

Winter, L., & Uleman, J. S. (1984). When are social judgments made? Evidence for the spontaneousness of trait inferences. *Journal of Personality and Social Psychology*, 47, 237-252.

John N. Bassili is Associate Professor of Psychology at the Scarborough campus of the University of Toronto. His current research interests include social cognition with a particular focus on on-line processes of person perception.

Attitude Importance and Attitude Accessibility

Jon A. Krosnick
Ohio State University

Across a range of settings, attitudes that people consider personally important have been shown to be more powerful determinants of perceptions of others' attitudes, of liking of others, and of social behavior than unimportant attitudes are. This article reports two studies that evaluate one possible explanation for this difference: the hypothesis that important attitudes may be more accessible in memory and may therefore come to mind more frequently in the course of social perception. In both studies, subjects reported the importance they attached to a series of political attitudes and reported those attitudes on a computer that measured response latencies. Important attitudes were reported more quickly than unimportant ones, even when subjects were instructed to report the first attitudinal cue that came to mind. This finding supports the accessibility hypothesis.

Attitudes vary in the degree to which they shape cognition and behavior, and one factor that seems to regulate their psychological potency is personal importance. Important attitudes are those that individuals attach personal importance to and care deeply about. Across a range of settings, these attitudes have been shown to be more powerful than unimportant attitudes in determining perceptions of others' attitudes (e.g., Brent & Granberg, 1982; Granberg & Brent, 1974), liking of others (Byrne, London, & Griffitt, 1968; Clore & Baldridge, 1968; Krosnick, 1988a; Schuman & Presser, 1981, p. 267), and social behavior (Krosnick, 1988a).

Why are more important attitudes psychologically more consequential? One explanation is suggested by recent research on accessibility (e.g., Higgins & King, 1981). Attitudes vary in accessibility, and more accessible attitudes are more potent determinants of cognition and action (e.g., Fazio & Williams, 1986; Snyder & Kendzierski, 1982). Perhaps important attitudes are more consequential because they are more accessible in memory.

AUTHOR'S NOTE: The results reported here were part of a doctoral dissertation submitted to the Department of Psychology at the University of Michigan. This research was supported by a Faculty Seed Grant from the Ohio State University to the author and by Grant SES-8411371 from the National Science Foundation to Howard Schuman. Portions of this paper were presented at the 59th Annual Meeting of the Midwestern Psychological Association, Chicago, May 7-9, 1987. The author wishes to thank Howard Schuman for his advice in planning this research and Thomas M. Ostrom for very helpful comments on an earlier draft. Requests for reprints should be addressed to Jon A. Krosnick, Department of Psychology, Ohio State University, 1885 Neil Ave. Mall, Columbus, OH 43210.

Personality and Social Psychology Bulletin, Vol. 15 No. 3, September 1989, 297-308
© 1989 by the Society for Personality and Social Psychology, Inc.

This hypothesis is consistent with Higgins and King's (1981) theory-based speculations regarding the determinants of accessibility. Higgins and King argued that the accessibility of an attitude is a function of three factors: frequency of activation, salience, and links to other constructs. The more frequently the construct is accessed, the more accessible it should be. The more distinctive or unusual it is, the more accessible it should be. And the more extensively it is linked to other constructs through an associative network in memory, the more accessible it should be.

Important attitudes are likely to have all three of these attributes. They typically involve strong affect and therefore are relatively distinctive (Krosnick, 1986). These attitudes are also frequent subjects of conscious thought and of discussion with others (Yankelovich, Skelly, & White, 1981) and are elaborately linked to other attitudes and knowledge structures in memory (e.g., Judd & Krosnick, 1989; Wood, 1982). Thus, because important attitudes are likely to have features that are hallmarks of enhanced accessibility, there is theoretical justification for the hypothesis that important attitudes may be more accessible than unimportant ones.

The relation between attitude importance and attitude accessibility has not been investigated previously. However, indirect empirical support for the notion that more important attitudes are more accessible is provided by evidence that correlates of attitude importance are also correlates of the latency of attitude reports, a measure of accessibility. For example, important attitudes tend to be extreme (e.g., Borgida & Howard-Pitney, 1983; Brent & Granberg, 1982), and extreme attitudes are reported more quickly than moderate attitudes (Fazio & Williams, 1986; Osgood, Suci, & Tannenbaum, 1957, pp. 155-159; Powell & Fazio, 1984). Moreover, people frequently express attitudes they consider important during social interactions (e.g., Yankelovich et al., 1981), and repeatedly expressing an attitude decreases the latency of attitude reports (Fazio, Chen, McDonel, & Sherman, 1982). This evidence suggests that attitude importance should be negatively associated with the latency of attitude reports. The two studies reported below tested this hypothesis directly.

