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# 7

## Operative and Meta-Attitudinal Manifestations of Attitude Accessibility Two Different Constructs, Not Two Measures of the Same Construct

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Psychology has a long history of studying the workings of the human mind by asking research participants to describe their thoughts, feelings, and preferences. In the arena of attitude research, the most popular measures have relied on participants to describe their evaluations of objects via explicit measures (e.g., Likert, 1932; Osgood, Suci, & Tanenbaum, 1957; Thurstone, 1927a, 1927b). In contrast, researchers in many areas of psychology have gauged psychological processes and constructs indirectly, often by observing behaviors in a controlled environment (e.g., Bargh, Chen, & Burrows, 1996; Lieberman, Solomon, Greenberg, & McGregor, 1999). In the attitude domain, recent years have seen a surge of interest in implicit measures, such as the Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998), Payne, Cheng, Govorun, and Stewart's (2005) affect misattribution paradigm, and Fazio's (1995) affective priming paradigm. These measures typically involve assessing aspects of task performance that are not under conscious control and that do not make participants overtly aware that their attitudes are being measured. Researchers interested in assessing attitudes have studied this distinction extensively (e.g., Fazio, Jackson, Dunton, & Williams, 1995; Greenwald & Banaji, 1995; Greenwald et al., 2002).

Paralleling the distinction between explicit and implicit measures of attitudes is a similar distinction in the attitude strength arena of "meta-attitudinal" (MA) versus "operative" (OP) indices. MA measures have been defined as people's "impressions of their own attitudes," whereas OP measures are measures that are "linked to the judgment processes responsible for attitude responses" (Bassili,

1996, p. 638). Our goal in this chapter is to broaden the implicit/explicit literature by exploring the operative/meta-level distinction with regard to the accessibility of attitudes. Specifically, we gauged whether meta-accessibility and operative accessibility reflect a single underlying construct or two distinct constructs and whether they have different impact in regulating the influence of attitudes on judgment and behavior.

## CONSCIOUS EXPERIENCE

Throughout the history of psychology, beliefs about the role of conscious experience have varied widely. One perspective proposes that conscious experience is the most important aspect of psychology: "The question is not what you look at, but what you see" (Thoreau, 1993). Indeed, the earliest empirical research in experimental psychology relied heavily on introspection: Research participants described their conscious experiences in response to stimuli that were controlled by the researcher (e.g., Titchener, 1912; Wundt, 1897/1987).

This view did not survive unchallenged. Philosophers and psychologists alike questioned the notion that a person could be both observer and the object of observation (Comte, 1830–1842), and the pendulum swung far in the opposite direction when behaviorists argued that "what the psychologists have hitherto called thought is in short nothing but talking to ourselves" (Watson, 1924, p. 8) and that "mental life and the world in which it is lived are inventions" (Skinner, 1974, p. 36).

Currently, psychology thinks about mental processes and people's conscious awareness of these processes as related, parallel systems. For example, when asked to make a judgment or evaluate an object, people not only retrieve relevant information from memory, but they also have thoughts about the process of retrieval and about the information they have retrieved, or thoughts about their own thoughts. An example of a theory that takes consciousness into account is the meta-cognition model (Nelson, 1996), which makes a distinction between "object-level" cognitions about an outside object or stimulus and "meta-level" cognitions, which are thoughts about object level cognitions. These two levels of thought can occur simultaneously and may influence each other. Object-level cognition can influence meta-level cognition to the extent that people are able to *monitor* object-level processes. Furthermore, meta-level processes can influence object-level cognition by *controlling* decisions and judgments (Metcalfe & Shimamura, 1994; Nelson, 1996). However, monitoring of object-level processes or constructs may not always be possible or complete, leading to biased or inaccurate meta-level perceptions. This distinction is related to the distinctions that have been made between implicit and explicit constructs (Fazio, 1995; Kitayama & Rarasawa, 1997) and conscious and unconscious mental processes (Jacoby, Toth, & Yonelinas, 1993).

## ATTITUDE STRENGTH

In this chapter, we seek to advance understanding of such distinctions with a focus on the notion of attitude strength. Considerable research has demonstrated that some attitudes are difficult to change and strongly influence thoughts and

behaviors, whereas other attitudes are easy to change and have little influence. This distinction has been defined as a difference in attitude strength. Strong attitudes are those that are resistant to change, persist over time, and influence behavior and cognition (Petty & Krosnick, 1995).

