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Attitude-Behavior Congruity, Mindfulness, and Self-Focused Attention: A Behavior-Analytic Reconstruction

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Social psychologists have responded to research reporting low agreement between attitude measures and related behavior with attempts to explain the incongruities and enhance agreement. This article examines attitude-behavior incongruity from a behavior-analytic point of view. Traditional and behavior-analytic views of attitudes and behaviors are compared. In the behavior-analytic view, answering an attitude scale should be considered as behavior displayed by a person under rather unusual social conditions, not as a reflection of an enduring personal disposition. Reasons why questionnaire-answering behavior will not resemble behavior in other functionally different social conditions are reviewed. Special attention is extended to two representative lines of attitude-behavior research: mindfulness and self-focused attention. Discriminative stimuli in both areas of study have produced more predictable agreement between questionnaire-answering behavior and behavior in other settings.

Key words: attitude measurement, social behavior, behavior analysis, attitude-behavior consistency

Experimental social psychology is increasingly dominated by cognitive, mentalistic explanations for behavior, but it is possible to reconstruct the descriptions of these studies by removing mentalistic references and describing the events that appear to have controlled the behavior. Two such research programs are represented by social psychological studies in areas called mindful behavior and self-focused attention.

Research in both mindfulness and self-focused attention deals with the relation between attitudes and behavior. It will be best to begin with a summary of what the words *attitude, behavior,* and *attitude-behavior relation* mean in the vocabulary of the traditional social psychologist. Behavior-analytic reconstructions of these terms will follow, and then the problems of mindfulness and self-focused attention will be addressed.

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ATTITUDES AND BEHAVIOR

Attitudes: The Traditional View

Many mainstream texts of social psychology define attitudes as relatively enduring evaluations and beliefs about objects that direct behavior toward those objects. Attitudes themselves are not behaviors. Attitudes are mental processes that relate the individual to objects. The objects may be physical (e.g., anchovy pizza) or abstract (e.g., Roman Catholicism).

Attitudes are measured by responses to evaluative statements about the object. The responses may be simple reports of agreement or disagreement with the statement, but more elaborate methods are often employed. The responses are converted into a number, which is taken to reflect the person's attitude, and later behavioral disposition, toward the object.

It is expected that the attitude measurement will be evaluatively consistent with other actions toward the attitude object, to the extent that the attitude measure could be used to predict the other behavior. The traditional view differentiates between attitude scale behavior and these other behaviors toward an object. In the traditional view, attitude measurement is viewed as a passive sampling of the enduring mental state of the per-

son, not the active product of the questionnaire or the measurement setting, which are considered to be either transparent to the process or sources of extraneous noise.

Attitudes: A Behavior-Analytic View

A behavior-analytic description of attitudes is briefer than the traditional view because there are fewer properties to describe. Attitudes are the behaviors you see when you ask someone to fill out an attitude survey. There is no enduring mental state being tapped by the attitude survey. Remote behaviors cannot be predicted from traditional attitude measurements. Attitudes may be nothing more than words that are offered as explanations or descriptions for one's own behavior because the language community accepts them.

Private events undoubtedly accompany attitude measurement. Physiological arousal, covert verbal rehearsal of intended behavior, and interpretation of the verbal stimuli of the questionnaire may be among them. The relation between these private events and self-reports is unclear. Skinner's (1974) opinion was that self-reports occasion the private events of attitudes: "Self knowledge is of social origin. It is only when a person's private world becomes important to others that it is made important to him. It then enters into the control of the behavior called knowing" (p. 31).

In an article in which he called himself an "unreconstructed behaviorist" (p. 197), social psychologist Daryl Bem (1968) defined an attitude as "an individual's self-description of his affinities for and aversions to some identifiable aspect of his environment" (p. 197). Bem pointed out that this is not the traditional definition of attitudes, but if one observes the events that are called attitudes, this definition is accurate. It is important to note that, in Bem's view, the self-description is not a *measurement* of the attitude: It *is* the attitude itself.

In summary, the differences between traditional and behavior-analytic identifications of attitudes are that, in the traditional view, attitudes are not only self-reports but they also reflect internal dispositions—mental processes—that are relatively independent of settings, they arise from and direct other behavior, and they indicate enduring emotional responses to objects and factual assertions about the objects. In the behavior-analytic view, attitude measurement presents a stimulus to a person, and the response is determined by the person's history in the social context of the measurement setting. The act of making a self-report is not different from other behaviors.

