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(12) att (1), pg 205

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(14) not (0), pg 205

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(16) ~~not rap (3)~~

(16) log (1), pg 206

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error - black in data

error - att, not behind IAT

error - judgment call

before not rap (3)

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Using Partially Structured Attitude Measures to Enhance the Attitude-Behavior Relationship

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This article recalls a classic scheme for categorizing attitude measures. One particular group of measures, those that rely on respondents' interpretations of partially structured stimuli, has virtually disappeared from attitude research. An attitude measure based on respondents' interpretation of partially structured stimuli is considered. Four studies employing such a measure demonstrate that it predicts unique variance in self-reported and actual behavior, beyond that predicted by explicit and contemporary implicit measures and regardless of whether the attitude object under consideration is wrought with social desirability concerns. Implications for conceptualizing attitude measurement and attitude-behavior relations are discussed.

Keywords: attitudes; implicit attitudes; attitude measurement; attitude-behavior consistency

Mary didn't go to church once the whole time she was in college but she claimed that she was still a very religious person. She said that she prayed occasionally and that she believed in Christian ideals. Sometimes she watched mereligious programs on TV like the 700 Club or the Billy Graham Crusade.

On the above information, how religious would you judge Mary to be? As explained further shortly, if you can see that she was quite religious, you show evidence of a religious attitude. If you thought she was not very religious, however, you show evidence of a religious attitude. Why might this be the case? Considerable research in social psychology has shown that people not only have attitudes but that attitudes also influence information processing and social judgments, such as Mary's religiousness (e.g., Lord, Ross, & Lepper, 1979; Sherif & Hovav, 1961; Vallone, Ross, & Lepper, 1985). For this

reason, ratings of Mary can serve as a measure of your attitudes.

CLASSES OF MEASURES AND MULTIPLE INDICATORS

In 1964, Cook and Selltiz published a prescient article identifying five classes of attitude measures and calling for the use of multiple indicators in attitude measurement. Remarkably, after four more decades of attitude research, the five classes of measures identified by Cook and Selltiz encompass all contemporary attitude measures. The first group consists of "self-reports of beliefs, feelings, behavior, etc., toward an object or class of objects" (p. 39). A great deal of research has successfully identified conditions under which self-report (i.e., explicit) attitude measures are predictive of behavior (e.g., Ajzen & Fishbein, 1977; Fazio, 1990; Fishbein & Ajzen, 1974). The second group, behavioral measures, is now commonly viewed as attitudinal outcomes rather than measures. And for the purposes of the present research, there seems little to be gained by attempting to predict behavior on the basis of other behavior except to

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behavior ($r_s = .33$ and $.60$, respectively, $p_s < .001$) and with one another ($r = .32$, $p < .001$).

To see whether the PS measure reliably predicted unique variance in self-reported religious behavior beyond that predicted by the explicit measure, both were entered into a simultaneous multiple regression analysis. This analysis revealed that the PS measure once again predicted unique variance in self-reported behavior ($\beta = .17$, $p = .02$) beyond what was predicted by the explicit measure ($\beta = .54$, $p = .00$).

These results offer further support for the notion that a PS measure can predict behavior above and beyond that predicted by an explicit measure. Furthermore, this study provides evidence that our PS measure can have good internal reliability. Thus, the current study further establishes the validity of the PS measure, but as in Studies 1 and 2, however, we remain uncertain about the exact process by which the PS measure operates: it may tap attitudes, consistency motivation, normative influences, or some combination thereof.

STUDY 4

In a fourth study, we sought to replicate and extend work from the previous studies in three ways. First, we wanted to further explore the psychometric properties of the PS measure. To this end, Study 4 used a split-half, split-method technique wherein participants completed measures at two different times using paper-and-pencil at Time 1 and a computer program at Time 2. This technique also allowed us to examine consistency concerns by correlating Time 1 PS measure scores with Time 2 behaviors, and vice versa. Second, we wanted to compare the efficacy of our PS measure to a well-known implicit (or objective in Cook and Sellitz's, 1964, terms) attitude measure, the IAT (Greenwald et al., 1998). Third, we wanted to see whether our PS measure would still predict unique variance in self-reported behavior, even with a variety of explicit and implicit predictor variables entered into a simultaneous multiple regression equation. Following previous work in domains where social desirability concerns are minimal (e.g., Wanke, Plessner, & Pries, 2002), we expected that the IAT would be correlated with explicit attitude measures and that the IAT would predict unique variance in behavior. More importantly, we predicted that the PS measure also would predict unique variance in behavior beyond that predicted by the IAT and multiple explicit measures.

Study 4 also was designed to address one potentially troubling aspect of Study 2: the fact that two deliberative measures each predicted unique variance, beyond one another, in political behaviors (significantly for self-reported behavior and marginally for actual behavior), just as the PS measure does (marginally for self-reported behavior and significantly for actual behavior).

There are at least two possible explanations for the predictive utility of additional explicit measures. First, it may be a methodological issue—multiple explicit measures of the same construct may add unique variance because each is an imperfect measure of religious attitudes (Cook & Sellitz, 1964). Second, and more troubling, it may be a conceptual issue—multiple explicit measures of the same construct may add unique variance because each is tapping different aspects of political attitudes. This suggests the possibility that there is nothing unique about the PS measures; they may be no more effective than additional explicit measures. A compelling argument against this problem would be to demonstrate that PS measures can predict unique variance in self-reported behavior, even after additional explicit attitude measures stop explaining unique variance in self-reported behavior. The use of the split-half, split-method technique allows us to assess additional explicit attitude measures for an analysis to address this issue.

Method

PARTICIPANTS

Participants at Time 1 were 338 male and female advertising students at the University of Illinois who received extra credit in an advertising course. At Time 2, 226 of these students returned, again for extra credit in an advertising course, to complete additional measures.