*Resistance.* Resistance is perhaps the most studied defining feature of strong attitudes and has most often been examined by assessing attitude change or persuasion (e.g., Mutz, Sniderman, & Brody, 1996; Petty & Cacioppo, 1986). Resistance refers to the attitude's ability to withstand attack. Strong attitudes are less likely to change in response to a persuasive message or processes shown to change attitudes (e.g., listing the reasons for one's attitude). Although typically measured by assessing attitudes at two times and calculating change or by comparing a treatment and control group in an experiment, researchers have also measured meta-resistance by asking people how likely they would be to change their attitudes or by asking how much they had changed them in response to persuasion.

*Impact on behavior* A second feature of strong attitudes is that they influence behavior (Boninger et al., 1995; Fazio, Chen, McDonel, & Sherman, 1982). Attitudes may influence behavior in at least two ways. First, attitudes may influence the decision of whether or not to act. Strong attitudes presumably motivate action, whereas weak attitudes do not. Second, attitudes may influence the extent to which chosen actions are attitude-consistent, such that stronger attitudes may result in more attitude-consistent behavior.

*Information processing.* Strong attitudes also influence cognition, such as the processing of information in one's environment. Broadly, attitude strength may influence people's motivation or interest in acquiring attitude-relevant information. Furthermore, because people have a limited capacity to attend to and remember information, we must often choose among a variety of possibilities. When cognitively busy or overloaded, the process of choosing which information to attend to and remember may happen automatically, and people may not be aware of its occurrence. Strong attitudes may also direct attention under such circumstances.

*Perceptions of attitude-relevant information.* Strong attitudes may also influence people's perceptions of attitude-relevant information. For example, strong attitudes may influence perceptions of the attitudes of others. The false consensus effect is the tendency for people to overestimate the proportion of others who share their opinions (Marks & Miller, 1987). The false consensus effect may occur for a number of reasons: because one's own attitude is salient when making a judgment about the attitudes of others (Marks & Miller, 1987) or is used as an anchor when judging others' attitudes (Davis, Hoch, & Ragsdale, 1986); because people selectively affiliate with others who share their opinions (Berscheid & Walster, 1978); because believing that others share one's opinion reinforces the belief that one's attitudes are correct (Marks & Miller, 1987); because we project "good qualities" (in this case our attitudes) on liked others (the evaluation principle; Sherman, Chassin, Presson, & Agostinelli, 1984); because people attribute their own attitudes to situational factors (e.g., Jones & Nisbett, 1971) and may perceive that the same situational factors would similarly lead others to have similar attitudes; or because people may interpret the attitude object differently (i.e., "differential object construal"; Gilovich,

1990), which may affect how people report their own attitudes and others' Many of these processes may be stronger when the attitude involved is stronger.

*Influence on judgments.* Strong attitudes may also influence evaluations to a greater extent than do weak attitudes. For example, people evaluate candidates on the basis of many considerations, including candidates' positions on policy issues. People like a candidate to the extent that the candidate's attitude on an issue is similar to their own (Downs, 1957), consistent with the more general finding that people like similar others more than dissimilar others (Byrne, 1961, 1971). However, not every person uses every issue equally to evaluate candidates. Some issues are weighted more heavily than others (Krosnick, 1988, 1990), and attitude strength is revealed by the extent to which people use an issue to evaluate a candidate.

## THE CURRENT INVESTIGATION

### *Research Questions*

In this chapter, we pull together the ideas and literatures reviewed thus far by investigating the meta/operative distinction regarding accessibility, which is one aspect of attitudes thought to be related to their strength. Attitudinal accessibility has usually been measured operatively, but it can also be measured meta-attitudinally. OP accessibility can be defined as the speed with which an attitude can be retrieved from memory or constructed and reported, and has been measured using response latencies (Fazio, & Powell, 1997). MA accessibility can be defined as a person's subjective perception of the ease of retrieving an attitude from memory or constructing the attitude and can be measured by asking people how quickly their attitudes come to mind or how easy it is to bring their attitudes to mind (Bassili, 1996).

