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The weighting of positive vs. negative valence and its impact on the formation of social relationships☆

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ABSTRACT

Forming social relationships is an integral aspect of our lives and a topic fundamental to social psychology. Using a performance-based measure of individual differences in valence weighting, we demonstrate that the extent to which first-year college students weight positive versus negative valence when engaged in attitude generalization predicts how many peer relationships they develop during the subsequent two months (Study 1). Furthermore, we show that individuals strategically recruited for their high sensitivity to interpersonal rejection benefit from an intervention that recalibrates their valence-weighting tendencies from an overweighting of negative valence to a more balanced weighting of positive and negative valence (Study 2). Recalibration led to extended decreases in participants' rejection sensitivity and, most importantly, led them to develop more social relationships over a subsequent two-week period. These findings demonstrate that the weighting of positive versus negative valence is a fundamental process that influences complex social outcomes and that such valence weighting tendencies can be recalibrated so as to benefit individuals.

Take a moment and remember back to your very first day as a student at college. You have just moved away from your home, perhaps for the first time ever, and are now faced with the prospect of making new social connections in a brand new environment. As you walk down your dormitory corridor, you see two other students chatting at the end of the hallway. Should you join them and introduce yourself? On the one hand this situation resembles one where you met a few of your friends in high school. You approached them, had a free-flowing conversation, and became fast friends. On the other hand, this situation also resembles one where you had attempted a conversation with another student while seated at a lunch table, were largely ignored, and came away feeling distressed. That situation turned out significantly worse. These types of decisions present themselves frequently when first entering a new environment. One of the ways we can decide on our course of action is to weigh the current situation's resemblance to past positive versus negative experiences. Whichever past situation seems to better resemble the current one may win the day and foster the selection of that course of action.

Such a decision process may seem relatively straightforward, but is made much more difficult to the extent that this novel situation closely resembles both a previous positive and negative experience. In essence, one is then faced with the dilemma of how much weight to give to each valence. Although negative valence may predominate on average (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Fazio, Pietri, Rocklage, & Shook, 2015; Rozin & Royzman, 2001), this is not the case for all individuals. Indeed, research shows that individuals vary in the extent to which they give weight to positive versus negative valence – an individual difference that has been termed the *weighting bias* (Fazio et al., 2015; Pietri, Fazio, & Shook, 2013a).

The underpinnings of this valence weighting bias lie in a theoretical model concerning attitude generalization. Any novel situation in which individuals need to reach some judgment requires some weighting of the situation's positive versus negative aspects. The central theoretical premise is that any such weighting is essentially an exercise in attitude generalization. Individuals must weigh how much the entity resembles past occurrences that proved to be positive versus those that proved to be negative. These differential resemblances may be sufficiently extreme so as to make the assessment straightforward. However, when the novel stimulus resembles both a known positive and known negative to some extent, either the positive or the negative attitude must come to

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dominate the generalization process. For this reason, valence weighting tendencies can be assessed by examining how individuals' pre-established attitudes generalize to similar but novel attitude objects.

A now-lengthy line of research documents that individuals do differ in the extent to which they give weight to positive versus negative valence when generalizing their attitudes, that this difference can be measured behaviorally, and that these weighting tendencies influence related judgments and behaviors. For instance, as we overview more fully below, individuals with negative weighting tendencies express more anxiety regarding novel situations, are more averse to risk taking, anticipate potentially threatening situations to grow progressively worse over time, and are more likely to interpret ambiguous social cues as signaling rejection (Fazio et al., 2015). These very processes are likely to be involved in any given situation involving the possibility of forming new relationships. The aim of the current research is to take the theoretical and empirical foundation underlying our understanding of individuals' valence weighting tendencies and extend it to forming social relationships in the real world.

1. Assessing individual differences in attitude generalization

It is important to understand how valence weighting tendencies are measured and, in particular, their foundation in attitude generalization. For that reason we first present the method and then proceed on to the important outcomes to which this performance-based individual difference variable has been shown to relate.

Individuals' weighting bias has been measured behaviorally through a game referred to as "BeanFest" (Fazio, Eiser, & Shook, 2004). BeanFest exposes participants to virtual beans that vary in terms of their shape (10 levels from circular to oblong) and number of speckles (1 to 10). Subsets of the beans from this 10 × 10 matrix are presented during the course of the game, with some types producing positive outcomes when individuals choose to approach them (+10 points) and others producing negative outcomes (−10 points). In this way, individuals develop attitudes toward the different types of beans presented during the game.

