

# MODELING SURVEY PARTICIPATION AT THE INTERVIEWER LEVEL

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**KEY WORDS:** Nonresponse, response rates, interviewers

## 1. INTRODUCTION

Survey methodologists have long suspected the interviewer to be an important source of variation in response rates. Indicators of this include observed differences among trainees in the ability to absorb and put into practice the interviewing lessons, interviewer variation in item missing data rates, individual interviewers' response rates, and the ability of some interviewers to convert the initial refusals of others. However, aside from a few limited studies, much of what we know about the impact of the interviewer on survey participation remains untested or inconclusive. In an oft-cited study, Durbin and Stuart (1951) found experienced interviewers to be "decidedly superior" to student volunteers in terms of response rates. Groves and Fultz (1985) found that novice interviewers (1 to 6 months of tenure) had the highest refusal rates in a telephone survey. In contrast, Singer, Frankel and Glassman (1983: 74) found the effect of experience on response rates in a telephone survey to be counter-intuitive, that is, more experienced interviewers did not achieve higher response rates. They do note, however, that this result is based on only six interviewers. In a study of 16 field interviewers in Sweden, Schyberger (1967) found nonresponse rates to be higher for experienced than for newly recruited interviewers.

Within the context of a broader framework of survey participation (See Groves and Cialdini, 1991), this paper aims to explore the role of various interviewer characteristics, particularly experience, in survey participation. Two questions will be addressed: (a) does interviewer experience lead to higher response rates? (b) given (a), what are the mechanisms by which greater experience produces higher response rates? These questions are important to the survey research community. If the behaviors used by successful experienced interviewers can be taught, then some of the effects of experience can be transferred to new interviewer recruits. If not, then the value of reducing turnover among interviewers remains high for survey organizations.

## 2. TOWARD A MODEL OF SURVEY PARTICIPATION

The model is presented graphically in Figure 1. Each of the concepts in the model represents a number of different variables. Each of these will be discussed in turn.

### 2.1. Interviewer experience

First, interviewers' experience is expected to have a positive effect on the response rates they obtain. This stems from lessons learned through trial and error application of alternative techniques over time, and from alternative training guidelines and experiences on different surveys. Experience thus has two components: length and breadth. Length of experience is indicated by the number of years a person has worked as an interviewer. One indicator of breadth of experience is the number of different organizations an interviewer has worked for, or the number of different kinds of studies an interviewer has worked on. It is argued that length and breadth of experience both serve to increase the variety of different interviewing situations to which an interviewer is exposed.

We expect the relationship between length of experience (as measured by tenure) and response rates to be curvilinear. Experience in the first few years of interviewing will have a greater impact on response rates than in later years. After a certain point, the number of new situations faced by interviewers declines, and interviewers become comfortable dealing with the wide variety of sample persons and assignment areas they may face. After this, additional years of experience may not produce further gains in response rates.

It is hypothesized that experience translates into higher response rates through the intervening effects of interviewer expectations and behavior. In other words, is it possible to explain away the effect of experience on response rates by taking into account differences in expectations and behavior?

### 2.2. Interviewer expectations

It is hypothesized that positive interviewer expectations lead to higher response rates. Interviewers who have a greater belief in their ability to persuade sample persons to participate, who believe in the legitimacy of the work they are doing, and who

are confident that most people agree to participate in surveys, are likely to get higher response rates than those who believe otherwise. This argument has some empirical support in the study by Singer, Frankel and Glassman (1983), in which it was found that interviewers who felt that the task of persuading respondents was "moderately easy" achieved higher response rates than those who believed the task to be "moderately difficult". Note that in Figure 1, there is again no direct effect posited between interviewer expectations and respondent participation.

