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Conceptualizing Personal and Extrapersonal Associations

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Abstract

We recently introduced the term “extrapersonal associations,” and defined them as information that is available in memory but that does not contribute to one’s attitudes toward a given object (Olson & Fazio, 2004). Here we review our conceptualization of the term, contrast it to our conceptualization of attitudes as personal associations, and briefly summarize evidence that the Implicit Association Test, as it is traditionally employed, is influenced by extrapersonal associations. We discuss recent critiques of the concept and in so doing, elaborate upon the essence of the personal versus extrapersonal distinction. We conclude with speculations on the nature of extrapersonal associations, their origins, and relationship to attitudes.

Conceptualizing Personal and Extrapersonal Associations

Our minds are brimming with cognitions, the very things that shape our perceptions, coalesce into judgments, and guide action. Far from lying inertly inside our skulls, cognitions, some acquired through direct experience and some a vestige of passive socialization processes, are springboards for engaging in the world…most of the time. Although cognitions incontrovertibly matter, some matter more than others. Specifically, we have argued that some associations in memory form the basis of attitudes that through various processes influence perceptions, judgments, and actions. Others, which we have called "extrapersonal" associations, are available in memory, but do not inform one's attitudes (Olson & Fazio, 2004; Han, Olson, & Fazio, 2006). Our distinction has proven more contentious than we ever expected (e.g., Gawronski, Peters, & LeBel, 2008; Nosek & Hansen, 2008). Our primary goal for the present article is to provide further clarification of the distinction. In so doing, we also aspire to sway the reader to the position that the concept of extrapersonal associations is valuable, and even necessary, on both theoretical and empirical grounds.

Some Background and Context

Early forays into implicit measurement had little to do with issues of awareness and consciousness. Instead, this research was focused primarily on assessing the automaticity of attitudes and sought to provide a means of identifying attitudes that could be considered relatively strong (e.g., Fazio, Sanbonmatsu, Powell, & Kardes, 1986). At the time, automaticity was a novel approach to the study of attitude strength, and the concept served theories of attitude-behavior relations well in describing moderators of the extent to which attitudes guide judgments and behavior (Fazio, 1990). Early research using evaluative priming techniques, for

example, confirmed that some attitudes were strong enough to be activated automatically upon mere presentation of the attitude object (Fazio et al., 1986). Even though the task context provided no reason to consider one's evaluation of the object, presentation of, for example, "puppies" automatically evoked more positivity than did presentation of "cockroaches." Moreover, attitudes marked by such accessibility have been found to more reliably relate to judgments and behavior, particularly when one lacks the motivation and opportunity to act in ways other than what would be implied by one's attitudes (for a review see Olson & Fazio, in press).

In a similar manner, the research introducing the IAT included demonstrations of its ability to assess strong attitudes with known valences (Greenwald, McGhee, & Schwartz, 1998). Clearly, people prefer, for example, flowers to insects, and sure enough, the IAT reflected this, just as it showed that Koreans prefer Koreans and Japanese prefer Japanese. And, not surprisingly, implicit and explicit measures converged in many of these studies. Indeed, recent meta-analyses of hundreds of IAT studies conducted to date indicate that the IAT tends to agree with explicit measures in socially innocuous domains, so long as they are measuring attitudes toward the same object (Nosek, 2005). This is consistent with our view that implicit measures of attitudes generally provide an index of the strength of the attitude, typically its automaticity, not its 'implicitness' in the sense of the attitude's imperviousness to awareness. These findings are also consistent with the perspective that factors that influence honest responding on explicit measures (e.g., social desirability issues), do a considerable job explaining implicit-explicit dissociations (e.g., Olson, Fazio, & Hermann, 2007; see Fazio & Olson, 2003a for a review).

Given our assumptions about the nature of the constructs tapped by implicit measures, we found ourselves perplexed by a number of IAT findings as they appeared in the literature. For

example, smokers were presumed to harbor negative views of smoking at the implicit level (Swanson, Rudman, and Greenwald, 2001), and heavy drinkers appeared to feel negatively toward alcohol (Wiers, van de Luitgaarden, van den Wildenberg, & Smulders, 2005). People appeared to overwhelmingly prefer apples to candy bars when our own tastes and intuitions would suggest otherwise (Karpinski & Hilton, 2001). Whites' prejudice against Blacks was much more rampant than previous research would have suggested, with upwards of 90% evidencing implicit prejudice on the IAT (Nosek, Banaji, and Greenwald, 2002). Furthermore, Blacks and other low status groups appeared not to abide by the seemingly universal principle of ingroup favoritism. Instead, most IAT data suggested that Blacks do not prefer Blacks over Whites implicitly (e.g., Nosek et al., 2002).

