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Individual differences in valence weighting: When, how, and why they matter

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HIGHLIGHTS

- We examined individual differences in weighting positive versus negative valence.
- Restricting the opportunity to deliberate enhanced the impact of valence weighting.
- Increasing the motivation to deliberate attenuated its impact.
- Valence weighting affected approach/avoidance behavior and, hence, information gain.
- A negative weighting bias led to difficulty in overcoming invalid negative attitudes.

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ABSTRACT

Recent research has shown that individuals vary in the extent to which they weight positive versus negative information during attitude generalization, i.e., their valence *weighting bias* (Pietri, Fazio, & Shook, 2013). As of yet, little is known about the conditions under which such valence weighting is likely to affect behavior and the consequences of that behavior. Experiments 1 and 2 tested the idea that the relative weight individuals give to positives versus negatives may influence their formation of an initial evaluative response, which will serve as a default provided that they do not have the motivation and opportunity to deliberate further. When opportunity was restricted by the requirement to respond quickly, participants showed greater correspondence between their weighting bias and their approach–avoidance behavior toward objects in a novel environment (Experiment 1). When an experimental manipulation motivated them to mistrust their initial responses, participants showed less correspondence between their weighting bias and risk-taking behavior than when they were motivated to trust their initial responses (Experiment 2). Experiment 3 investigated the downstream consequences of this valence weighting bias for attitude maintenance versus change. Those with a more negative weighting bias gave greater weight to negative information that was actually false, avoided testing the associated stimuli, and hence did not discover their true value. Those with a more positive weighting bias gave less weight to the negative information, tested the associated stimuli more fully, and overcame the false negative information. Implications for exploration, attitude maintenance, and prejudice are discussed.

Introduction

Valence is one of the most far-reaching constructs in psychology. It applies to domains as diverse as judgment and decision-making, close relationships, the self, and stereotyping. Not only is valence far-reaching, but much of how we interact with our world also is determined by the positive and negative associations we have. For instance, given a positive attitude toward objects or people, we will be all the more likely to engage with them, thereby leading to the potential experience of positive outcomes, as well as information about the validity of the positive association. A negative attitude, on the other hand, can lead to avoidance behavior, thereby not only evading potential harm, but also forgoing any possible benefits of interaction with the object or person. Such avoidance behavior can maintain our original negative association without actually testing its validity (Fazio, Eiser, & Shook, 2004).

When investigating valence, researchers have often put forward the possibility that individuals tend to be affected more by negatives than positives (e.g., Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Rozin & Royzman, 2001). Similarly, other researchers have argued that a single-unit increase of negativity has greater implications for subsequent behavior compared to a single-unit increase of positivity (Cacioppo, Gardner, & Berntson, 1997). Beyond this general asymmetry, researchers have also proposed that individuals differ in the extent to which they focus on positives versus negatives. For example,

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the behavioral inhibition and activation systems (BIS/BAS) have been put forth to account for individual differences in sensitivity to punishment (BIS) and to reward (BAS; Gray, 1987). Likewise, research on regulatory focus shows that individuals can differ in the extent to which they are sensitive to gains (promotion focused) or sensitive to losses (prevention focused) (Higgins, 1997). More recently, approach/avoidance temperament has been proposed as basic dimensions of personality that capture individual differences in sensitivity to positives and negatives (Elliot & Thrash, 2010). It is these sensitivities, in turn, that are argued to underlie observed relations among different approach-related (e.g., extraversion, positive emotionality, BAS, and promotion focus) and avoidance-related constructs.

Researchers have also recently developed and demonstrated the utility of a performance-based measure of one particular aspect of differential valence sensitivity: the extent to which individuals weight positive versus negative information when generalizing their existing attitudes to novel objects (Pietri, Fazio, & Shook, 2013). The measure stems from a computer game called BeanFest in which participants learn about beans, varying in shape and number of speckles, that produce either positive or negative outcomes when selected. After learning about these beans during a game phase, participants then classify new beans that vary in resemblance to these game beans as being either positive or negative. It is these classifications that provide the basis for the valence weighting measure. For example, when faced with a novel bean that resembles both a positive and negative game bean, an individual who categorizes that bean as negative is weighting negative information more heavily. Indeed, some individuals show evidence of having generalized negative attitudes to a greater extent than positive attitudes, indicating that they have given greater weight to negative resemblances. Other individuals generalize their positive attitudes more strongly, weighting resemblance to a known positive more heavily than resemblance to a known negative, thus leading to more favorable appraisals of the novel beans.