### 2.3. Interviewer behavior

Interviewer behaviors are the mechanism by which greater experience and positive expectations may produce higher response rates. The behavior of interviewers in gaining cooperation from sample persons may be likened to that of other "compliance professionals" (such as salespersons, fundraisers, etc.). Based on an extensive review of experimental and observational evidence, Cialdini (1984, 1990) identifies six compliance principles that people use to decide whether to accede to a request. Briefly, these principles are as follows:

- (a) Reciprocation: One should be more willing to comply with a request to the extent that the compliance constitutes the repayment of a perceived gift, favor, or concession.
- (b) Consistency: After committing oneself to a position, one should be more willing to comply with requests for behaviors that are consistent with that position.
- (c) Social validation: One should be more willing to comply with a request to the degree that one believes that similar others would comply with it.
- (d) Authority: One should be more willing to yield to the requests of someone who one perceives as a legitimate authority.
- (e) Scarcity: One should be more willing to comply with requests to secure opportunities that are scarce.
- (f) Liking: One should be more willing to comply with requests of liked others.

To what extent do interviewers make use of these principles to persuade sample persons to participate in a survey? This is not an exhaustive list of the strategies employed by interviewers in gaining compliance. Nevertheless, these behaviors represent an important subset of those typically used by interviewers and permit us to test preliminary hypotheses in this regard.

It is hypothesized that interviewers who make greater use of each of the various approaches mentioned above are likely to have greater success in persuading reluctant sample persons to participate.

However, the use of such persuasion techniques indiscriminately in all situations may backfire. The use of these compliance principles may not be universally effective in all situations or for all sample persons.

Thus, it is not just whether these persuasive techniques are used by interviewers, but also how they are used. Two concepts are of interest here. The first we will refer to as the "repertoire" of techniques at the interviewer's disposal. A novice interviewer may learn one or two "canned" introductions during training, and use them on all sample persons he/she encounters. In contrast, the experienced interviewer has a wide "menu" of approaches upon which to draw, and can apply them as the situation warrants it.

The second concept is that of appropriate application of the skills or techniques at the interviewer's disposal. We will refer to this as "tailoring". An interviewer is expected to be an "astute psychological diagnostician" (Cannell, 1964), to be able to size up a situation quickly, and apply the appropriate persuasive messages. These skills are gained primarily through experience. The novice interviewer, with fewer skills and less confidence, may rigidly adhere to a small number of "tried and trusted" approaches. The experienced interviewer, on the other hand, is better able to tailor his/her approach to each potential respondent.

### 2.4. Respondent attributes influencing response rates

We need to take into account the fact that interviewers are assigned different areas in which to interview. There is a fairly large body of literature on the demographic correlates of response, of which only certain salient elements will be briefly reviewed here. First, the problem of obtaining cooperation from sample persons in inner-city areas is well known (see Steeh, 1981, Smith, 1983). House and Wolf (1978) found that rising crime rates, particularly in high density urban areas, have been a major deterrent to survey participation, and to trusting and helping behavior in general (see also Korte and Kerr, 1975). We expect this arises both because of reluctance to interact with strangers on the part of residents of these areas, and unease among interviewers in doing their jobs there.

Turning to characteristics of sample households, household size has been found to correlate positively with response rates (see for example Gower, 1979; Paul and Lawes, 1982; Rauta, 1985). Single-person households tend to have relatively low response rates (see Brown and Bishop, 1982; Wilcox, 1977). This may be due in part to the large proportion of aged persons living alone. Families with dependent

children, on the other hand, tend to have higher response rates. Lievesley (1988: 7) notes that higher response rates in certain areas of the U.K. may be explained by the high probability of finding someone at home arising from "spectacularly high proportions of children aged 0-4."

The findings on sample person characteristics are somewhat more mixed. A number of researchers (see Brown and Bishop, 1982; Hawkins, 1975; Herzog and Rogers, 1988; Weaver, 1975) have found age to be associated with nonresponse, particularly among the elderly. The impact of other sample person characteristics such as race, education, socio-economic status, gender, etc. are somewhat inconsistent (see Groves (1989) and Goyder (1987) for reviews of these factors).

### 2.5. Interviewer attributes and survey design features

Certain interviewer attributes (gender, age, race, etc.) are posited to affect success in gaining cooperation. We believe that they all primarily influence the respondents through their perceptions of the social meaning of those attributes. Thus, race-matching of interviewer and respondents is often attempted because of the belief that increased social validation of the survey request from a same race requestor leads to greater cooperation.

Finally, survey design features (topic, burden, respondent selection rules, etc.) are likely to influence a sample person's decision to participate. These either affect the saliency or perceived burden factor for the respondent's decision or affect the number of different ways the interviewer can obtain the information sought by the survey.