Enter theories of "dual attitudes" (Greenwald & Banaji, 1995; Wilson, Lindsey, & Schooler, 2000). According to such models, an active unconscious lies beneath the surface, within which a class of attitudes impervious to conscious insight resides. These "implicit attitudes" may stem from different sources than their conscious, "explicit" counterparts, operate through different processes, and arrive at different conclusions. When explicit and implicit measures revealed different attitudes, these theories provided an explanation not only in terms of motivational biases shaping reports on explicit measures, but also in terms of separate attitudinal systems—implicit and explicit. Blacks, for example, may explicitly prefer Blacks to Whites, but unconsciously harbor negativity toward their own group out of a need to justify their own low status (e.g., Jost, Banaji, & Nosek, 2004). People may harbor negative self-views that stand in stark contrast to their self-reported positive self-esteem (e.g., Koole & Pelham, 2003). And perhaps people do, unconsciously, prefer apples to candy bars—they just do not know it. In other words, in cases where explicit-implicit dissociations were observed, or surprising IAT

findings merged, there was now theoretical grounding to make a case for the operation of an implicit attitude.

We certainly appreciate that attitudes can be implicit in the sense of their having origins of which individuals are unaware (e.g., Olson & Fazio, 2002). However, our view differed from those who seemed to conclude that a given surprising (or socially undesirable) finding on the IAT was direct evidence of some heretofore hidden implicit attitude. Largely our skepticism was based on how IAT findings contrasted with those from priming measures of attitudes. For instance, while IAT data suggest that smokers implicitly dislike smoking and Blacks implicitly dislike themselves, data from priming measures indicated something less surprising—that smokers do show automatic activation of positivity in response to cigarettes (Sherman, Presson, Chassin, Rose & Koch, 2003), as do Blacks to members of their own group (Fazio et al., 1995). And while prejudice is rampant according to IAT findings, priming measures estimate that automatic negativity toward Blacks among college students hovers at around 50% (e.g., Olson & Fazio, 2003). Also, candy bars appear to sell better than apples.

These discrepancies led us to propose that the IAT, in addition to revealing evaluative associations that do meet the criteria for attitudes, also assess something else: extrapersonal associations (Olson & Fazio, 2004; Han et al., 2006). However, before delving into our view of extrapersonal associations, we first describe our view of attitudes.

Attitudes as Personal Associations

Attitudes summarize one's evaluative reactions to a stimulus object. We have described them as "object-evaluation" associations in memory (e.g., Fazio, 1995). That is, of the hedonically meaningful objects represented in memory, each is associated with an evaluation that provides a functional "ready-aid" summary of the object—good, bad, neutral, etc. Notably,

this definition does not include *any* association in memory that is somehow linked to a given object. Our past treatments of the concept have been clear in describing this association as a summary – one that captures the individual's expected likelihood of benefit (or harm) when interacting with the attitude object. The strength of this object-evaluation association is meaningful such that stronger attitudes have stronger object-evaluation associations in memory, and hence, are more likely to be activated automatically upon perception of the attitude object (Fazio, 2001). What becomes activated is one's idiosyncratic evaluation of an object (Fazio, 1993), and such activation is functional to the individual, as it can affect attention, construal, and behavior toward the object (see Fazio & Olson, 2003b, for a review). In order to arrive at a decision as to how to behave upon encountering an attitude object, perceivers need not review the list of its features represented in memory; they need only consult their summary evaluation.

The question of what enters into this summary evaluation is a matter of the origins of attitudes themselves, which we certainly will not attempt to review exhaustively. However, central to most discussions of the origins of attitudes is the principle that attitudes are functional (Fazio, 2000; Katz, 1960; Maio & Olson, 2000). That is, an individual is assumed to be motivated to have accurate attitudes, ones that reflect the reality of the world around, and that promote his or her successful function by leading to approach and avoidance decisions that maximize positive and minimize negative outcomes. In other words, attitudes are inherently idiosyncratic and "personal." As a consequence of varying skills, value systems, hereditary factors, and the like, one person's social reality does not perfectly cohere with another's.