Utilizing this behavioral measure of individuals' valence *weighting bias*, Pietri et al. (2013) found that the bias related to judgments of novel events in a wide variety of domains, including interpersonal relationships, threat assessment, and risk propensity. Specifically, a more negative weighting bias (i.e., generalizing negative attitudes to a greater extent than positive attitudes and therefore giving more weight to negative features than positive features) was related to greater expressed concern about specific situations that allowed for the possibility of social rejection, perceptions that various potentially threatening events were likely to increase in severity, a general apprehension about meeting new people and entering new situations, a decreased propensity to endorse risky options, and more cautious behavior in a gambling situation. Given its relevance across these diverse domains, the weighting of positive versus negative appears to be a fundamental bias that generally characterizes individuals' judgments of novel objects or events. These relations make sense as any such novel judgments are essentially exercises in attitude generalization.

Apart from its fundamental nature, as of yet, relatively little is known about the characteristics of the weighting bias. There are, however, two important findings to note. First, as intimated above, it does appear that the weighting bias is most impactful in novel situations. Indeed Pietri et al. (2013) found that the weighting bias was strongly related to judgments regarding situations that college students were unlikely to have experienced (e.g., chasing tornados to take dramatic photos), while largely unrelated to those that they were likely to have encountered in the past (e.g., exposing oneself to the sun without sunscreen). It seems likely that once having experienced the situation, individuals can utilize what they learned from that experience and need not rely on valence weighting. Second, individuals appear to have difficulty reporting their valence weighting tendencies. For instance, when directly asked about the extent to which they weight positive versus negative information, individuals' self-reports did not correlate with their weighting tendencies as measured in BeanFest. Similarly, Pietri et al. found that the weighting bias does not overlap with other self-report measures such as approach/avoidance temperament (Elliot & Thrash, 2010). As has been noted by many researchers, valence is often confounded with distinctiveness and diagnosticity (e.g., Skowronski & Carlston, 1989). Therefore, discerning and reporting their valence weighting tendencies may be particularly challenging for individuals. Measuring individuals' weighting tendencies via the attitude generalization task of BeanFest, on the other hand, is done behaviorally and utilizes novel stimuli that are experimentally associated with positive and negative outcomes and, hence, is free of any such confounds.

Thus although valence weighting tendencies have been established as a fundamental individual difference, when they are most likely to operate and have their largest impact remains largely unknown. The current research therefore seeks to address the following questions: Under what conditions is the weighting bias most likely to operate? Under what conditions is it most likely to have its largest impact? In addition, under what conditions might individuals deviate from their typical valence weighting tendencies? And, finally, what are the downstream consequences of acting on the basis of one's weighting bias?

Knowing when such valence weighing tendencies are most likely to operate provides not only conceptual clarity to the construct itself, but also a better understanding of when, how, and why such tendencies may prove beneficial to individuals. For example, it may be the case that this valence weighting bias allows for efficient decision processes that require relatively few resources, and therefore is especially pivotal when individuals need to make decisions under time pressure or other challenging circumstances. Once the conditions associated with the operation of valence weighting proclivities have been identified, it would then be important to demonstrate what the consequences of relying on such valence weighting might be.

Valence weighting in the formation of an initial evaluative response

Given that the process of distilling and integrating positive and negative features appears to occur across a number of domains, it seems that individuals are likely to become quite practiced at such valence weighting. As a result, individuals' valence weighting biases may facilitate their quick appraisal of a novel stimulus and the development of an initial attitude toward the stimulus. Under certain circumstances, this evaluative response may prove sufficient for behavioral decisions. That is, the initial appraisal resulting from the weighting bias may provide an acceptable default basis for action toward the object. One way of illuminating such a possibility is to consider the circumstances under which individuals' weighting proclivities might prove influential from the perspective of dual-process models.

Though there are many different flavors, dual-process models all have similar features. They all postulate a more spontaneous processing method that is often referred to as more automatic, intuitive, top-down, or "quick-and-dirty" (see Chaiken & Trope, 1999) as well as a second, more deliberative processing method, which has been described as more controlled, thoughtful, effortful, or bottom-up. The Motivation and Opportunity as DEterminants (MODE) model is one such model and is particularly relevant as its very focus concerns attitudes and the multiple processes by which they influence behavior (Fazio, 1990; Olson & Fazio, 2009).

As a dual-process model, the MODE model shares the characteristic postulate regarding spontaneous versus deliberative processing. It also argues for the possibility of "mixed processes" that involve a combination of automatic and controlled components. The spontaneous mode refers to an attitude-to-behavior process in which judgments or behaviors are a downstream consequence of an automatically-activated attitude. Once activated, the attitude biases construal of the object in the immediate situation. These immediate perceptions will determine behavior unless the individual engages in more deliberative processing that serves to override the initial response. Whether such deliberation is pursued then depends on individuals' *motivation* to engage in more