### 2.6. Interaction effects on response rates

We suspect that there may be a number of statistical interactions in the model described above. One question is whether there are some areas (such as high density central city areas) in which experience is more important than other areas. It could be that high density urban areas are more diverse, thus requiring greater experience to deal with a greater variety of different situations. Behavior in areas in which the situations presented to interviewers are all very similar could be more easily learned, as fewer persuasion strategies may be needed. The greater the heterogeneity of an assignment area, the greater the repertoire of techniques required. In other words, we would expect experience to produce greater gains in response rates for interviewers working in high density urban areas than in rural areas.

What other interactions should be considered? We suspect that different surveys may obtain varying

response rates for different subpopulations as a result of the differential salience of the subject matter to such groups. For example, it may be expected that the National Crime Survey (which focuses on criminal victimization) may get higher response rates in high crime areas than in low crime areas. Similarly, does the Health Interview Survey (which measures health-related activities) get higher response rates in areas with an older than average population? Similar interactions may be expected between the Consumer Expenditure Survey and such variables as average household size and income or poverty level.

## **3. METHOD**

The results in this paper are part of a larger study of survey participation in face-to-face surveys in the United States. The first part of the work involved a series of focus groups with interviewers working on a variety of different surveys around the country. The insights gained from these groups led to the development of a structured questionnaire to test some of these hypotheses on a larger audience of interviewers.

The interviewer surveys had the goal of measuring behavioral, experiential and attitudinal influences on levels of cooperation obtained by interviewers. Versions of this questionnaire have been administered to interviewers working on a number of different personal visit surveys, including the following three which form the basis of this paper:

- (a) Consumer Expenditure Survey (CE) (Sponsor - Bureau of Labor Statistics; Collection - Bureau of the Census)
- (b) Health Interview Survey (HIS) (Sponsor - National Center for Health Statistics; Collection - Bureau of the Census)
- (c) National Crime Survey (NCS) (Sponsor - Bureau of Justice Statistics; Collection - Bureau of the Census).

The questionnaire was mailed in February, 1990, to Census Bureau interviewers working on these three surveys. All interviewers were paid their normal salary rate for completing the questionnaire (most were paid for an hour of their time). In an effort to seek candid responses and eliminate the threat of supervisory intervention, interviewers were assured that their individual responses would not be seen by or discussed with any of their supervisors, and that the results would be reported only as statistical totals.

Questionnaires were mailed back to the central office. Reminder letters and telephone calls were used to increase response rates. A total of 1,013 completed questionnaires were received, representing a response rate of 97.1%. A number of questionnaires were

excluded from the analyses reported here. These are from interviewers who started work during the period in which the interviewer survey was administered, and for whom no historical response rate information was available. This left a total of 918 interviewers, 276 from CE, 187 from HIS and 455 from NCS. The sample sizes reported in various analyses may be further reduced due to missing values on certain variables.

In addition to the questionnaire responses, other variables were added to the data file to facilitate analysis. These included a set of variables to represent each interviewer's usual assignment area. Typically, the primary sampling unit (PSU) in which an interviewer works consists of one or more coterminous counties. County-level data were extracted from the County and City Data Book (Bureau of the Census, 1988). These data were then aggregated to the PSU level and attached to the interviewer records. Note that these variables can only reflect gross differences in assignment area and cannot, for example, distinguish between central city and suburban areas. Furthermore, certain data are suppressed for some counties for confidentiality purposes. This served to further reduce the effective sample size for many of the analyses.

The date each interviewer was hired by the Bureau was obtained from administrative records to create a variable to serve as a measure of tenure. Although it does not indicate length of experience on a particular survey, it does reflect the number of years an interviewer has worked as such at the Census Bureau.

It was not possible to obtain measures of race, age, gender, or other demographic attributes of the interviewer. Confidentiality restrictions prevented access of personnel records for this information.

Three different surveys are represented in the data set. Instead of introducing control variables measuring key design features of the surveys, dummy variable indicators of the survey will be used to control on important design differences among them.