One's direct experience with an attitude object and the positive and negative outcomes the object promotes is a pervasive source of particularly strong attitudes (e.g., Fazio & Zanna, 1981). Similarly, albeit less directly, attitudes can develop through a motivated process of

information-seeking, where the values of attributes of a given object are studied and combined in various ways to arrive at a summary evaluation (e.g., Fishbein & Middlestadt, 1995). Still less directly, attitudes can develop via social influence processes, where one accepts the attitudes of some relevant reference group (Newcomb, 1961). What these sources have in common, however, is the development of a "ready aid" that eases decision-making by lessening the need for effortful deliberation and yet steers those decisions in a direction that promotes individuals' functioning and well-being. Of course, some positively evaluated objects can engender negative long term outcomes, a point not lost on most smokers, just as negatively evaluated objects can promote such an avoidance that their positive attributes are never learned (e.g., Fazio, Eiser, & Shook, 2004). And, a host of biases in information processing further chip away at our ability to be perfectly accurate (e.g., Nisbett & Ross, 1980). Still, the attitudes acquired through the above processes are the result of a given individual's motive to survive and function in the world, however imperfectly accurate the resulting attitudes may be.

Importantly, such summary evaluations can develop directly without deliberative reasoning. There has been a recent surge of interest in the less thoughtful and more associative processes that create attitudes (e.g., Olson & Fazio, 2001; Rudman, 2004). Passive socialization experiences, for example, are a pervasive source of attitudes. Evidence suggests that such attitudes may stem from the learning of covariations present in one's environment (De Houwer, Thomas, & Baeyens, 2001). These cases of "evaluative conditioning" entail the encoding of an association, not between some attitude object and some other object, but between an attitude object and a valence (see Jones, Fazio, & Olson, in press, for a model of the underlying mechanism). In cases where evaluative conditioning occurs implicitly, that is, without conscious

detection of covariations, an evaluative summary is created directly, in the absence of an inference process; the association become one's summary evaluation.

Such associative learning helps to explain culturally pervasive attitudes, from American children's near-universal liking of all things McDonalds to the pervasive prejudice that many harbor against African-Americans, Muslims, and gays. Presumably, depictions of McDonalds' food and African-Americans in the media and other cultural vehicles are systematic enough to be detected implicitly, without intention or effort, resulting in attitudes that reflect the world the perceptual system detects. The problem is that while these implicit processes are smart enough to detect regularities in the environment with very little effort and only a minimum amount of attention, they are probably not smart enough to differentiate fictional television shows from the real world (Dijksterhuis & Nordgren, 2006). Irrespective of the extent to which they reflect truth versus fiction, it is as a consequence of such associative learning mechanisms that people can develop attitudes whose origins are unknown at a conscious level .The attitude is formed without any reliance on deliberate reasoning processes.

Extrapersonal Associations

Through the process of consciously deciding upon attitudes about which one's conscious mind has a say, some information is deemed irrelevant. That is, it does not contribute to one's summary evaluation (e.g., Fishbein & Ajzen, 1975; van der Pligt, de Vries, Manstead, & van Harreveld, 2000). One author's recent decision to buy a digital camera, for example, involved consideration of many relevant features: mega-pixels, zoom capabilities, size, and speed, to name a few. After attitudes toward various cameras were formed and the final decision was presumably made, the author was confronted with a final factor that he was not expecting. It happened to be the case that the author's spouse was skeptical of the particular brand of camera

he was considering. His spouse, however, was wrong, as consumer surveys showed it to be one of the most reputable in the business. Fortunately, the author reminded himself that he is the one who reads the electronics magazines and was easily able to continue with his purchase despite her ill-founded reservations. Thus, those reservations had no impact on his attitude toward the camera, although he remained perfectly aware of his spouse's negative assessment and remembered it weeks later.

To extend the point further, others' opinions can sometimes be seen as cause to adopt a view *opposite* theirs. The case of the recent camera purchase continues to serve as an example because the authors' spouse is a techno-phobe and prefers electronic devices with few features and even fewer buttons. In the process of reviewing various purchase options, this spouse would excitedly identify very simple cameras as potential contenders. The author would then quickly develop negative views of these same cameras simply as a function of learning that his spouse liked them. In this case the source was regarded as so dissimilar (at least as far as appreciation for camera complexity goes) that her positive endorsement was a cue for the development, not of a positive attitude, but of a negative one. Our sense is that the adoption of opposite views of dissimilar others is relatively common when politicians whom we dislike endorse a given policy.

It is not surprising then, that as attitudes form, some attributes are weighed more heavily than others, and some receive no weight at all. When we reason about our overall evaluations, some knowledge is deemed of low importance (a camera's color), some is considered absolutely irrelevant (a spouse's ill-informed views on camera brands), and some is considered reason to adopt the opposite viewpoint (e.g., a spouse's preference for simple cameras is opposite one's own preference).