This game/learning phase is followed by a test phase in which individuals are asked to classify each bean as to whether it is one that produces positive or negative outcomes, which provides data regarding how well they learned the game beans. During this test phase participants are also shown – without forewarning – novel beans that were not presented during the game. When categorizing these novel beans, which vary in their visual similarity to the positive and negative game beans, participants must weigh their resemblance to these previously-encountered beans.

The data invariably indicate that attitudes generalize (Shook, Fazio, & Eiser, 2007). Beans that more closely resemble known positives are more likely to be classified as positive than are beans that more closely resemble known negatives. However, individuals' responses to a large number of these novel beans provide a means of measuring valence weighting tendencies. If individuals tend to categorize a greater proportion of the novel beans as positive (negative) than is to be expected on the basis of how well they learned the positive and negative game beans, this indicates they give relatively greater weight to positive (negative) resemblances when judging novel instances.

2. Self-reports of valence sensitivity

Past research indicates that individuals' self-reported beliefs about their valence biases tend not to show an association with the weighting bias (Fazio et al., 2015). We believe this occurs for at least three reasons. First, individuals are typically inaccurate when reporting how many beans they classified as positive or negative during BeanFest and, hence, appear not to have much insight into their own tendencies (see Pietri, Fazio, & Shook, 2013b). Second, negative events and information are typically unexpected, surprising, and distinctive (Jones & Davis, 1965; Kanouse & Hanson, 1972) and therefore are often more diagnostic (Skowronski & Carlston, 1989). As such, these natural confounds may make it difficult for individuals to achieve an accurate calibration of their valence weighting tendencies per se (see Fazio et al., 2015, for a more extensive discussion of this issue). Finally, when reporting their valence biases, individuals may have self-presentational concerns as they may not wish to acknowledge that they have tendencies to overweight either positives or negatives (e.g., Paulhus, 1984).

To directly test individuals' ability to self-report their valence weighting tendencies, researchers created the Weighting Bias Questionnaire (WBQ; Pietri et al., 2013a), which explicitly asks participants about their weighting tendencies (e.g., "To what extent do you tend to give more weight to positive information over negative information?"). Attesting to its validity, the WBQ has been found to correlate significantly with other well-validated self-report measures of general sensitivity to positives and negatives such as the Approach/Avoidance Temperament Questionnaire (ATQ; Elliot & Thrash, 2010). (See the supplementary materials for details regarding many additional correlates of the WBQ, including self-reports of loneliness and life satisfaction). Individuals' self-reported weighting tendencies in the WBQ, however, did not relate to those that were measured behaviorally via BeanFest across a corpus of over 500 participants (Fazio et al., 2015). As such, individuals appear unable to report their weighting tendencies.

Furthermore, individuals' valence weighting tendencies appear not to be redundant with other commonly-used measures related to valence sensitivity. Indeed, similar null correlations have been observed with the ATQ (Elliot & Thrash, 2010), the BIS/BAS scales (Carver & White, 1994), the promotion/prevention scales (Lockwood, Jordan, & Kunda, 2002), the attachment scales of the Experiences in Close Relationships – Revised questionnaire (Fraley, Waller, & Brennan, 2000), and the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Furthermore, null correlations have been found with individuals' self-reported Big Five traits using the Big Five Aspects Scale (DeYoung, Quilty, & Peterson, 2007), the Ten-Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003), and the extraversion subscale of the Eysenck Personality Questionnaire – Revised (Eysenck & Eysenck, 1991).

3. Research on valence weighting tendencies and their relation to developing new relationships

Research findings regarding individuals' valence weighting tendencies highlight the multiple pathways by which they may influence the formation of social relationships. For example, developing new relationships often requires that individuals enter novel situations and interact with strangers. Past research has demonstrated that individuals with a more negative weighting bias express greater fear of novel situations (Pietri et al., 2013a). Indeed, individuals with more positive valence weighting tendencies actually sample a greater proportion of stimuli of an unknown valence, especially when required to make rapid approach-avoidance decisions (Rocklage & Fazio, 2014).

Also important to forming relationships is actively taking risks, as when making the effort to introduce oneself to a stranger or attending a social function where one may not know many people. A connection between actual risk-taking behavior and the weighting bias has been demonstrated across multiple studies. In particular, the Balloon Analogue Risk Task (BART; Lejuez et al., 2002) is a game where participants must pump a virtual balloon in order to increase its value, but balance this pumping with the knowledge that if pumped too much, the balloon will pop and the participant will earn no money on that particular trial. Those with a more positive weighting bias display more risky behavior by pumping the balloon to a greater extent (Pietri et al., 2013a; Rocklage & Fazio, 2014).

Furthermore, once in the new situation and talking with a stranger, some individuals may interpret ambiguous cues from others as signaling some form of threat and therefore may prematurely disengage from a conversation. A more negative weighting bias has been found to