The dependent variable is aggregate response rate for the six month period October, 1989, through March, 1990. It was not possible to obtain interviewer-level data on the components of nonresponse (particularly refusals) for this period. These rates thus do not distinguish between noncontact and refusal components of nonresponse. Hence, it should be noted that the analyses reported here are based on interviewer-level response rates rather than refusal rates.

It is hypothesized that the effect of tenure on response rate is greater in the first few years. For this reason the tenure variable is transformed (the natural

log of tenure is used) to reflect this. The linear form of this variable was also tested, and found to produce a slightly worse fit than the transformed variable.

Given that the size of the interviewer assignments may vary (and hence affect the variance of the individual response rates), it was decided to use weighted least squares (WLS) with assignment size as the weight. Comparisons of the WLS results with those using ordinary least squares (OLS) solutions were made, and it was found that WLS reduces the size of the coefficients marginally, but does not affect the sign or relative strength of the coefficients. All the analyses reported here are based on the WLS solutions.

A number of tests were performed to determine the appropriateness of the models specified. A number of outliers in the dependent variable were detected. However, removal of these outliers had little or no effect on the results obtained, and they were therefore retained in all analyses. Further, tests of the normality assumption were also conducted. The normal probability plots show that the residuals from these models do not differ markedly from a normal distribution.

A more detailed description of the variables used in these analyses can be found in the Appendix.

#### 4. LIMITATIONS

Before describing the analyses, it is important to note some of the limitations of these data. First, these findings refer only to interviewers working on three ongoing national surveys at the Census Bureau at the time at which the interviewer survey was conducted. It is not possible to generalize to other face-to-face or telephone surveys conducted by academic or private sector organizations.

Furthermore, the data are cross-sectional in nature. Cohort and period effects are confounded with the effects of experience. That is, any observed response rate differences by interviewer experience may be due to changes in the quality of interviewers hired over time, in the effectiveness of interviewer training over time, or in differential turnover by interviewer quality. Hypotheses can be constructed to support both positive and negative effects of these factors on response rates. The measured impact of interviewer experience on response rates is a complex combination of these factors. Longitudinal measurement of interviewers is needed to disentangle these effects.

Interviewers are not randomly assigned to areas. Although we have attempted to control for a number of characteristics of assignment area that may impact on response rates, there may be many other factors that could explain differences in response rates across

assignment area. Further, we are limited to weak controls, on attributes of counties and groups of counties, not on attributes of specific assignment areas within counties given to interviewers. A hierarchical analysis containing data on individual respondents and interviewers assigned to them would improve these control factors.

A further shortcoming in this study is that it is not possible to distinguish between noncontacts and refusals. Refusals as a proportion of total nonresponse varies from 87% for CE to 52% for NCS. We suspect that different sets of factors operate to affect these two components of nonresponse. Ideally one would want to develop and test separate models for each component, but this was not possible given the current data set. To the extent that factors affecting refusals are different from those affecting other components of nonresponse (such as noncontacts), the results will be confounded (see Lievesley, 1988). It can also be noted that nonresponse rates for these three surveys are low to begin with (13.4% for CE, 4.5% for HIS and 3.1% for NCS in 1990). This may further restrict the ability of these models to explain differences among interviewers.

## 5. RESULTS

First, we measured the impact of experience, controlling for characteristics of assignment areas and dummy variables for the three surveys (Model 1 in Table 1). Before turning to the observed impact of experience, let us examine the coefficients of the control variables. Looking at the assignment area variables first, it can be seen that with few exceptions, most have significant impact on response rates. Both population density and crime rate act as expected, with lower response rates being obtained in high crime, high density areas. The negative effect of household size is contrary to expectation. This may be explained in part by the fact that these surveys all collect information from or about all adult household members, thereby increasing the reporting burden for large households. This is contrary to many surveys where a single adult is selected from each household. The coefficient for single-person households is also negative, suggesting that interviewers who work in areas with higher proportions of single-person households tend to achieve lower response rates. Whether this means fewer contacts or more refusals in these areas, we cannot tell. The proportion of persons over 65 does not appear to have a significant effect on response rate, whereas the proportion of families with young children does. This supports the finding of Lievesley (1988).