*MA and OP: Same or different?* We set out to determine if MA and OP measures of accessibility assessed a single construct or distinct MA and OP constructs. If people have access to the features of their attitudes, MA and OP measures of these features are likely to assess the same construct. Supporting this possibility is evidence that people may be able to accurately report some psychological constructs accurately (Mandler, 1975; Miller, 1962; Neisser, 1967), including their favorable or unfavorable evaluations of objects (Wilson, 1990). In addition to being able to describe the valence and extremity of the attitude itself, people may also have access to other attributes of their attitudes. If so, MA reports of attitude accessibility may reflect the same construct assessed by OP measures, and OP and MA measures of accessibility would then be strongly related.

However, there are reasons to believe MA and OP measures of accessibility may not be strongly related. Although people may have a summary evaluation stored in memory that is easily retrieved and reported, and they may be able to easily retrieve information from memory about the attitude object and construct an attitude, accurately describing attitude accessibility may be difficult. People may not store in memory a summary of the strength of the link between the attitude object and the evaluation, and may not be able to accurately monitor how long it takes them to retrieve an attitude when asked to report their attitude accessibility, since important distinctions are in terms of fractions of seconds.

Another reason why MA measures of attitude accessibility might be inaccurate involves the effects of reporting context. Many studies have shown that perceptions of physical constructs, such as weight, can be biased by context (e.g., Sherif & Hovland, 1961). The actual weight of a 10 lb. weight is the same regardless of whether it was lifted after a 30 lb. weight or after a 1 lb. weight, but the 10 lb. weight seems lighter in the first context than in the second. Similarly, perceptions of attitude accessibility and other psychological constructs may be changed by context, even when the construct itself remains unchanged.

Relying on people's perceptions of attitude accessibility also requires the assumption that people are willing to accurately report those perceptions. People may sometimes be motivated to construct favorable images of themselves for other people, sometimes via deceit. Considerable evidence has now accumulated documenting such systematic and intentional misrepresentation when answering questionnaires. For example, people are more willing to report socially embarrassing attitudes, beliefs, and behaviors when their reports are anonymous (Paulhus, 1984; Warner, 1965) and when respondents believe researchers have other access to information about the truth of their thoughts and actions (Sigall & Page, 1971). Thus, some people sometimes distort their answers to questions to present themselves as having more socially desirable attitudes, beliefs, or behavioral histories, and the same sorts of motivations could conceivably bias reports of attitude accessibility. In the research reported here, we explored the accuracy of self-reports of accessibility.

*Consequences of MA and OP accessibility.* The second question addressed by the current investigation is whether MA and OP measures of accessibility have independent effects on thoughts and behaviors. Even if MA measures of accessibility are not highly related to their OP counterparts, much evidence suggests that people's subjective experiences are meaningful and consequential (Fried & Aronson, 1995; Hart, 1965; Koriati, 2000; Petty & Wegener, 1993, 1995; Wegener, Kerr, Fleming, & Petty, 2000; Zanna & Cooper, 1974). If OP and MA measures of attitude accessibility assess separate constructs, and MA measures tap meaningful and consequential subjective experiences, the two types of measures may also have distinct effects on cognition and behavior.

### *Hypotheses*

OP accessibility seems likely to have two types of influence on behavior and cognition. First, it may influence the processes by which people choose which information in their environment to attend to, particularly when people are unable or unmotivated to attend to everything in their environment. Attitude objects associated with attitudes that are high in OP accessibility may be particularly consequential when resources do not allow deliberate processing of the information in one's environment. Individuals with attitudes toward an object that are high in OP accessibility may automatically orient toward information about it.

When people choose to attend to or are exposed to attitude-relevant information not by their own choice (e.g., in situations where they cannot make choices about allocating attention), attitudes high in OP accessibility seem likely to come to mind and to influence judgment processes. As such, these attitudes may induce

biased processing and discounting of attitude-inconsistent information. Similarly, individuals high in operative accessibility may discount the attitudes of others when these attitudes are inconsistent with their own.

OP accessibility may not always be consequential. Specifically, when decisions are made via careful, thoughtful deliberation, the influence of OP accessibility may be reduced or even eliminated (Fazio, 1990).