Similarly, if an attitude were to be based solely on associative learning, surely not all exposures are equivalent. Just as some attributes of known objects are not attitudinally relevant, some associations in memory are not attitudinally relevant; they do not form the basis of one's attitude. Say, for example, every time we have entered a room with elaborate floral-patterned wallpaper we have recoiled in disgust—we just do not like the stuff. This response is based, not on any deliberative reasoning about the aesthetics of floral wallpaper, but on our own affective reactions,. Our mother, as it turns out, does like the stuff. Through our lifetime, we observed many instances in which her delight with floral patterns was obvious. Yet, our own consistently experienced distaste is undeniable. Thus, her preference for floral wallpaper is irrelevant to our attitudes, despite our repeated exposure to her positivity.

It was in light of such considerations that we introduced the term "extrapersonal associations." We noted that they are "associations that do not contribute to one's evaluation of an attitude object and thus do not become activated when one encounters the object," and that they "are available in memory but are irrelevant to the perceived likelihood of personally experiencing a positive or negative outcome on interaction with the attitude object" (Olson & Fazio, 2004, p. 653). In the camera and floral wallpaper examples, extrapersonal associations came about merely as a function of having knowledge of another's attitude that differs from one's own. Considered this way, it should be obvious that we all have many extrapersonal associations available in memory. Some of us like chocolate, and others like vanilla, and we often entertain knowledge of others' attitudes without second-guessing our own.

In more extreme cases, one's attitude differs from a modal cultural belief. However, the principle is the same—one has knowledge of others' attitudes that differ from one's own, but here the others' attitudes comprise a cultural norm. Peanut allergy sufferers, who must

constantly scan their food-environment for the presence of peanuts and peanut oil, often find themselves in this position when surrounded by friends ordering dishes with peanut sauces at Thai restaurants. Culture is no doubt a deep well of attitudinal influence, but individual experiences can differ from the norm and something as vague and monolithic as "culture" cannot influence each of its inhabitants equally (Banaji, 2001). Thus, attitudes are necessarily based upon a subset of experiences and knowledge.

Extrapersonal Associations & the IAT

Here we briefly highlight some points from our work demonstrating the influence of extrapersonal associations on the IAT (see Olson & Fazio, 2004; Han et al., 2006). First, our point was not to "throw the baby out with the bathwater." Clearly the IAT is capable of assessing meaningful personal attitudes and is reliable predictor of behavior, particularly in socially sensitive domains (Greenwald, Poehlman, Uhlmann, & Banaji, in press). However, no measure is process-pure, and we suspected a systematic source of bias was present in the IAT based on the counter-intuitive findings we reviewed earlier, as well as the following reasoning: in solving the category mapping problem posed by the IAT categorization task, respondents process the stimulus items in accordance with a goal to correctly categorize them. The items themselves are processed little beyond what it takes to make the appropriate categorization, which means that it is associations to the category labels themselves that the IAT primarily assesses (De Houwer, 2001). This feature of the IAT, in our view, provides an opportunity for any associate to the category, be it attitude-relevant or otherwise, to be activated and influence responding. Given that the usual attribute labels are "Pleasant" and "Unpleasant" (or Good/Bad), extrapersonal associations that in some way involve these attributes would be particularly likely to be activated (e.g., knowledge of others' attitudes).[1]

A “personalized” IAT was developed to reduce the impact of extrapersonal information (Olson & Fazio, 2004). Chiefly, this involved changing the attribute category labels from “Pleasant” to “I like” and “Unpleasant” to “I don’t like” (although additional changes like the use of non-normative attribute items and the removal of error feedback were made in earlier studies). Our reasoning was that such label changes would limit the activation of valenced knowledge to that which is summarized by one’s own attitudes.

We have now conducted several studies comparing the traditional to the personalized IAT. Consistent with our reasoning that the rampant negative portrayal of African-Americans in the popular media makes readily available negative extrapersonal associations of Blacks, we found that mean prejudice estimates were more negative for the traditional compared to the personalized IAT (Olson & Fazio, 2004, Experiments 1 & 2). Given the positive portrayal of apples compared to candy bars, we also expected and found that the traditional IAT reflected strong positivity toward apples compared to candy bars, whereas the personalized IAT’s results were more equivocal (Experiment 3). More importantly, the personalized version predicted actual apple and candy bar consumption among respondents, but the traditional IAT did not. A similar pattern of results was found when political candidates were used as attitude objects (Experiment 4).