Behavior: Traditional and Behavior-Analytic Views

In the context of attitude studies, the word *behavior* traditionally refers to responses to the attitude object when it is physically present—so-called real behavior—as opposed to the behavior of answering attitude surveys. To a behavior analyst, all behaviors are equally real. The only difference might be that the attitude object is usually not physically present when self-reports are made, whereas it is physically present for the other behaviors of interest. I will use the terms self-report behavior and object-present behavior to reconstruct the traditional distinction between attitudes and behaviors.

ATTITUDE-BEHAVIOR CONSISTENCY

The traditional literature is full of reports of the inability to predict real behavior from attitude measurements (Wicker, 1969) and approaches for increasing the reliability of prediction (Chaiken & Stangor, 1987; Olson & Zanna, 1993; Tesser & Shaffer, 1990). Attitude-behavior inconsistency is viewed as a failure to measure correctly the single cognitive process that directs both self-report behavior and later object-present behavior. In this behavior-analytic reconstruction, I offer two reasons for attitude-behavior inconsistency: misidentifying the causes of self-report behavior

and overlooking the functional features of behavior when consistency is operationally defined.

What Are Self-Reports?

Attitude researchers assume that both self-report and object-present behavior are directed by the same internal response principle, the attitude. In an inventive review, however, Nisbett and Wilson (1977) demonstrated that people have virtually no ability to report these internal processes. For example, they suggest asking someone for his or her mother's maiden name and then asking, "How did you come up with that?" "The accuracy of subjective reports is so poor as to suggest that any introspective access that may exist is not sufficient to produce generally correct or reliable reports" (p. 233). The same might be observed about even simple motor behaviors. We say that these movements are voluntary, but it is beyond us to describe what steps we go through to accomplish even the simplest. Just exactly how does one direct one's hand to squeeze a toothpaste tube? This hidden processing has obvious survival advantages to the species but has troublesome implications for attitude researchers.

The first implication is that people cannot accurately report private events. Thus, self-reports probably do not refer to enduring mental states. From the behavior-analytic perspective, self-reports conform to learned cultural rules about causality and appropriate verbal behavior. The rules for self-reports are socially defined, and one is reinforced by the community for close approximations. The word *plausibility* describes the reinforcement rule. Self-reports are socially reinforced for plausibility, not for objective accuracy. In descriptions of the causes of behavior, if the true stimulus is implausible, it is dismissed as noninfluential (Nisbett & Wilson, 1977). Instead of corresponding to private events, such as evaluations, preferences, or behavioral intentions, self-reports are statements designed to meet the criteria of plausibility and consistency with norms. It might be more accurate to call them plausible reports instead of self-reports.

The requirement that a self-report be accepted by an audience provides an alternative explanation for a phenomenon noted by Vallacher and Wegner (1987), who point out that there are many ways in which self-reports or overt behaviors can be described. They contend that people use more abstract descriptions if possible. Their theory of action identification does not specify the causes for this preference for verbal abstraction, saying only that it reflects a preference for cognitive abstraction. It seems to me that the verbal community reinforces abstract descriptions and self-reports more than concrete descriptions and self-reports. When one is asked, "What are you doing?" a detailed list of one's motor behaviors will be punished by audience inattention and by the potential for successful contradiction. More global self-descriptions allow a broader range of specific behaviors eligible for reinforcement or the avoidance of aversive consequences.

The potency of the plausibility criterion accounts for studies showing that warning people that they will be asked to describe the reasons for their behavior actually decreases the congruence between later attitude and behavioral measures. These studies (Fazio & Zanna, 1981; Regan & Fazio, 1977; Wilson, Dunn, Bybee, Hyman, & Rotondo, 1984) involved rating liking for puzzles, scenic pictures, and romantic attraction to a dating partner, and then measuring actual time spent with these objects. Some subjects were told that they would be asked to explain the reasons for their behavior. Attitude scores were significantly worse predictors of the later behavior of these people. The warning appeared to change the self-reports, but not the object-present behavior, by directing the person's attention to the wrong factors or to making plausible explanations rather than to the effective factors. Making the effective stimuli more salient should improve consistency, but simply instructing the person to attend to their thought processes reduces consistency, reaffirming the

conclusion that people have no access to these private events. The request to concentrate on reasons simply starts the process of searching for plausible, but not necessarily causal, factors.

