perceptual similarity of NSi to exemplars of either positive or negative stimuli rather than on their temporal association. In the present study, we aimed to measure perceptual similarity on an individual and per stimulus pair basis in order to directly assess whether evaluative shifts depend on PERCEIVED similarity between NSi with liked/disliked ASi.

REFERENCES