STUDY ONE

Method

Subjects. Sixty-one female and 54 male undergraduates at the University of Michigan participated in this study in partial fulfillment of an introductory psychology course requirement. They were selected from a pool of possible subjects on the basis of their responses to a screening questionnaire.

Screening questionnaire. A questionnaire was administered to all students enrolled in introductory psychology classes at the start of the semester. One section of the questionnaire measured students' attitudes on a series of issues having to do with women's rights, and two items measured the certainty with which these attitudes were held. The certainty measures asked how much more

information the respondent would need in order to form an opinion and the likelihood that the respondent would change his or her mind. Responses to both were made on 7-point scales.

To assure a distribution of certainty of attitudes on women's rights, we selected two extreme sets of students to participate: high certainty and low certainty. High-certainty students were those who placed themselves at or within 1 point of the *no more information* and *very unlikely to change my mind* ends of the scales. Low-certainty respondents were those who placed themselves at or within 1 point of the *need much more information* and *could change my mind very easily* ends of the scales.¹

Procedure. The selected subjects were contacted by telephone and scheduled to visit the laboratory on two consecutive days. When subjects arrived at the lab for their first visit, they were seated alone in a sound proof booth in front of a video monitor and a keyboard of seven buttons arranged in a row. They were told that they would be participating in a study of how people think about political issues. The instructions on the monitor informed them that, during the first task, a series of phrases would appear on the screen, each referring to "a particular public policy or action or event." They were instructed to indicate their opinion on each by pressing one of the buttons in front of them.

In all, 40 phrases appeared, including multiple items addressing women's rights, abortion, and racial integration. For example, the abortion phrases were *legalized abortion*, *federally-funded abortion*, and *outlawing of abortion*. The phrases appeared individually on the screen in an order randomized newly for each subject, and each phrase disappeared when a button was pressed. After a 2-sec delay the next phrase appeared. A randomly chosen half of the subjects reported their attitudes using all seven response buttons, with the extremes labeled *extremely pro/in favor of* and *extremely anti/opposed to*. The other half of the subjects used only buttons 1, 4, and 7, labeled *pro/in favor of*, *no opinion/not sure*, and *anti/opposed to*, respectively. This variation in response scales was included in order to test the generalizability of our findings across these two common measurement approaches.

Subjects returned the following day to repeat the procedure. However, the response scale assignments were reversed; those who used the 7-point scale on Day 1 used the 3-point scale on Day 2, and those who used the 3-point scale on Day 1 used the 7-point scale on Day 2. The attitude phrases were presented in an order that was newly randomized for each subject during this procedure.

After this task, subjects filled out a questionnaire that measured some of the attitudes previously measured and the importance of each. For example, the abortion attitude question asked: "There has been some discussion about abortion in recent years. Some people feel that abortion should never be permitted, while others feel that abortion should never be forbidden. Where would you place yourself on the scale below?" (1 = *Abortion should be considered murder. Doctors and women involved should be prosecuted accordingly*. 6 = *Abortion should be permitted whenever a woman wishes to have one*.)

TABLE 1 Study One: Attitude Self-Report Latencies (in sec) for High- and Low-Importance Subjects

Issue	Low Importance	High Importance	<i>p</i>
Women's rights	3.71 (<i>n</i> = 59)	3.31 (<i>n</i> = 56)	.022
Abortion	4.59 (<i>n</i> = 29)	3.68 (<i>n</i> = 84)	.001
Race	4.38 (<i>n</i> = 71)	3.98 (<i>n</i> = 44)	.071

Subjects reported how important each attitude was to them by choosing one of four response alternatives ranging from *extremely important* to *not too important*.

Results

Response latencies for the reports of each attitude collected on both Day 1 and Day 2 were averaged to generate a mean response latency for each attitude for each subject.² This latency variable was then correlated with the importance of the attitude. As predicted, importance and response latency were significantly negatively associated across all three issues (women, $r = -.29, p < .002$; abortion, $r = -.31, p < .001$; racial integration, $r = -.20, p < .03$). The mean response latencies for subjects above and below the midpoint of each importance scale are shown in Table 1. These figures illustrate the importance-response latency correlation; all row-wise differences are statistically significant or marginally so. These differences were comparable when attitude reports were made on a 3-point scale and when they were made on a 7-point scale.