In more recent work, we provided experimental evidence for the influence of extrapersonal associations on the traditional IAT (Han et al., 2006). In these experiments, participants were led to develop attitudes toward two novel objects. Then, some were exposed to extrapersonal information, a video of two children discussing the objects and extolling obviously inaccurate information about them. Despite the fact this extrapersonal manipulation did not influence their own self-reported attitudes, attitude estimates based on a priming measure, or the

personalized version of the IAT, the manipulation did influence the traditional IAT. It strikes us as unlikely that a piece of obviously incorrect information that has no impact on self-reported attitudes, the evaluation that is activated in response to primes of the attitude object, or the personalized IAT, could be considered a valid attitudinal influence based on the results of the sole measure that detected it. Instead, we find it more reasonable to conclude that not all information influences attitudes equally, and that the traditional IAT is less capable than other implicit measures of discriminating between these different classes of information.

Ultimately, the essential difficulty with the traditional IAT centers on the malleability of the evaluative labels "Pleasant/unpleasant." Pleasant or unpleasant for whom? Whose perspective is to be considered? Indeed, recent research indicates that this issue of perspective is so malleable within the traditional IAT that it can be affected by a previous experience in a completely unrelated task (Han & Fazio, 2008). Participants in this research were subjected to a subtle manipulation designed to shift how they interpreted the meaning of the traditional IAT labels prior to completing the IAT itself. The manipulation consisted of a simple questionnaire in which participants rated how much "I like/don't like" or "People like/don't like" various attitude objects (none of which related to race). The expectation was that the two versions of the questionnaire would produce a personal and a normative focus, respectively. Consistent with Olson & Fazio's (2004) finding of greater prejudice on the traditional versus the personalized IAT, participants appeared more prejudiced on the traditional IAT when they completed it following the adoption of a normative versus a personal mindset. In short, a questionnaire administered in what was presented as a distinctly separate experiment had a carryover effect: it affected how participants interpreted the IAT's category labels. It is for this very reason that focusing the IAT by personalizing it is so beneficial.

Recent evidence from other researchers lends support to our view that the personalized IAT reduces the impact of extrapersonal associations. For example, De Houwer, Custers, and De Clercq (2006) reaffirmed that the traditional IAT portrays smokers as implicitly negative to their habit, but more importantly, data they collected from a personalized IAT indicated that smokers do indeed exhibit positive automatic responses to smoking. Similarly, Houben and Wiers (2007) recently found that heavy drinkers implicitly show positivity to alcohol on a personalized IAT, contrary to earlier traditional IAT data.

Recent Critiques of the Extrapersonal Concept

Some authors have questioned our definition and have sought greater clarity on how extrapersonal associations might best be defined. Gawronski, Peters, and LeBel (2008), for example, recently offered a review of possible definitions of the extrapersonal concept. These authors do a laudable job of weighing the potential costs and benefits of a variety of potential criteria. One that we agree can quickly be ruled out involves the concept of endorsement. According to this view, attitudes that are not consciously endorsed would be considered extrapersonal. We explicitly rejected this possibility in our original article when noting that "we do not make the additional assumption that the personal-extrapersonal distinction necessarily corresponds with individuals' acceptance or endorsement of the association" (Olson & Fazio, 2004, p. 656). Hence, we concur with Gawronksi et al.'s argument that such a criterion would be overly exclusive, for a number of unwelcome attitudes typically reside in each of our minds. Smokers, for example, may disapprove of their own habit and wish to quit despite their strong positive reactions to the sight of a cigarette. In our own work we consistently have found that some Whites harbor negative automatically-activated attitudes toward Blacks, but have qualms about doing so. They do not endorse their automatically-activated negativity and are motivated

to control prejudiced reactions. When opportunity allows, such motivated individuals often attempt to correct for the influence of their automatically-activated attitudes on race-related judgments and behavior (see Olson & Fazio, 2008, for a review).

A similar criterion that Gawronski et al. quickly reject is that of origin; one might for example, make the argument that personal and extrapersonal associations stem from personal experience and cultural influences, respectively. It should be clear from our earlier discussion of the origins of attitudes that we agree with these authors, as well as Banaji (2001) and others (e.g., Nosek & Hansen, 2008) who have argued that there is no "bright line" between self and culture, that such a criterion is indefensible (see also Banaji, Nosek, & Greenwald, 2004). Indeed, one of the very aims of the research that we described earlier by Han et al. (2006) was to demonstrate that extrapersonal associations need not reflect cultural or normative considerations, but instead could arise from the remarks offered by a specific source.