*MA accessibility.* The experience of ease of performing other tasks has been found to influence a variety of types of judgments (Aarts & Dijksterhuis, 1999; Dijksterhuis, Macrae, & Haddock, 1999; Haddock, Rothman, Reber, & Schwarz, 1999; Haddock, Rothman, & Schwarz, 1996; Kelley & Lindsay, 1993; Schwarz et al., 1991; Wänke, Schwarz, & Bless, 1995; Winkielman, Schwarz, & Belli, 1998). However, there is no consensus about when ease of retrieval influences judgments. Some researchers have argued that ease primarily influences judgments when motivation to engage in effortful thought is high, and others have argued the opposite. For example, Rothman and Schwarz (1998) argued that ease influences persuasion primarily under conditions of low elaboration as a cue. Similarly, Aarts and Dijksterhuis (1999) found that ease of retrieval influenced frequency estimates, but not when participants were motivated to be accurate. However, Tormala, Petty, and Briñol (2002) and Wänke and Bless (2000) found that ease of retrieving arguments influence persuasion under conditions of high elaboration.

People may use MA accessibility (the experienced ease of attitude retrieval) as information about how strong or crystallized their attitudes are. People who feel that it is difficult for them to think of their attitude may attribute that difficulty to lack of a strong attitude toward the attitude object, so they may choose not to place much weight on the object when making decisions or choosing courses of action. In addition, perceiving a lack of strong feelings toward an object may make people believe that they cannot successfully defend their attitude, so they may not invest much effort in trying to do so.

MA accessibility's influence seems likely to be moderated by two types of factors. First, a self-perception process seems likely to require at least some conscious thought, even if a high degree of motivation to think carefully is not necessary. Thus, perception of ease seems unlikely to be used as information when judgments are made automatically. Second, MA accessibility may not inform deliberate judgments if people think that their perceptions of accessibility are not diagnostic of true accessibility. For example, if a person finds it easy to retrieve an attitude but attributes that ease to some recent situational experience rather than to chronic accessibility, he or she may not use the perception of ease when deciding whether to use the attitude.

### *The Present Study*

To explore these possibilities, we assessed the relations of MA and OP measures of attitude accessibility to a variety of behaviors and judgments that might be affected by these strength-related attitude features. Participants in our study were undergraduate students ( $N = 654$ ) enrolled in an introductory psychology class at Ohio State University. They came to a laboratory in groups of 5 to 15 during the fall of 2000, coinciding with the 2000 presidential campaign. Each participant completed

a questionnaire individually on a computer. Participants were randomly assigned to answer questions about one target issue, either abortion or capital punishment. Data on the two issues were combined in all analyses reported below.

Each questionnaire consisted of two primary sections. In the first, attention to attitude-relevant information, which is called "orienting," was measured via a procedure adapted from Roskos-Ewoldson and Fazio (1992). Participants were shown a list of nine words for 2 seconds and asked to recall as many of them as they could. Four such lists were shown to each participant. Recall of information about the target issue was a measure of whether participants noticed the information. Choices of political issues about which to learn new information were also assessed. Participants ranked pieces of information on many topics from those they would most like to learn to those they would least like to learn. Each list contained one piece of information about the target issue. Participants were also asked to evaluate the candidates running in the 2000 presidential election (George W. Bush and Al Gore).

In the second section of the study, participants answered questions about the target issue. First, they answered four questions to assess their attitudes toward the policy on 7-point rating scales. Response latencies were measured for each of the four attitude reports as an OP measure of attitude accessibility. Immediately after reporting their attitudes, participants reported the speed and ease with which their attitudes had come to mind. This was our measure of MA accessibility. Next, participants' perceptions of others' attitudes on the issue were assessed to measure the magnitude of the false consensus effect, and participants reported their perceptions of George W. Bush's and Al Gore's attitudes toward the policy. Participants reported whether they had engaged in specific activist behaviors to express their attitudes on the issue, how involved they had been in activities related to the issue generally, their interest in learning more about the issue, and their perceptions of the amount and direction of bias in media coverage of the issue.

Finally, resistance to attitude change was measured. Participants were asked how resistant they perceived their attitudes to be, which was our MA measure. OP resistance was assessed by measuring attitude change in response to a persuasive message. Participants read a counterattitudinal essay, reported their thoughts about the essay, and reported their attitudes a second time.

### *Analysis Strategy*

Multiple measures of each construct of interest were administered, allowing us to conduct latent variable covariance structure modeling (Jöreskog & Sörbom, 1996). This approach has a number of advantages: It allowed us to test the fit of a hypothesized model to the observed data. For example, we assessed the goodness of fit of a model in which MA and OP measures of attitude accessibility are assumed to assess a single accessibility construct. We also gauged the effects of latent variables representing MA and OP accessibility on latent variables representing thoughts and actions. Using this analytic approach reduces the distorting influence of measurement error (Alwin, 1974; Jöreskog, 1974; Kenny, 1979; Widaman, 1985).