The theoretical discussion above justifies the inference that the differences between high- and low-importance subjects shown in Table 1 reveal an association between attitude importance and attitude accessibility. However, it is possible that these data actually reflect general dispositions of individuals: Some people undoubtedly respond more quickly than others to all questions, and the high-importance groups may coincidentally contain more of the former individuals. In order to test this possibility, we conducted a series of multiple regressions predicting response latency. The predictor variables in these regressions were the measures of importance of all three attitudes and the average response latency of all 80 attitude reports (called "total response latency"). The results of these regressions are shown in Table 2.

As would be expected, total response latency was powerfully related to the response latencies for the individual attitudes (see column 4 of Table 2). The coefficients on the diagonal beginning in the upper left of Table 2 represent the effect of the importance of an attitude on the latency of reports of that attitude.

TABLE 2 Study One: Standardized Regression Coefficients Predicting Attitude Report Response Latency Using Measures of Attitude Importance and Total Response Latency (*N* = 115)

Response Latency	Importance			Total Response Latency
	Women's Rights	Abortion	Race	
Women's rights	-.22**	-.04	.00	.72**
Abortion	.06	-.31**	.10	.57**
Race	-.03	-.08	-.15*	.76**

* $p < .02$; ** $p < .001$.

These coefficients are all sizable and highly significant, whereas the off-diagonal coefficients are close to zero and nonsignificant. These results indicate that the latency of an attitude report is related to the importance of that attitude but not to the importance of other attitudes. More generally, these results discredit the possibility that the associations between response latency and attitude importance are due to general dispositions of individuals rather than to attitude-specific factors.

Discussion

Across three different political issues, people who considered an attitude important reported it more quickly than people who considered the attitude unimportant, suggesting that the attitudinal cues associated with important attitudes are more accessible in memory.

However, there are a number of methodological limitations in the study's design. First, the preselection of subjects who were either extremely certain or extremely uncertain of their attitudes on women's rights limits the generalizability of the findings. Second, attitude importance was measured only a short time after the attitude reports were made. The accessibility-importance correlation could be artifactual, because subjects may have based their reports of attitude importance in part on their recollections of how easily (i.e., quickly) they answered the relevant attitude report questions in the computer task. We therefore conducted a second study using a different design in an attempt to circumvent these problems.

STUDY TWO

For Study Two, no preselection of subjects was done, and importance ratings were collected 2 months before the latencies of attitude reports were measured. In this study, we also investigated another alternative explanation for the results of Study One: that reports of less important attitudes may be made more slowly

TABLE 3 Study Two: Attitude Self-Report Latencies (in sec) for High- and Low-Importance Subjects

Issue	Low Importance	High Importance	<i>p</i>
Abortion	4.42 (<i>n</i> = 48)	3.89 (<i>n</i> = 103)	.013
Defense	4.30 (<i>n</i> = 61)	3.91 (<i>n</i> = 91)	.028

because of lack of motivation. In Study Two, some subjects were instructed to report the first reaction that came to mind as quickly as possible. If low-importance attitude reports take longer simply because of lower motivation, we thought these instructions might reduce or eliminate the association between importance and response latency.

Method

Subjects. Sixty-nine male and 83 female undergraduates at the University of Michigan participated in this study in partial fulfillment of an introductory psychology course requirement.

Measurement of attitude importance. Subjects were mailed a questionnaire that they filled out and returned by mail. The questionnaire measured subjects' attitudes on two issues, defense spending and abortion, and the importance of each attitude. Respondents again reported how important the issue was to them by selecting one of four alternatives ranging from *extremely important* to *not too important*.