STIMULUS MATERIALS AND PROCEDURE

The PS measure was identical to the one used in Study 2. The IAT was administered using the Windows 95-based FIAT program (Farnham, 1997). A list of the words used for the IAT is presented in the appendix. Critical blocks in the IAT were counterbalanced across participants (i.e., half saw religious + positive and atheistic + negative in Block 3, and vice versa in Block 5; half saw religious + negative and atheistic + positive in Block 3, and vice-versa in Block 5). We used three explicit attitude measures: the RAS, a series of semantic differential items (the same as those used in Studies 1 and 2), and a one-item explicit attitude measure that asked respondents to indicate their "attitude toward being religious" on an 11-point scale anchored by *extremely unfavorable* and *extremely favorable*. In addition to the explicit and PS measures, participants completed the BIDR (Paulhus, 1991) and a comprehensive behavioral index of self-reported religious behaviors. This index was adapted from Fishbein and Ajzen (1974) and contains a list of 83 religious and antireligious behaviors. Participants indicated whether they had engaged in these behaviors, receiving 1 point for each behavior performed and 0 points for each behavior not performed. Antireligious behaviors were reverse scored. Finally, all the behaviors were summed to form an index ranging from 0 to 83.

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22-25

All but three of the measures used in this study were divided into halves and administered at two times, 4 to 6 weeks apart. Participants were randomly assigned to receive either the first half of the materials or the second half of the materials at Time 1. The semantic differential and the one-item explicit measures were short enough to be included in full at both testing sessions. The IAT was administered only at Time 2 because it does not lend itself to either split-half or split-method analyses. Aside from these deviations, participants completed half of the measures at Time 1 and the remaining half at Time 2. At Time 1, participants were asked to complete a packet containing the stimulus materials. The measures were organized into 24 different counterbalanced orders and given to participants in a single packet. At Time 2, all measures were administered in a random order using MediaLab software (Jarvis, 2001), except the IAT, which was always administered last. Participants were fully debriefed and thanked at the end of Time 2.

Results

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The IAT data were compiled following procedures outlined in Greenwald et al. (1998). Means, standard deviations, split-half/split-method correlations, and possible ranges for Study 4 measures are presented in Table 7. As can be seen, the split-half/split-method correlations for all predictor variables are adequate.

The correlation matrix (Table 8) shows that the explicit attitude measures were all correlated with one another and with self-reported religious behaviors, replicating Fishbein and Ajzen (1974). Consistent with Studies 1 and 2, the PS measure was unrelated to any of the explicit attitude measures, and it was only marginally correlated with self-reported religious behavior. The IAT was reliably correlated with two of the three explicit attitude measures, marginally correlated with the third, and reliably correlated with self-reported religious behavior. The IAT and the PS measure also were marginally correlated with one another.

Impression management was correlated with self-reported religious behavior and marginally correlated with two of the three explicit attitude measures; it was not correlated with either the PS measure or the IAT. This correlational pattern suggests that religion may be somewhat sensitive to social desirability concerns. Alternatively, religious attitudes and behaviors may be confounded with idealistically "good" items on the impression management subscale. Religiosity may not necessarily be related to impression management, but people who perform religious behaviors and hold favorable attitudes toward religion may be more likely to engage in idealistically good behaviors such as those on the impression management subscale.

TABLE 7: Means, Standard Deviations, Reliability Scores, and Possible Ranges for Study 4 Measures

Variable	M	SD	Split-Half/ Split- Method	Possible Range
Self-reported behavior	40.79	8.10	.59	0 to 83
PS measure	5.63	0.86	.45	1 to 11
Religious Attitude Scale	71.16	24.98	.30	40 to 140
Semantic differential ^a	8.48	1.58	.68	0 to 11
One-item measure ^a	7.42	2.19	.51	1 to 11
Impression management	3.99	2.63	.32	0 to 20
Implicit association test	.38	.23		

NOTE: PS = partially structured.

a. These correlations are test-retest/split-method rather than split-half/split-method.

There is mixed support for the idea that participants' consistency motivations are driving responses to the PS measure. Time 1 PS scores were uncorrelated with self-reported behavior at Time 2 ($r = .00$, ns), suggesting that participants do not report behavior in a manner that is consistent with the PS measure. Time 2 PS scores were correlated with self-reported behavior at Time 1 ($r = .15$, $p < .05$), suggesting that participants may respond to the PS measure in a manner that is consistent with recently reported behavior.

To test whether the PS measure could predict unique variance in self-reported behavior even after the addition of explicit measures that no longer predict additional variance, we relied on the split-half/split-method technique to generate a number of different explicit attitude measures. We used the RAS and semantic differential measures from Times 1 and 2 as four distinct explicit measures. We collapsed the one-item explicit measure & by computing a mean score from Times 1 and 2.⁴ All five explicit attitude measures were reliably correlated with self-reported behavior (RAS Time 1, $r = .60$; RAS Time 2, $r = .46$; Semantic Differential Time 1, $r = .58$; Semantic Differential Time 2, $r = .51$; one-item explicit measure, $r = .58$; all $ps < .001$); that is, all of the explicit measures predicted behavior on their own.

Next, we entered all of the explicit, implicit, and PS measures and the impression management scale into a simultaneous multiple regression equation. When the five explicit attitude measures were entered simultaneously (Table 9), only three of them reliably predicted unique variance in self-reported behavior; however, the PS measure still reliably predicted unique variance in self-reported behavior. A PS measure predicted unique variance in self-reported behavior even after a number of explicit attitude measures stopped explaining unique variance in self-reported behavior. Contrary to expectations, the IAT did not predict unique variance in self-reported behavior. Finally, impression management predicted



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3) dnd (2), p 436