The large effects for the two survey variables

(relative to the omitted category of the Consumer Expenditure Survey) reflect differences in the mean response rates for these three surveys. Such differences can be attributed to a host of survey design differences (length of the interview, respondent selection rules, panel versus cross-sectional designs, content of the questionnaires, etc.) that are beyond the scope of this paper. Nevertheless, it is clearly necessary to control for these differences.

Let us now examine the measured effect of experience, given these control variables. It can be seen from Table 1 that the effect of tenure on response rate is positive and highly significant ( $p < .01$ ), even when controlling for the nature of the area to which an interviewer is assigned. This appears to confirm prevailing beliefs about the role of interviewer experience. Interviewer differences in response rates appear to be more than simply artifacts of differences in the areas to which they are assigned, and experience plays a key role in such interviewer differences.

The inclusion of an indicator for breadth of experience was also tested, but found to have no significant effect in the presence of the remaining variables. It thus appears that, for Census Bureau interviewers at least, experience working for other survey organizations does not appear to have any impact on response rates over and above that of tenure. Census Bureau response rates are typically much higher than those obtained for most other face-to-face surveys, which may produce higher expectations for these interviewers. It would be interesting to test the opposite effect, that is whether experience working for the Census Bureau has a positive effect for those interviewers working for other organizations.

Does experience have a differential impact on response rates in different assignment areas? Interactions of tenure with density and crime were tested, but neither coefficient was statistically significant. Our expectation that experience would have a greater impact in high density areas does not appear to be supported.

Interactions between the three surveys and various assignment characteristics were also tested, as discussed earlier. None of these appear to have any noticeable effect in these models, and are not discussed further. As a further test for the presence of additional interactions involving the survey variables, separate models were fitted for each of the three surveys. The models obtained are essentially the same for each of the three surveys examined.

Given that it appears that experienced interviewers achieve higher response rates regardless of the areas

to which they are assigned, we can proceed to address the question of how experience impacts on levels of cooperation. What makes a more experienced interviewer better at gaining cooperation from respondents?

The first step involves the addition of interviewer expectation variables to the model. The results are presented as Model 2 in Table 2. All three expectation variables behave as anticipated, although only one is statistically significant. It appears that those interviewers who have a greater belief in their ability to convince reluctant respondents to participate, actually achieve higher response rates.

It should be cautioned that the causal link between expectations and response rates cannot be established in a cross-sectional study such as this. It may be that greater success leads to greater expectations of future success, rather than the other way around. It is a long way from this to say that instilling a greater sense of self-efficacy in interviewers will produce higher levels of response. Nevertheless, this finding is an intriguing one that demands further attention.

The next step was to add the set of interviewer behaviors into the model. The results can be seen in Model 3 in Table 2. Two things can be noted about these results. First, the inclusion of this set of interviewer behaviors failed to explain away the effect of tenure. In fact, the coefficient for tenure is hardly affected by the addition of either the expectation variables or the behavior variables. The contribution of this set of variables to the explanation of the dependent variable is minimal.

Second, the results for the specific behaviors are somewhat mixed. It was expected that the coefficients for all the behavior variables would be positive. This is not the case. The results for AUTHORITY and RECIPROCATION indicate that interviewers who use these techniques achieve higher response rates. In contrast, use of the scarcity principle appears to have the opposite effect. The remainder of the behavior variables do not appear to have a significant effect on the response rates attained by Census Bureau interviewers.

It was suggested earlier that a reduced model, using only REPERTOIRE and TAILORING, should be considered. In Table 2 it was seen that these two variables do not have significant effects in the presence of the other behavior variables. Removing these other behavior variables from the Model 3, the contribution of REPERTOIRE and TAILORING is still not statistically significant ( $F=0.31$ , d.f. =2, 815,  $p>.10$ ). Thus, the argument that the way interviewers use various compliance techniques are more important than the actual behaviors themselves

gains little empirical support from these data.

Given the failure to explain away the effect of tenure or to find any strong effects for the behavior variables, the remainder of the analyses will be focused on these variables. Using the behaviors as dependent variables, we attempted to explore whether interviewer differences in behavior could be explained by experience and assignment area. Other things being equal, we would expect that more experienced interviewers would make greater use of each of the compliance principles, would have a wider repertoire of techniques and would make greater use of tailoring.