Laboratory procedure. About 8 weeks after they returned the questionnaires, subjects were contacted by telephone and were scheduled to visit the lab. They were not told about the connection between this study and the questionnaires they had completed previously. When they arrived at the lab, they were seated individually in a booth facing a microcomputer and were told that they would be participating in a study of political thinking. For 88 subjects, the first task, the attitude-reporting task, was identical to that in Study One, with all attitude reports made on 7-point scales. Sixty-four subjects performed the attitude-reporting task as subjects in Study One had but were instructed to make their responses "as quickly as possible." We asked them not to "spend too much time deciding which button to press—we're interested in your first reaction." Random assignment to condition (speeded or nonspeeded) began after 25 subjects were run without being given the speeded-response instructions.³

After subjects completed this procedure, they spent about 10 min performing a distraction task that involved estimating the likelihood that they would

TABLE 4 Study Two: Standardized Regression Coefficients Predicting Attitude Report Response Latency Using Measures of Attitude Importance and Total Response Latency

Response Latency	Importance		Total Response Latency	<i>N</i>
	Abortion	Defense		
Abortion	-.24*	.09	.63*	151
Defense	.04	-.21*	.76*	152

* *p* < .001.

perform an array of behaviors in the future. The items on this questionnaire were not related to politics or to the policy issues of interest here. After completing the distraction task, the subjects repeated the attitude-reporting task.

Results

As expected, the correlation between importance and response latency was sizable and significant for defense spending ($r = -.25, p < .003, n = 152$) and abortion ($r = -.26, p < .002, n = 151$). The mean response latencies for subjects above and below the importance scale midpoints are consistent with the correlations (see Table 3). As Table 4 illustrates, when average reaction time across all 76 attitude reports was controlled, the latency of abortion attitude reports was related to the importance of abortion attitudes but not to the importance of defense spending attitudes; and the latency of defense spending attitude reports was related to the importance of defense spending attitudes but not to the importance of abortion attitudes. These findings therefore replicate the main findings of Study One, using improved methods and samples.

Subjects who were asked to press a button as quickly as possible reported their attitudes more quickly than those who did not receive those instructions (total average response latency = 4.02 sec vs. 3.73 sec, $p = .015$). This decrease was apparent for high-importance as well as low-importance subjects for each issue. However, a test of the interaction between attitude importance and instructions was nonsignificant for both abortion ($t = 0.26, df = 144, p = .80$) and defense spending ($t = 0.38, df = 145, p = .70$). This indicates that the difference between the response latencies of high- and low-importance subjects was not smaller among subjects in the speeded-response instructions condition than among subjects in the non-speeded-response condition. Thus, asking subjects to report the first thought that came to mind did not reduce or eliminate the difference between the high- and low-importance subjects in response latency. This finding argues against the claim that reports of unimportant attitudes are slower because of low motivation.

GENERAL DISCUSSION

In both these studies, attitudes that people considered personally important were reported more quickly than attitudes people considered unimportant. This was true whether or not subjects were asked to report the first attitudinal cue that came to mind. These results are therefore consistent with the hypothesis that important attitudes are more accessible in memory than unimportant attitudes.

Previous studies have shown that attitude accessibility is greater for attitudes formed through direct behavioral experience with the object (Fazio et al., 1982), for extreme attitudes (Fazio & Williams, 1986; Osgood et al., 1957; Powell & Fazio, 1984), for attitudes that are frequently expressed (Fazio et al., 1982), and for attitudes held by low self-monitors (Kardes, Sanbonmatsu, Voss, & Fazio, 1987). The present study adds to this literature by documenting an additional correlate of accessibility. Because attitude importance is highly stable over time (Krosnick, 1986), it presumably falls into the category of *chronic* determinants of accessibility, as opposed to temporary, situational determinants (Bargh, Bond, Lombardi, & Tota, 1986).

After many years of theoretical speculation about the correlates of attitude importance and relatively little empirical research evaluating them, recent years have seen a substantial growth in the empirical literature on this variable. Early work documented that, compared with attitudes that people consider unimportant, important attitudes are more resistant to the influence of persuasive communications (Ewing, 1942; Fine, 1957; Knower, 1936; Rhine & Severance, 1970). Recent work has shown that important attitudes are also more stable over relatively long periods (Krosnick, 1988b), more extreme (Borgida & Howard-Pitney, 1983; Brent & Granberg, 1982), more evaluatively consistent with other attitudes (Judd & Krosnick, 1989; Schuman & Presser, 1981; Smith, 1982), more potent determinants of sentiment toward others (Krosnick, 1988a), indicators of more polarized perceptions of others' attitudes (Judd & Johnson, 1981; Krosnick, 1988a), and more potent determinants of social behavior (Krosnick, 1988a). The present study contributes to this growing literature by documenting the relation between attitude importance and attitude accessibility. As discussed above, accessibility appears likely to be a mediator of the effect of importance on social evaluations, just as it is a mediator of the effect of direct behavioral experience with attitude objects (see Fazio, 1986). Research testing this mediation hypothesis in the case of attitude importance should be conducted.