Gawronski at al. (2008) also consider whether personal and extrapersonal associations may be represented differently in memory (see Nosek & Hansen, 2008, for a related argument). This issue of representation comes closer to our view that the extrapersonal associations do not contribute to one's summary evaluation of an object. Recall our view of attitudes as object-evaluation associations, an association that summarizes hedonically relevant reactions to the object. It is the personal associations in one's memory, in our view, that contribute to one's summary evaluation of a given object. Gawronski and colleagues appear to take an overly inclusive view of the object-evaluation association, considering *any* association to the object as an object-evaluation association, which would make a representation criteria for distinguishing personal and extrapersonal associations difficult to maintain. The definition of the object-evaluation association that we have espoused for years and reviewed here should provide the

level of specificity that Gawronski and colleagues seek. Further specification of how personal versus extrapersonal associations are represented in memory may be informed by models that posit "links" or "tags" to attitudinally-relevant information (e.g., Petty, Briñol, & DeMarree, 2007). Tentatively, we might speculate that in contrast to personal associations, extrapersonal associations sometimes may be tagged with a source, thus specifying that the association is not one's own.

Next, they consider the possibility that the characteristic of automatic activation might distinguish personal from extrapersonal associations. The authors make the excellent point that some attitudes are not particularly strong and hence are not activated automatically, but would be considered extrapersonal according to this criterion. However, this would only be the case if the criteria these authors discuss are treated independently. We would argue that automatic activation of an evaluative response is not necessary but is sufficient for an association to be deemed a personal one. We also maintain that extrapersonal associations are not automatically activated by mere presentation of the attitude object. Indeed, a wealth of empirical findings indicate that one's personal evaluation is evoked by the object, even though that attitude might differ from the general consensus (e.g., Bessenoff & Sherman, 2000; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Fazio 1993; Fazio et al., 1986, 1995: Sherman et al., 2002). This is not to say that extrapersonal associations are incapable of automatic activation, but simply that their activation requires linkages in memory other than an object-evaluation association. Shortly, we will consider how extrapersonal associations, on some (perhaps rare) occasions, might be automatically cued by relevant environmental triggers.

Gawronski et al. next consider function, a criterion that resonates well with what we have argued here. Indeed, one would be hard-pressed to find an attitude that did not serve some

function. The authors criticize this criterion as overly inclusive, noting that people often follow cultural norms for the same functional reasons they follow their own attitudes. Again, we would argue that entertaining this criterion as the single distinguishing factor provides it with incomplete treatment, as attitudes are not the only tools in the cognitive box that facilitate adjustment to a complex social world.

The authors also question the utility of a function criterion because, as they argue, it is often impossible to determine a priori what is functional to the individual in that goals can vary from situation to situation: "one and the same behavior can lead to positive or negative outcomes, depending on the particular goal that is used to evaluate the behavior" (p. 10). We would argue that goals affect the construal of attitude objects in any given situation and that those specific construals dictate the resulting attitudinal response (see Fazio, 2007, for elaboration of this issue). Thus, the functional value of attitude activation is necessarily situated within a context that includes the consideration of immediate motivational goals. We continue to maintain that personal associations fulfill this situated role better than extrapersonal associations.

In sum, let us reiterate that our reasoning regarding the distinction between personal and extrapersonal associations "rests squarely on the view of attitudes as associations in memory between the attitude object and one's summary evaluation of the object" (Olson & Fazio, 2004, p. 655). Attitudes are summaries of expected consequences of interacting with the object. Information related to a given attitude object may or may not have contributed to one's summary evaluation. It is in this sense that personal and extrapersonal associations are represented differently in memory. Attitudes derive from personally relevant associations. Particularly to the extent that the attitudes are strong and capable of automatic activation, they fulfill the attitudinal functions of guiding attention, construal, judgments, and, ultimately, behavior toward objects.

Although they may be shared with others (Bargh, Chaiken, Govender, & Pratto, 1992), they are one's own idiosyncratic evaluative response to an object and sometimes deviate from the general consensus (Fazio, 1993). As we have argued, these features—function, representation, and automatic activation, are more than mere items on a list of possible features of personal associations. They are an internally consistent conceptualization of the attitude concept that includes its powerful functional role in influencing judgments and behavior and that recognizes the (to us) incontrovertible assertion that some information contributes to the particular attitudes that individuals develop, whereas other information does not.

Indeed, we would be utterly shocked if anyone – scientist or layperson – could not, after reading just a few pages of this paper, easily identify an attitude for which they have a clear and obvious extrapersonal association. As Gawronski et al. note, we did refer to the distinction between personal and extrapersonal as being characterized by "some conceptual fuzziness." However, what is fuzzy is not the existence of extrapersonal associations, their definition, or an individual's generation of fitting examples. The fuzziness we noted is with reference to the perspective of an outside observer: "it is difficult to discern whether any given piece of information has contributed to the attitude or not" in that "what is extrapersonal information for one individual can form the very basis for another individual's attitude" (Olson & Fazio, 2004, p. 659). It was for this very reason that we pursued an experimental approach in the Han et al. (2006) research summarized earlier. Objectively accurate attitudes toward novel stimuli were created experimentally in the laboratory on the basis of evaluatively unambiguous attribute information. Later, after participants were induced to consolidate this information and to rehearse and express their attitudes, a source offered objectively erroneous and unsubstantiated statements that contradicted all the previous attribute information that had served as the bases for

those attitudes. With such experimental control, we could be confident that the source's observations constituted extrapersonal information – knowledge that did not contribute to the participants' attitudes. The knowledge did, however, yield a disparaging view of the source's intelligence, as evidenced by the unfavorable trait ratings that participants provided.