## RESULTS

*Relation between MA and OP measures of attitude accessibility.* To examine the relation between MA and OP measures of accessibility, two models were tested using confirmatory factor analysis. First, a model in which all MA and OP measures were specified to be indicators of a single latent construct was tested. The fit of this model was assessed and compared to that of one in which the MA measures were specified to be indicators of one latent construct, the OP measures were specified to be indicators of a second latent construct, and the two latent constructs were allowed to covary. If the second model fit the data considerably better than the first model did, that would suggest that the two constructs are distinct.

*Effects on thoughts and behavior* For each measure of thought or behavior, the parameters of four covariance structure models were estimated, always controlling for attitude extremity (see, e.g., Thompson, Zanna, & Griffin, 1995; Zanna & Rempel, 1988). The first model gauged the conclusions that might be drawn if MA and OP measures of accessibility were assumed to reflect a single construct, based on the assumption that MA and OP measures of accessibility are interchangeable and can therefore be combined in measuring a single latent construct.

In past studies, most researchers have used either MA or OP measures of accessibility. To assess whether one would draw different conclusions from using one of the two types of measures rather than the other, the parameters of two other models were estimated, in which accessibility was assessed only by MA measures or only by OP measures. Next, two latent variables indicated by MA and OP measures were used to predict the thought or behavior simultaneously in a single model, gauging the impact of each measure (MA and OP) while controlling for the other.

Model fit was assessed by three standard statistics: the ratio of the  $\chi^2$  statistic to the degrees of freedom, the root mean square error of approximation (RMSEA), and the goodness-of-fit index (GFI).

*Relation between MA and OP accessibility.* A confirmatory factor analysis in which all seven measures of accessibility were constrained to be indicators of a single latent factor did not fit the data well, suggesting that the seven measures of accessibility did not reflect a single latent construct. A two-factor confirmatory factor model fit the data well, and the relation between MA and OP accessibility was not significantly different from zero. These results suggest that OP accessibility and MA accessibility are two separate, *unrelated* constructs. However, even if measures of OP and MA accessibility appear to assess separate constructs, OP and MA accessibility may have the same effects on thinking and actions.

*Resistance.* Next, the relation of OP and MA attitude accessibility to attitude resistance was tested. Analyses predicting OP resistance indicated that MA and OP measures of accessibility simultaneously both were significant and positive predictors of resistance: Greater accessibility was associated with greater resistance. When predicting resistance measured meta-attitudinally (by asking participants how likely they thought they would be to change their attitude), MA and OP measures of accessibility both had significant, positive effects on resistance. Thus, MA and OP accessibility each predicted unique variance in both OP and MA resistance.

*Activism.* When the amount of specific attitude-expressive activist behaviors that people had performed was predicted, MA accessibility was unrelated to activism, but OP accessibility was significantly and negatively related to activism, such that greater accessibility was associated with *less* activism. Likewise, when predicting answers to more general questions about how involved participants had been in activities related to the issue, MA accessibility was unrelated to activism, but OP accessibility was negatively related to activism, such that higher accessibility was related to less activism.

*Information processing.* Neither MA nor OP accessibility was related to general expressed interest in learning attitude-relevant information, nor was either measure of accessibility related to participants' actual choices of which specific pieces of information to obtain. When predicting orienting to attitude-relevant information, OP accessibility was significantly and positively related to orienting (as in past research), but MA accessibility was not.

*The false consensus effect.* MA accessibility was unrelated to the magnitude of the false consensus effect, but the latter was significantly and positively predicted by OP accessibility, indicating that people with more accessible attitudes perceived that a larger percentage of others agreed with them.

*Perceptions of news media bias.* A measure of perceived media bias was constructed, and we explored whether accessibility moderated the relation of attitudes to this index. In fact, OP accessibility moderated the impact of attitudes on perceived media bias, but MA accessibility did not. Individuals with more OP accessible attitudes perceived the media to be more biased against their own positions than those with less OP accessible attitudes.