A second implication is that people cannot accurately report when their private behaviors change. They tend to report that their attitudes have always been the same as the most recent form. In one study (Bem & McConnell, 1970), students for or against school busing were exposed to a well-prepared confederate who argued convincingly against their attitudes. Self-reports after the arguments showed attitude change, but when the subjects were asked to recall their earlier self-reports, their recollections were significantly different from the true earlier ratings. They remembered their earlier reports as being more consistent with their later ratings than they really were.

In another study (Hessing, Elffers, & Weigel, 1988), Dutch taxpayers were surveyed for their attitudes toward tax evasion and were asked in 1984 whether they had underreported their income in 1981 or 1982. If the person reported that it was all right to cheat, they were more likely to report that they had cheated, whether they had really cheated or not. If the person believed that cheating was wrong, they would report that they had not cheated, again without regard to whether they had really cheated or not. People inaccurately describe their own past behavior and its causes. This corrupts self-reports and their relation to object-present behavior. This may be one of the reasons why statements of what one would do in specific settings (Ajzen & Fishbein, 1980) are better predictors of later behavior than are attitude scale scores.

Operational Definitions of Consistency

Attitude researchers typically gloss over the many ways in which self-reports and object-present behaviors may be said to be consistent or causally related, avoiding precise statements of "directionality, probableness [sic], time ordering, sufficiency, and necessity of their relationship" (Siebold, 1980, pp. 207–208). How do traditional researchers decide if attitudes and behaviors are consistent with each other? The criterion is verbal. Self-report instruments ask people to tact their own behavior. To be judged consistent, object-present behavior should be tacted in the same way by observers. Thus, verbal choices made by the observer may generate many apparent inconsistencies.

To use an example from Craig (1980), if I say that I am a Democrat, this should imply that I will vote for Democratic candidates. The word *Democrat* is said to connect these two behaviors. If I actually vote for a Republican for president, this is taken by the traditional researcher to be attitude inconsistency. Craig points out that inconsistency may be only an artifact of the experimenter's inability to identify salient stimulus aspects, given the history of the person. In our example, the voter may have a rule never to vote for a president from the same party that controls Congress. The apparent attitude-behavior inconsistency is really only a measure of the observer's inability to make effective verbal probes, given the behaver's history.

Behavior analysts who reinforce troublesome behavior in their own children, TV evangelists who use prostitutes, attorneys general who break the law, and dieters who eat chocolate are all examples of behavior pairs with inconsistent tacts, but these behaviors are quite consistently related to their settings and prior consequences. If we provide functional similarity of preceding and consequent events, we will observe consistent behaviors.

From a behavior-analytic standpoint, then, the list of mistaken traditional assumptions about the relations of self-reports to object-present behaviors is a long one. It is mistakenly said that (a) self-reports are a different class of behavior than other behavior; (b) the stimuli producing self-reports are different than the stimuli that produce other behavior; (c) if the experimenter can express a verbal connection between an attitude statement and ordinary behavior, the same connection should be known to the sub-

ject in an experiment; and (d) that which appears illogical to the experimenter indexes inconsistency in the attitudes and behaviors of the experiencing person.

There is a fundamental difference between the cognitive and behavior-analytic interpretations of the relation between self-reports and object-present behavior. The cognitivist assumes that both are effects of the same cause—the person's unseen attitudes. The behavior analyst assumes that each is produced by its own causal events: If these events are dissimilar, the resulting behaviors will probably be dissimilar. Filling out an attitude questionnaire while a psychologist watches is similar to practically nothing else in everyday experience.

Producing Consistency

Object-present behavior that is consistent with one's self-reports can be produced by straightforward behavior-analytic techniques. Correspondence training (Deacon & Konarski, 1987; Israel, 1978; Israel & O'Leary, 1973; Lloyd, this issue; Osnes, Guevremont, & Stokes, 1986), is a program to enhance say-do consistency. Correspondence training produces overt behavior that the language community describes with the same words as those used in the actor's self-reports.