We suspect that the incredulity with which the source's obviously invalid statements were met in this research represents a common mechanism underlying the differentiation of personal and extrapersonal information. Remarks that contradict our attitudes are often met with explicit rebuttal, silent disapproval, or sheer resignation ("well, you're entitled to your opinion"). As a result, such instances serve to re-affirm one's own attitude and to strengthen the object-evaluation association. They amount to yet further attitude rehearsal and expression, enhancing the likelihood that the associated personal summary evaluation will be activated automatically the next time the object is encountered (Fazio et al., 1986). In other words, consciously noting one's attitude, be it in the process of reacting to others or in response to the need for a behavioral decision, has consequences for the strength of these clearly personal associations.

Such a conclusion is perfectly compatible with recent models that have adopted a dual systems approach to attitudinal representations (e.g., Gawronski & Bodenhausen, 2006; Smith & DeCoster, 2000; Strack & Deutsch, 2004; Wilson, Lindsey, & Schooler, 2000), To our knowledge, no dual systems model views the systems as operating in complete independence. Instead, there is "communication" between the two. Associations represented in long-term memory provide elements for reflection, and over time the conclusions reached via such reflection can come to be represented as associations in memory. For example, according to Strack and Deutsch's (2004) Reflective-Impulsive Model (RIM): "…associative links can be formed through reflective operations. This is possible because every propositional representation

in the reflective system activates corresponding contents in the impulsive system. As a result, elements…often related to each other in the reflective system will also become associatively linked in the impulsive system…concepts will emerge in the impulsive system through frequent propositional categorizations" (p. 224).

It is through interplay of this sort that personal associations can come to enjoy an advantage in memory over extrapersonal associations and can, in effect, come to be represented differently in memory. As a consequence of their previous expression and use, one's own attitudes are more likely to be activated when the object is encountered than is extrapersonal knowledge. Contrary to the view seemingly advocated by some (e.g., Nosek & Hansen, 2008), we do not believe associative knowledge to be a collection of independent and unprioritized elements lacking for any integration and structure. Over time, the interplay noted by the dual systems theories (and demonstrated in early research on automatic attitude activation) makes some associations markedly stronger than others. Associations that summarize one's previous reasoning and decisions regarding the value of an object, as well as the outcomes one has experienced upon interacting with the object – the necessarily personal associations that comprise attitudes – will come to occupy a different status in memory than will more singular elements of information that have been dismissed as contrary or irrelevant to one's attitudes. To us, this role for attitudes is the hallmark of a truly functional system by which learning and memory guide behavior in a fruitful direction.

Questions to Consider

We had no intentions of opening a Pandora's box upon coining the term "extrapersonal associations," but it excites us that ours and others' consideration of the concept has prompted some interesting questions that we think are worthy of future pursuit.

A fundamental question has to do with how extrapersonal associations originate. Intuitively, it seems easier to imagine acquiring an extrapersonal association explicitly and consciously as opposed to implicitly or unconsciously. I can, for example, easily and consciously reject the assertion as false were I to overhear someone claim "I think chocolate tastes bad." However, it is a bit more challenging to imagine how an association that enters the mind implicitly might assume an "extrapersonal" nature. Indeed, Gilbert, Krull, and Malone (1990) provide evidence that encoded information is accepted as true by default, and that one must revisit information consciously to tag it as "not true." This reasoning might suggest that extrapersonal associations must be acquired consciously, and that all information that is learned implicitly must be personal.

Although such a view might be tempting (see Nosek & Hansen, 2008), we suspect that it is possible to acquire extrapersonal associations implicitly. Consider the earlier example of our mothers' preferences for floral wallpaper. One might have been exposed, perhaps as a child, to many instances when this preference was expressed, and these associations may have been learned incidentally, without intention. Further focusing on the nature of the association itself, we speculate that it would likely be represented in memory as an association between "mother" and "floral wallpaper" and would probably not have produced any coupling of the self to the evaluative response. In other words, such exposure, in and of itself, would have been more of an exercise in person perception and impression formation than attitude formation. On the other hand, if we were passively exposed to simple associations between floral wallpaper and "positive," then a personal association might be more likely to arise. The difference between the extrapersonal and personal associations would be the presence of a clear source, "mother," designating the association as belonging to her and not the self. In the absence of a salient

"other" (i.e., an actor other than the self), the associations to which one is exposed may begin to resemble evaluative conditioning (De Houwer et al., 2001; Jones et al., in press), and in turn influence one's own attitudes.