*Candidate evaluations.* To explore the impact of attitude accessibility on the ingredients of political candidate evaluations, two variables were computed. First, candidate preference was measured by subtracting participants' attitudes toward George W. Bush from their attitudes toward Al Gore. Second, an issue discrepancy variable was calculated by subtracting the absolute value of the difference between participants' position on the issue and George Bush's position on the issue from the absolute value of the difference between participants' position and Al Gore's position. Positive values on this variable meant that a participant's attitude was more similar to George Bush's than to Al Gore's. MA accessibility marginally significantly moderated this relation, but OP accessibility did not. Higher MA accessibility was associated with more use of the issue in evaluating the candidates.

## DISCUSSION

### Factor Structure

Our confirmatory factor analyses suggest that MA and OP measures of accessibility assess distinct constructs. A model in which MA and OP measures were specified to be indicators of a single latent factor fit the data atrociously, but a model including separate MA and OP factors fit the data well. In this model, the correlation between MA and OP accessibility was not significantly different from

zero, suggesting that people may not be aware of or able to report the accessibility of their own attitudes accurately.

### *Impact on Thoughts and Action*

OP and MA accessibility had unique effects on thinking and action. The consequences of MA and OP accessibilities were sensible and interpretable when the conceptual differences between the constructs were considered.

*OP accessibility.* As expected, OP accessibility led to greater resistance (both MA and OP), perhaps via biased processing, as Fazio and Williams (1986) suggested. OP accessibility also led to greater false consensus and greater perceived hostile media bias, perhaps also via biased processing of information about other's attitudes (i.e., discounting of attitudes that are inconsistent with one's own). Attitudes high in OP accessibility directed automatic information acquisition, but OP accessibility was unassociated with more deliberate information acquisition. OP accessibility did not shape the ingredients of candidate evaluations, suggesting that this process may be a more deliberate, thoughtful one.

Surprisingly, higher OP accessibility was associated with *less* attitude-expressive activism. Because activism often requires the allocation of limited resources (such as time and money), deciding to engage in such behavior seems likely to be the result of deliberate thought. As such, no association between OP accessibility and activism would be expected. But instead, we saw consistent negative associations. This finding raises a possibility that has not been considered in the literature to date: that OP accessibility may inhibit attitude-expressive behavior. A useful focus for future research will be exploring if this occurs.

*MA accessibility.* MA accessibility was positively associated with both MA and OP resistance, consistent with the hypothesis that individuals who believe it is easy for them to think of their attitude were motivated by this belief to defend their attitude. Additionally, MA accessibility was positively associated with using candidates' positions on an issue to evaluate them. This suggests that perceived ease of retrieval may have led people to choose to place weight on the issue. MA accessibility was not related to perceptions of hostile media bias, the false consensus effect, information seeking behavior, or activism, suggesting that attitude impact on these phenomena may happen automatically rather than deliberately.

This initial foray into MA accessibility thus provides some evidence that it is a consequential construct. However, because it is unassociated with OP accessibility, understanding the origins of MA accessibility will be an important focus for further developing this construct conceptually. Identifying the causes of MA accessibility may also help to further development of hypotheses about its nature and consequences.

This zero correlation has especially important implications for one interesting line of argument that has been put forth in the past: that attitude accessibility may be a cause of attitude importance. For example, Roese and Olson (1994) suggested that when people are asked to report the amount of personal importance they attach to an attitude, they may do so in part by noting how quickly the attitude comes to mind. "If my attitude comes immediately to mind when I search for it," people might

think, "then it must be important to me. But if my attitude comes to mind only after I dredge my memory for a while, then it must not be a very important attitude to me." This perspective presumes that people have relatively weak senses of the importance they attach to attitudes and objects (e.g., Bassili, 1996) and therefore engage in self-perception-like processes (Bem, 1967-1972) in order to resolve these ambiguities. Furthermore, this perspective presumes that people perceive the accessibility of their attitudes and use those perceptions when making some judgments.

Although Roese and Olson (1994) reported evidence that they said indicated that OP accessibility was indeed a cause of reports of attitude importance, these investigators made an accidental computational error, yielding their analyses uninformative. And when Bizer and Krosnick (2001) conducted proper tests of the hypothesis using Roese and Olson's general approach, evidence disconfirmed the claim that OP accessibility is a cause of personal importance ratings.