MINDFULNESS AND SELF-FOCUSED ATTENTION

A behavioral analysis carries the known effects of setting events and consequences on variations in behavior into the arena of attitude-behavior inconsistency. The strength of the behavior-analytic approach is that it can successfully apply general principles of behavior to this specific case. Alternative explanations, however, appear in the textbooks and journals of mainstream social psychology. Two of these mentalistic explanatory systems are mindfulness and self-focused attention. This final section (a) provides behavior-analytic alternatives that replace references to mental processes with references to observable stimuli, behaviors, and consequences; (b) preserves and extends the explanatory and predictive power of behavior-analytic descriptions; and (c) shows the cognitive approaches to be applied instances of the more general principles of behavior analysis.

Mindfulness

A group of researchers associated with Ellen Langer of Harvard University contends that many behaviors are the result of mindlessness, that is, "passive information-processing in which the individual rather automatically relies on distinctions previously drawn, instead of engaging in active categorizing and new distinction making" (Langer, Bashner, & Chanowitz, 1985, p. 113). In contrast, mindfulness, "a state of alertness and lively awareness" (Langer, 1989b, p. 138), is matched more closely to the demands of the specific situation and less to stereotypic, scripted, mindless responses. Mindful behavior is said to be increased by stimulus novelty and response effort. As applied to attitude-behavior congruity, one presumes that, if one is mindful of one's self-report statements and mindful that an object-present situation contains the same class of stimulus elements, there will be greater congruity between self-reports and object-present behaviors.

Typical studies involve devising a stimulus setting; describing the mindless, habitual, or scripted response; describing a mindful response; and altering the stimulus setting in such a way as to enhance the probability of the mindful response over the mindless response. Consideration of two typical studies will allow us to reconstruct a behavior-analytic description of the events in mindfulness research. Langer's summaries (Langer, 1989a, 1989b) provide other examples.

Langer, Bashner, and Chanowitz (1985) asserted that people without handicaps mindlessly avoid interaction with handicapped people. Mindful people would attend more closely to the specific deficits of a handicapped person, resulting in less general avoidance. Sixth graders received 5 days of exposure to slides of either handicapped or nonhandicapped people

and wrote answers to questions requiring either effortful, mindful answers or easy, habitual answers. For example, they were asked for eight (mindful) or two (mindless) professional abilities of the depicted person, or were asked for lists of problem-solving capabilities (mindful) or only if the depicted person had a capability (mindless). When the subjects were later asked a series of questions about attending a picnic with handicapped children and choosing handicapped children as teammates for activities at the picnic, mindfulness-trained children made a higher proportion of attendance and teammate choices of handicapped children.

In the second example, Langer and Imber (1980) had subjects watch a videotape of a man reading a passage of text. Later, the subjects were asked to rate how much the man was "different from most people you know." The mindless group of subjects was not warned that they would have to fill out these ratings. Mindful groups were warned and, in addition, were presented with biographies reporting that the man was either a millionaire, a homosexual, a cancer patient, a mental patient, or divorced. One warned group was given a biography that contained none of these attributes. Unwarned, mindless subjects rated the man very similar to most people they knew. All the warned, mindful groups rated the person as being deviant from the norm. The experimenters promoted the notion that the warning enhanced mindfulness, resulting in response differentiation, but if that were true, their theory would also predict that the added attributes of homosexuality, millionaire status, and so on would further amplify reports of deviance. That is not what happened. These added descriptions had no effects beyond those of the warning alone.

A straightforward behavior-analytic reconstruction of these studies is available: Mindfulness procedures are discriminative stimuli. That they have control over subsequent behavior is sufficiently interesting to warrant further investigation by behavior analysts; the additional overlay of mentalistic language reduces the usefulness of the findings of these studies. The presence of the appropriate discriminative stimuli in these studies produced increased choices of handicapped playmates and increased reports of deviance because of the implied reinforcement contingencies for those behaviors.

Self-Focused Attention

Procedures said to induce self-focused attention, or objective self-awareness, are relevant to my earlier discussion of attitude-behavior consistency. This line of research reports increased correspondence between self-report and object-present behavior by manipulations said to focus attention on oneself. As with mindfulness research, behavior change is explained as the result of changes in cognition. As with mindfulness research, behavior analysis offers more economical explanations.

