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ScienceDirect
Journal of Experimental Social Psychology 43 (2007) 319–326
Journal of Experimental Social Psychology
www.elsevier.com/locate/jesp

Positive and negative associations underlying ambivalent attitudes ☆

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Received 14 June 2005; revised 2 December 2005
Available online 2 May 2006

Abstract

In two studies, we compared the strength of positive and negative associations of ambivalent attitudes to those of nonambivalent attitudes. In Study 1, results from an implicit association task showed that, in contrast to nonambivalent attitudes, ambivalent attitudes were characterized by strong positive *and* negative associations. In Study 2 responses to ambivalent attitude objects were faster following a positive as well as following a negative prime, compared to a non-word prime, whereas for neutral attitude objects prime type did not influence response times. Results provide direct evidence for the assumption that both positive and negative associations of ambivalent attitudes are relatively strong. Implications for attitude strength and attitude structure are discussed.

Keywords: Ambivalence; Evaluative conflict; Attitude structure; Attitude strength; Affective priming; Implicit association measure

Lighting up one more cigarette, going for a run at 6 a.m., legislating abortion, restricting the number of immigrants: These diverse attitude objects have in common that they can evoke strong conflicting feelings. In contrast to the traditional idea that attitudes are either positive or negative there is now ample evidence that separate positive and negative evaluations can and do exist (e.g., Cacioppo, Gardner, & Berntson, 1997, 1999). Ambivalence can be defined as the simultaneous existence of strong positive *and* negative evaluations about the same attitude object (e.g., Thompson, Zanna, & Griffin, 1995). The concept of ambivalence fits with more general ideas about the structure of affect, suggesting that positive and negative affect can occur relatively independently (e.g., Ito & Cacioppo, 2001).

Definitions of ambivalence imply that ambivalent attitudes have a structure that differs from nonambivalent (univalent) attitudes. Univalent positive or negative attitudes result from strong associations between the attitude object and positive or negative attributes (Fazio, 1995). In the case of ambivalent attitudes, strong associations are also likely to be present. However, ambivalent attitudes are thought to have both strong positive *and* strong negative associations. In the present studies, we aim to show this in a direct way.

Ambivalent attitudes share several characteristics and consequences that differ from nonambivalent attitudes. For instance, ambivalence is associated with slow evaluations, low attitude stability (Bargh, Chaiken, Govender, & Pratto, 1992) and systematic processing (Maio, Bell, & Esses, 1996). In general, such effects are thought to result from a weak link between the attitude object and a corresponding evaluation. However, for ambivalent attitudes this explanation seems less appropriate. For instance, Bargh et al. (1992) suggest that the long evaluation latencies are due to the fact that presentation of an ambivalent attitude object activates both positive and negative associations. Both sides fight for attention (and evaluation) and this makes it harder to decide whether the object is positive or negative. A similar argument is used to explain why ambivalence is associated with an absence of automatic attitude activation effects.

☆ This research was funded by Grant 01412001 from the Netherlands Organisation for Scientific Research and the Netherlands Organisation for Health Research and Development, awarded to the second author. We thank Ap Dijksterhuis for his advice in developing the paradigm used in Study 2. We also thank Kirsten Ruys and Rob Holland for valuable comments on an earlier version of this manuscript.
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0022-1031/$ - see front matter © 2006 Elsevier Inc. All rights reserved.
doi:10.1016/j.jesp.2006.02.012

Generally, mere presentation of an attitude object (e.g., Flower) automatically activates the associated evaluation (Fazio, Sanbonmatsu, Powell, & Kardes, 1986). Although not tested directly, results from Bargh et al. (1992) suggest that ambivalence is one of the factors that moderate this automatic activation effect. Again, this is attributed to the idea that ambivalent attitudes have a specific associative structure with both strong positive and negative associations. To further investigate these ideas, we set out to directly test whether ambivalent attitudes are characterized by strong positive *and* negative associations.