But perhaps it is too soon to completely reject Roese and Olson's hypothesis on the basis of that evidence. Although Bizer and Krosnick's (2001) evidence did disconfirm the claim that OP accessibility causes importance, the present study's evidence that OP and MA accessibility are completely uncorrelated with one another raises an alternative possibility: Perhaps MA accessibility is a cause of importance. If this is so, then there may be some truth to Roese and Olson's intuition, though along slightly different lines than they were thinking. Investigating this possibility could be done by manipulating MA accessibility and exploring the impact of such a manipulation on importance ratings. Our findings suggest that Roese and Olson's manipulation of OP accessibility (via repeated attitude expression) did not necessarily increase MA accessibility. So future studies might attempt to do so and then test the notion that people infer the personal importance of an attitude based partly on their perceptions of the ease with which they can retrieve that attitude.

### *Relation to Past Research*

In contrast to past research concluding that "the distinction between operative and meta-attitude measures is more about the method of measurement than about the property being measured" (Bassili, 1996, p. 648), we found that both MA and OP measures of attitude accessibility explained unique variance in thinking and action. Thus, for attitude accessibility, the sharp empirical distinction between OP and MA measures is more about distinct constructs being measured than about the methods of measurement being different ways to tap the same construct. Unlike past work, we examined a broad array of measures of uses and impact of attitudes, and we used multiple measures of all constructs rather than a single indicator approach. So there is reason to have confidence in our conclusion in this regard.

### *Implications for Measurement*

The finding that MA and OP accessibility are different constructs has implications for the way that strength-related attitude features, and psychological constructs in general, should be measured. Specifically, our results suggest that psychologists should be careful to choose their measures based on their conceptualizations

and theories, not simply on convenience. Psychologists who rely on people's perceptions of their own psychological constructs should perhaps reconsider if they are interested in the underlying psychological constructs themselves. If however, researchers are interested in people's *perceptions* per se, MA measures are preferable. Thus, researchers who rely only on OP measures may be missing part of the picture, just as researchers who rely only on MA measures may be.

Perhaps more importantly, our research has implications for the way psychologists think about psychological constructs. Reports of people's perceptions should not necessarily be treated as interchangeable with less subjective, more direct measures of psychological constructs. In developing theories, designing studies, and interpreting results, psychologists should be careful to be consistent in how they conceptualize the psychological constructs being studied. Furthermore, combining measures that may assess different constructs may lead to faulty conclusions.

Rather than throwing out self-reports of people's perceptions as measures of personality characteristics, attitudes, thoughts, or emotions and trying to use measures that do not reflect perceptions, our research suggests that to get the full picture of how people's minds work, researchers should use both types of measures and study the independent effects of both.

Our evidence contributes to a growing literature showing that although meta-level perceptions are important for understanding people's judgments and behavior, even when they do not match their object-level counterparts (see Bless & Forgas, 2000, for a review). The importance of meta-level perceptions has been documented in a range of substantive areas, including attitudes, stereotyping, and prejudice. We found that both meta-attitudinal perceptions and operative assessments of attitude accessibility influence people's thoughts and actions. In this domain, then, attitudinal processes and perceptions of those processes appear to be equally important elements of comprehensive theory building.

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#### AUTHOR NOTE

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# 8

## Vicarious Cognitive Dissonance *Changing Attitudes by Experiencing Another's Pain*

JOEL COOPER

Can people experience dissonance and undergo attitude change because of the actions of others? New research in the domain of cognitive dissonance suggests that the answer is yes. It has long been established that when people behave in ways that are at variance with their attitudes, they experience the unpleasant affective state of dissonance, and their attitudes change as a consequence. We now know that dissonance can also be aroused vicariously. Observers who witness others acting in a counterattitudinal manner may, under appropriate conditions, experience dissonance and be motivated to change their own attitudes.

Vicarious dissonance (Cooper & Hogg, 2007) is a novel approach at the nexus of two well-established theories in social psychology: social identity and cognitive dissonance. We propose that people experience dissonance vicariously when they observe a member of their social group behave in ways that are inconsistent with that group member's attitude. Like personal cognitive dissonance (Festinger, 1957), vicarious dissonance is experienced as an uncomfortable feeling of negative affect; it occurs when people have choices about their behavior and is heightened when behavior leads to aversive consequences. However, vicarious dissonance does not require the individual to behave inconsistently but only requires that he or she *observe* a fellow group member behaving at variance with his or her attitude. It is the ability to be motivated by the actions of a fellow group member that makes vicarious dissonance not only a fascinating phenomenon in its own right, but also makes it highly useful in creating attitude and behavior changes on a broad scale. Simply put, the counterattitudinal behavior of one member of a group has the potential to activate motivation on the part of other group members to undertake