Here are a few representative studies. In the first of three studies by Gibbons (1978), men filled out a self-report questionnaire including three items regarding pornography. After 1 month, they were asked to rate how exciting and attractive were the women in 15 pictures from *Playboy* magazine. Half of the subjects sat in front of a mirror while making their ratings; the others did not. There were significant positive correlations between self-reports evaluating pornography and later ratings of excitement and attractiveness, but only for the subjects seated in front of the mirror. For the other subjects, five of the six attitude-behavior correlations were nonsignificant, and the significant one was negative. In summary, the presence of the mirror produced consistent relations between self-report and object-present behaviors.

Pryor, Gibbons, Wicklund, Fazio, and Hood (1977) had subjects rate their sociability; some subjects were seated in front of a mirror, and some were not. Two days passed. During a 3-min conversation with a passive confederate, naive observers rated the subject's sociability and counted the number of words spoken by the subject. There were sig-

nificant correlations (r = .43 to .73) with self-reported sociability in the mirror subjects, but not (r = −.02 to .49) with the no-mirror subjects. In a second study by these authors, subjects were given a choice of working on different kinds of problems, and then were asked which problems were most interesting. The mirror was present for half the subjects when their preferences were reported. Preference ratings were significantly related to the proportions of each type of problem worked and the order in which the problems were worked, but only for the mirror subjects.

In theory, the manipulations promoted self-focused attention and brought overt behaviors in line with attitudes. Many manipulations can produce these effects: mirrors (Carver, 1975, 1977; Gibbons, 1978; Pryor et al., 1977; Wicklund & Duval, 1971); TV cameras (Wicklund & Duval, 1971), tape recordings of one's voice (Ickes, Wicklund, & Ferris, 1973; Wicklund & Duval, 1971; Wicklund & Ickes, 1972), recollections of one's past behavior (Zanna, Olson, & Fazio, 1981), and a movie camera (Insko, Worchel, Songer, & Arnold, 1973). The manipulation enhances relations when present in either the self-report phase or object-present phase or when the self-report precedes or follows the object-present behavior. These studies have involved behaviors related to legalization of LSD, attractiveness of sex-oriented courses, real self/ideal self differences, religion, civil protest, censorship, registration of firearms, abolishing college football, forcing students to live in dorms, punishment, pornography, and sociability.

How are these findings to be reconstructed in the behavior-analytic mold? All the techniques used to induce self-focused attention or objective self-awareness—the mirrors, cameras, tape recorders, and so on—are stimuli associated with making one's behavior public. Some are recording media, means by which others may observe your behavior. One looks in a mirror when one's appearance will be evaluated by others; furthermore, as Libby Street has pointed out to me, wall-mounted mirrors would be taken by most experimental volunteers to be means of concealing hidden observers.

Instead of inducing self-observation, these stimuli serve as signals that one's behavior can be recorded and observed by others. The process might be objective public awareness, not objective self-awareness. From research on cognitive dissonance and studies of conformity, we know that public access to one's behavior induces behavior consistent with one's other publicly known behaviors and with the normative behaviors of currently salient groups. All the experimental self-awareness manipulations involve exposure to means by which consistency could be checked; thus, they are contingency-specifying stimuli (Blakely & Schlinger, 1987; Schlinger & Blakely, 1987; Skinner, 1969) that imply appetitive consequences for consistent responses to other stimuli and aversive consequences for inconsistency. If there are issues for which inconsistency leads to reinforcing consequences (e.g., instructions to produce novel, creative, clever, or surprising behavior) or for which consistency is irrelevant, self-focused awareness procedures should produce greater inconsistency or no differences from comparison control subjects.

CONCLUSION

Explicit references to behavior analysis in most social psychology texts are limited to a discussion of how reinforcement and punishment can affect the acquisition of attitudes. Less coverage is devoted to the behavioral nature of those attitudes and the observable circumstances that maintain or alter their strength and form of expression. In this paper, I have shown how the social psychological core concepts of attitudes and attitude-related behavior and the related phenomena of mindfulness and self-focused awareness can be lifted from a framework of cognitive explanation and reconstructed in the terminology of behavior analysis. Mindfulness and self-focused attention are only two of the dozens of theories of limited scope that populate the social

psychological landscape. Behavior analysis provides a comprehensive descriptive, explanatory, and predictive system with the potential to clarify the accomplishments and unsolved problems of social psychologists.

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