The evidence reported here suggests a possible explanation for an unresolved puzzle in the literature on attitude importance. It has been widely believed that important attitudes are associated with less ambiguous internal cues than unimportant ones and that reports of important attitudes therefore contain less random and systematic measurement error (e.g., Converse, 1964, 1970; Kendall, 1954; Schuman & Presser, 1981). However, in a recent three-study investigation, Krosnick (1988b) found no association between attitude importance and the amount of random measurement error in attitude reports. And in a study consisting of 27 experiments, Krosnick and Schuman (1988)

found no relation between attitude importance and systematic measurement error. Thus, it seems that reports of important attitudes contain no less measurement error than reports of unimportant attitudes.

It is well known that human judgments are subject to a speed/accuracy trade-off: people take longer to make judgments in order to increase accuracy (e.g., Meyer, Irwin, Osman, & Kounios, 1988; Pachella & Pew, 1968). Perhaps the added delay characteristic of reports of unimportant attitudes occurs because people take the time necessary to think about the attitude object and formulate a precise evaluation of it. This process is presumably easier and therefore faster in the case of important attitudes, because these attitudes are likely to be associated with relatively unambiguous, preconsolidated internal cues. People may take additional time to report unimportant attitudes so that these reports will be as precise as reports of important attitudes. This view therefore suggests that the differences in response latency shown here are due to differences in the difficulty of integrating the attitudinal cues that are retrieved from memory.

Alternatively, it may be that the cues associated with important and unimportant attitudes are equally clear and unambiguous, and so it may take no longer to formulate a precise report of an unimportant attitude than an important attitude. If this is true, the longer response latencies typical of reports of unimportant attitudes may simply reflect differences in cue retrieval time. That is, it may take longer to bring cues to mind when asked to report an unimportant attitude. The differences in response latencies shown in this article may therefore simply reflect differences in the accessibility of equally clear attitudes.

As described above, Higgins and King's (1981) theoretical analysis of accessibility suggests three possible reasons that important attitudes may be more accessible than unimportant attitudes: frequency of activation, salience, and links to other constructs in memory. That is, important attitudes may be more accessible because they are more frequent subjects of conscious thought, involve stronger affective reactions, and are more extensively linked to other attitudes, beliefs, and values in memory. It would be useful for future research to determine whether any or all of these three factors are responsible for the response latency differences shown here. This could be accomplished by measuring each of these attributes directly, as well as measuring attitude importance and attitude report latency. If the relation between importance and response latency were found to be reduced by controlling for frequency of thought, affective intensity, or extent of linkage, that would lend support to the claim that the control variable is a mediator of the effect of importance on accessibility.

This sort of analysis would be predicated on the assumption that attitude importance is a determinant of response latency. And the evidence in the present studies is consistent with this assumption. However, because the present studies are correlational, the observed relations between attitude importance and response latency could be spurious. That is, the present results could have occurred because attitude importance is determined by a variable that also

determines response latency. The most effective way to rule out the possibility of spuriousness would be to manipulate attitude importance experimentally and to examine whether attitude report latency changed as a result. In order to conduct this sort of study, one must have in hand a theory of the determinants of attitude importance, a goal toward which we are currently working (Krosnick, Boninger, Berent, & Carnot, 1988).

NOTES

¹This study was initially designed to focus on women's rights attitudes. However, after collection of the screening data and selection of the subjects, we decided to expand the pool of attitudes to be examined in the laboratory procedure. We had intended to include measures of attitude importance in the screening questionnaire instead of measures of attitude certainty. However, because of a clerical error, certainty measures were substituted for the importance measures. Although certainty of women's rights attitudes was correlated with the personal importance of women's rights attitudes ($r = .18$, $p < .05$, $N = 115$), certainty was uncorrelated with the latency of reports of these attitudes ($r = .05$, $p > .15$).

²For all analyses reported here, response latencies less than 0.5 sec and greater than 10.0 sec were eliminated from the data set. The remaining individual item response latencies were positively skewed, although the average response latencies for each issue were much less skewed. Subjecting the response latencies to a log transformation did not alter the findings reported here.

³The decision to incorporate the speeded-response instructions was made after the first 25 subjects were run without being given such instructions. Therefore, these 25 subjects were assigned to the non-speeded-response condition. Analyses omitting these subjects yielded the same results as those reported here.