However, this distinction between evaluations that are or are not unitized to a source may not be fully adequate. Further theoretical complications arise upon consideration of the implications of research on spontaneous trait transference. When one person describes a trait-implicating behavior of another, the communicator is also seen as possessing more of the trait he or she is describing (e.g., Skowronski, Carlston, Mae, & Crawford, 1998). A variety of research findings indicate that this outcome stems from a mindless associative process rather than a conscious attributional inference (Carlston & Skowronski, 2005). Although spontaneous trait transference work concerns trait associations and not attitudes, the implication is that some association between floral wallpaper and positivity may be promoted simply as a consequence of their being simultaneously active in working memory.

We would speculate that the outcome of passively observing one's mother's delight with floral wallpaper may depend on the strength of one's attitude. If our own attitude toward floral wallpaper is weak or non-existent, then our mothers' praise for it may be functionally equivalent to an evaluative conditioning trial, meaning the association between it and praise may be passively encoded and contribute to one's own evaluation. If, however, one's preference is already well-developed, then overhearing praise for something that one dislikes may be noticed, questioned, and in all likelihood, countered and dismissed consciously. Even if conscious rejection were not to occur, however, this stronger attitude is likely to be automatically activated by the incident. Thus, perceiving one's mother's enthusiasm for floral wallpaper means not only that positivity and wallpaper are simultaneously active in working memory, but also one's own

negative attitude. The activation of one's own attitude should negate the development of any positive association to floral wallpaper. The end result would be the development of the person perception link (mother and floral wallpaper) without any impact on one's own liking for floral wall paper. This reasoning leads us to speculate that the critical factor determining whether a perceived association may be passively encoded in an extrapersonal manner is the likelihood of automatic activation of one's own contrary attitude within that context.

Another set of questions that occur to us has to do with the strength of extrapersonal associations. Could an extrapersonal association be strong enough to be automatically-activated upon encountering an object? For example, could the scent of "Obsession," an ex's favorite fragrance, on an unknown passerby automatically activate the association between "my ex" and said perfume? We suspect so, as one would likely have been exposed to many instances of one's ex donning the perfume. Similarly, inhabitants of any region of the country where fanaticism toward a particularly sports team is rampant are constantly being reminded of their neighbors' preferences. Whether one's own attitudes are influenced by such norms is one matter, but we would speculate that the sight of a "Power T," an oversized "O" or any other well-known team symbol is enough to spontaneously remind us that we are in "Vols country" or "Buckeye territory" and so on. We would clarify, however, that what is automatically-activated is not an evaluative response. Instead, we would argue that a social target is activated—a subject—and his, her, or their association to the environmental trigger.

Of course, sports team fanaticism appears to be a contagious disease. In other words, it would appear that some associations might begin as "extrapersonal," but over time can become "personal." Surely this is possible. My neighbor's support for President Bush may not budge my own attitude in the slightest. However, social influence unquestionably occurs. Perhaps if

1000 of my neighbors bore Bush stickers on their cars, I might doubt the accuracy of my own attitudes, in which case those associations might be considered as possible candidates to become personal through normative influence (e.g., Wood, Pool, Leck, & Purvis, 1996). But as it stands, many of us have attitudes that disagree with others', and the knowledge of these others' contrary views makes that information extrapersonal.

Conclusion

By retracing the birth and the short history of the term extrapersonal associations, we hope to have convinced readers that the concept is not only useful and viable, but also essential to any understanding of the bases of attitudes. It is exciting to us that our early foray into exploring what seemed to be curious IAT findings has come to focus on (and revisit) questions that have long been central to attitude theory and research. How do attitudes form, and what information contributes to the development of a positive or negative association to an object? What informational bases are responsible for a given object automatically evoking a positive or negative evaluation? Our belief is that the concept of extrapersonal associations both informs these age-old questions and is informed by the literatures that these questions have generated.

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Footnote

1. In our earlier work, we also reasoned that the use of normatively positive and negative attribute items (e.g., “love,” “bombs”) and the provision of error feedback after each block further encouraged the activation of extrapersonal associations (Olson & Fazio, 2004), but later work revealed that the ambiguity of the category labels with respect to the evaluative perspective was primarily responsible for the activation of extrapersonal knowledge (Han et al., 2006).