When trying to assess ambivalence, most researchers rely on one of two types of measurement: 'Formula-based' indices of ambivalence and self-reports. The former requires participants to evaluate only the positive aspects of a stimulus, while ignoring the negative aspects and vice versa (Kaplan, 1972). These separate ratings are then combined into an index of ambivalence. For self-report measures, people are asked to indicate the degree to which they feel conflicted about a certain issue (e.g., Priester & Petty, 1996). Both types of measures have strengths and weaknesses (see e.g., Jonas, Brömer, & Diehl, 2000). Importantly, neither of the two types of measures directly assesses the degree to which the attitude is characterized by conflicting associations. Instead, strength of positive and negative associations is inferred from the equality and extremity of the given evaluations.

A study by Newby-Clark and colleagues (Newby Clark, McGregor, & Zanna, 2002) addressed the question about the strength of positive and negative associations more directly. They measured the speed with which participants gave their separate evaluations of positive and negative aspects on Kaplan-scales and submitted these evaluation latencies to an ambivalence-formula, intended to form an index of the strength in activation of the positive and negative associations. Their approach can be interpreted as a measure of the strength of conflicting associations. However, latencies in their study are likely to be a combination of the activation of the associations, and the time it takes to formulate the appropriate response on a Kaplan-scale. Conceptually, especially the first aspect is of interest. Therefore, with the present studies we aimed to provide more direct evidence that ambivalent attitudes are characterized by strong positive and negative associations. To do this, we compared the activation of positive and negative associations for ambivalent attitudes with those for univalent, positive and negative, attitude objects (Study 1) and neutral objects (Study 2). In Study 1, we used an implicit association paradigm to demonstrate that for ambivalent attitudes, positive and negative associations are comparable in strength. In Study 2, we used a priming paradigm that enabled us to distinguish ambivalent from neutral attitudes with respect to the strength of positive and negative associations.

Study 1

We used a variation on the Implicit Association Test (IAT; Greenwald, McGhee, & Schwarz, 1998) to investigate whether attitude objects to which people are ambivalent are characterized by equally strong positive and negative associations. In the IAT, people respond to words related to the attitude object and to unrelated positive and negative words. On different experimental blocks, the required response for the attitude object and valence words are either congruent (same key for, e.g., positive attitude object and positive valence words) or incongruent (same key for positive attitude object and negative valence words). We expected to obtain the standard effect for nonambivalent attitudes: Faster responses on congruent blocks than on incongruent blocks. In contrast, for ambivalent attitude objects we expected responses on the different blocks to be equally fast, reflecting that these attitudes have equally strong positive and negative associations.

Methods

Participants

Fifty psychology students (67% women, $M = 21$ years) from the University of Amsterdam completed the experiment in partial fulfillment of a course requirement.

Procedure

All tasks and instructions were administered on computers (iMac, 450 MHz), using Authorware 1.6 software. We used 15 in. monitors at a resolution of 800×600 pixels; refresh rate was 75 Hz. Stimuli were presented in 28-point Times New Roman font.

Participants learned the experiment consisted of several reaction tasks. They were instructed to be accurate and as fast as possible. To measure the strength of positive and negative associations for ambivalent and univalent attitude objects, participants completed three separate Single Target—Implicit Association Tests (ST-IAT; Wigboldus, Holland, & van Knippenberg, 2004), one for each type of attitude object. The ST-IAT differs from the original IAT in that it assesses associations of only one attitude category at a time instead of comparing two categories (e.g., Muslim vs. Christian). After completion of the ST-IATs, participants were thanked and debriefed.

Ambivalent and univalent attitude objects

Targets in this study were individually selected ambivalent and nonambivalent attitude objects. Preceding each ST-IAT, participants were instructed to think of an object that for them personally was ambivalent, positive, or negative, respectively. The attitude object they entered was then used as target in the subsequent ST-IAT.

Measure of positive and negative associations

In each ST-IAT, participants' task was to correctly categorize words that appeared in the center of the screen by pressing one of two keys (A or L). Words were general positive and negative words (e.g., pleasure, awful) and words representing the attitude object (e.g., meat, abortion). Each trial started with a 500 ms fixation point ("*"), followed by