REFERENCES

- Bargh, J. A., Bond, R. N., Lombardi, W. J., & Tota, M. E. (1986). The additive nature of chronic and temporary sources of construct accessibility. *Journal of Personality and Social Psychology*, 50, 869-878.
- Borgida, E., & Howard-Pitney, B. (1983). Personal involvement and the robustness of perceptual salience effects. *Journal of Personality and Social Psychology*, 45, 560-570.
- Brent, E. E., & Granberg, D. (1982). Subjective agreement and the presidential candidates of 1976 and 1980. *Journal of Personality and Social Psychology*, 42, 393-403.
- Byrne, D., London, O., & Griffitt, W. (1968). The effect of topic importance and attitude similarity-dissimilarity on attraction in an intrastranger design. *Psychonomic Science*, 11, 303-304.
- Clore, G. L., & Baldrige, B. (1968). Interpersonal attraction: The role of agreement and topic interest. *Journal of Personality and Social Psychology*, 9, 340-346.
- Converse, P. E. (1964). The nature of belief systems in the mass public. In D. E. Apter (Ed.), *Ideology and discontent* (pp. 206-261). New York: Free Press.
- Converse, P. E. (1970). Attitudes and non-attitudes: Continuation of a dialogue. In E. R. Tuftie (Ed.), *The quantitative analysis of social problems*. Reading, MA: Addison-Wesley.

- Ewing, T. N. (1942). A study of certain factors involved in changes of opinion. *Journal of Social Psychology*, 16, 63-88.
- Fazio, R. H. (1986). How do attitudes guide behavior? In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior*. New York: Guilford Press.
- Fazio, R. H., Chen, J., McDonel, E. C., & Sherman, S. J. (1982). Attitude accessibility, attitude-behavior consistency, and the strength of the object-evaluation association. *Journal of Experimental Social Psychology*, 18, 339-357.
- Fazio, R. H., & Williams, C. J. (1986). Attitude accessibility as a mediator of the attitude-perception and attitude-behavior relations: An investigation of the 1984 presidential election. *Journal of Personality and Social Psychology*, 51, 505-514.
- Fine, B. J. (1957). Conclusion-drawing, communicator credibility, and anxiety as factors in opinion change. *Journal of Abnormal and Social Psychology*, 54, 369-374.
- Granberg, D., & Brent, E. E. (1974). Dove-hawk placements in the 1968 election: Application of social judgment and balance theories. *Journal of Personality and Social Psychology*, 29, 687-695.
- Higgins, E. T., & King, G. (1981). Accessibility of social constructs: Information-processing consequences of individuals and contextual variability. In N. Cantor & J. Kihlstrom (Eds.), *Personality, cognition, and social interaction*. Hillsdale, NJ: Erlbaum.
- Judd, C. M., & Johnson, J. T. (1981). Attitudes, polarization, and diagnosticity: Exploring the effects of affect. *Journal of Personality and Social Psychology*, 41, 26-36.
- Judd, C. M., & Krosnick, J. A. (1989). The structural bases of consistency among political attitudes: The effects of political expertise and attitude importance. In A. R. Pratkanis, S. J. Breckler, & A. G. Greenwald (Eds.), *Attitude structure and function*. Hillsdale, NJ: Erlbaum.
- Kardes, F. R., Sanbonmatsu, D. M., Voss, R. T., & Fazio, R. H. (1987). Self-monitoring and attitude accessibility. *Personality and Social Psychology Bulletin*, 12, 468-474.
- Kendall, P. (1954). *Conflict and mood: Factors affecting stability of response*. New York: Free Press.
- Knower, F. H. (1936). Experimental studies of changes in attitude—III: Some incidence of attitude changes. *Journal of Applied Psychology*, 20, 114-127.
- Krosnick, J. A. (1986). *Policy voting in American presidential elections: An application of psychological theory to American politics*. Unpublished doctoral dissertation, University of Michigan, Ann Arbor.
- Krosnick, J. A. (1988a). The role of attitude importance in social evaluation: A study of policy preferences, presidential candidate evaluations, and voting behavior. *Journal of Personality and Social Psychology*, 55, 196-210.
- Krosnick, J. A. (1988b). Attitude importance and attitude change. *Journal of Experimental Social Psychology*, 24, 240-255.
- Krosnick, J. A., Boninger, D. S., Berent, M. K., & Carnot, C. G. (1988, April). *The origins of attitude importance*. Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago.
- Krosnick, J. A., & Schuman, H. (1988). Attitude intensity, importance, and certainty and susceptibility to response effects. *Journal of Personality and Social Psychology*, 54, 940-952.
- Meyer, D. E., Irwin, D. E., Osman, A. M., & Kounios, J. (1988). The dynamics of cognition and action: Mental processes inferred from speed-accuracy decomposition. *Psychological Review*, 95, 183-237.

- Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1957). *The measurement of meaning*. Urbana: University of Illinois Press.
- Pachella, R. G., & Pew, R. W. (1968). Speed-accuracy tradeoff in reaction-time: Effect of discrete criterion times. *Journal of Experimental Psychology*, *76*, 19-24.
- Powell, M. C., & Fazio, R. H. (1984). Attitude accessibility as a function of repeated attitudinal expression. *Personality and Social Psychology Bulletin*, *10*, 139-148.
- Rhine, R. J., & Severance, L. J. (1970). Ego-involvement, discrepancy, source credibility, and attitude change. *Journal of Personality and Social Psychology*, *16*, 175-190.
- Schuman, H., & Presser, S. (1981). *Questions and answers: Experiments on question form, wording, and context in attitude surveys*. Orlando, FL: Academic Press.
- Smith, T. W. (1982). *Attitude constraint as a function of non-affective dimensions* (General Social Survey Tech. Rep. No. 39). Chicago: National Opinion Research Center.
- Snyder, M., & Kendzierski, D. (1982). Acting on one's attitudes: Procedures for linking attitude and behavior. *Journal of Experimental Social Psychology*, *18*, 165-183.
- Wood, W. (1982). Retrieval of attitude-relevant information from memory: Effects on susceptibility to persuasion and on intrinsic motivation. *Journal of Personality and Social Psychology*, *42*, 798-810.
- Yankelovich, D., Skelly, F., & White, A. (1981). *The mushiness index: A refinement in public policy polling techniques*. New York: Yankelovich, Chalcey, Shulman.
- Jon A. Krosnick is Assistant Professor of Psychology and Political Science at Ohio State University and Adjunct Research Investigator at the University of Michigan's Institute for Social Research. His research interests include attitude formation, change, and effects, political psychology, survey research methodology, and the causes of heavy television viewing among children.

Support for Research in Social Psychology at the National Science Foundation

Jean B. Interimaggio
National Science Foundation

Christine Ing
George Washington University

Data from the Social and Developmental Psychology Program at the National Science Foundation (NSF) were analyzed for general trends in funding from 1956 through 1987. All 628 new grant proposals for fiscal years 1982 through 1987 were analyzed in detail. Success rates, proportion of total proposals submitted, and proportion of awards are presented by seniority, sex, status of PhD-granting department, status of submitting department, resubmissions, and subject area. There was no discernible pattern for seniority or sex. Researchers trained in Distinguished or Strong departments had higher success rates than those from Adequate or Good departments. However, status of submitting institution may be more important in the success rate than where the PhD was earned. Only status of submitting department was significantly related to success rate over the six years examined. Overall results show that a variety of investigators, institutions, and subject areas are represented among awards made since 1981.

This article describes support for research in social psychology at the National Science Foundation (NSF). First there is a brief overview of the history of support for social sciences. Next, we describe overall support for social psychology from 1956 to 1987 and analyze patterns of funding in depth for 1982 to 1987.

HISTORY OF SUPPORT FOR SOCIAL SCIENCES AT THE NATIONAL SCIENCE FOUNDATION

This brief history illustrates the early precarious organizational status of social sciences within NSF and places the data analysis portion into perspective. The background information is drawn from *A Patron for Pure Science* (England, 1982), a detailed history of the events leading to the establishment of NSF.

Whether to include social sciences among the fields to be supported by NSF had been the subject of debate before NSF was created in 1950. Vannevar Bush, in his capacity as head of the Office of Scientific Research and Development, wrote the report to President Truman outlining a national postwar science initiative. Bush, regarded as the founder of NSF, excluded the social sciences

AUTHOR'S NOTE: Requests for reprints should be sent to Jean B. Interimaggio, Program Director for Social Psychology, National Science Foundation, Washington, DC 20550.

Personality and Social Psychology Bulletin, Vol. 15 No. 3, September 1989, 309-324
© 1989 by the Society for Personality and Social Psychology, Inc.