A series of (linear and logistic) regression analyses were performed with each of these variables in turn as the dependent variable. The detailed results will not be presented here. In summary, in none of the models did the predictors (assignment area, survey and experience) explain more than 5% of the variance in the dependent variable (each of the behaviors in turn). Furthermore, examining individual predictors, no discernible trend could be found. For example, LOG(TENURE) has a significant ( $p<.05$ ) effect on only two behaviors (RECIPROCATION and SALIENCY) and the sign of the coefficient is negative in each case. DENSITY and CRIME both appear to have positive effects on all of the behaviors (that is, interviewers working in high crime, high density urban areas are more likely to employ these techniques), but none of the coefficients is statistically significant. Bivariate relationships between the behaviors and tenure, population density and crime rate were also examined. Again, few significant relationships appeared, and no pattern emerged from the data. Further exploration of these behavior variables thus appears fruitless.

The same is true when the three expectation variables are treated as dependent variables. Tenure has a positive effect on two of the variables, CONFIDENTIALITY ( $p<.01$ ) and RATE/QUALITY ( $p<.05$ ), but not on the third (EFFICACY). Again, no clear trend can be found for the expectation variables.

## 6. DISCUSSION

This paper set out to measure whether experienced interviewers achieve higher response rates than inexperienced interviewers. It found they do. It then tried to explain why they do. It failed. A number of reasons might be advanced for our failure to explain away the effect of interviewer experience on response rates by taking into account expectations and behavior. One possibility is that the model is incorrect. However, continued discussions with interviewers and supervisory staff lead us to believe that this theoretical

formulation has some merit.

Three alternative explanations can be posited. First, the model is being tested at the wrong level of aggregation. Although the questionnaire focussed on what interviewers usually or typically do, we are more interested in how they act in specific situations. A more appropriate test of these ideas should be conducted at the contact or household level. Next steps in this research program are planning such analyses. Second, the measurement of various concepts may be inadequate. We may have failed in our endeavor to translate concepts from the compliance literature into specific interviewer behaviors. Third, it should again be noted that these models deal with response rates. It may be that certain behaviors are more appropriately directed at persuading sample persons to participate (aimed at reducing refusals), while others may serve more to gain access to sample persons (the noncontact portion of nonresponse). Separate models for these two processes could not be developed here.

Despite these shortcomings, we feel that these results do not necessarily negate the theoretical framework we have suggested. Rather, the findings discussed here suggest further research and analysis to explore the relationships between specific behaviors and their application on the one hand, and response rates on the other.

It should be noted that these analyses are preliminary, and further work will be done once additional data are obtained from the other survey organizations. This will then allow us to test some of these ideas more fully. Nevertheless, we feel that this line of inquiry has merit, and encourage others to investigate the role of the interviewer in survey participation in their own organizations.

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## APPENDIX: VARIABLES USED

### Dependent variable:

**Response rate:** This is the response rate obtained by each interviewer for the six-month period in question, expressed as a percentage.

### Assignment area:

**Density:** Population density (persons per square mile)

**Crime:** Crime rate (crimes per 100,000 population)

**Aged:** Percentage of population 65 years of age and older

**Young:** Percentage of population under 5 years of age

**HH size:** Average household size

**Single HH:** Percentage of households with size one

### Survey:

Set of dummies to indicate which survey each interviewer works on:

**HIS:** Does interviewer work on the Health Interview Survey (1=Yes, 0=No)

**NCS:** Does interviewer work on the National Crime Survey (1=Yes, 0=No)

**CE:** (the Consumer Expenditure Survey) is thus the omitted category.

### Interviewer experience:

**Tenure:** Number of years employed at the Census Bureau as an interviewer

### Interviewer expectations:

**Confidentiality:** Interviewers were asked whether they thought there were any situation under which the Census Bureau would give individual survey response to any of a number of agencies (FBI, CIA, INS, IRS, state and local government agencies): 1 = High confidentiality belief (Census Bureau would not give responses to any of these agencies), 0 = Low confidentiality belief (Census Bureau would give responses to one or more of the agencies).

**Rate/quality:** Trade-off between response rate and data quality. Which one of the following statements comes closest to how you feel as an interviewer: 1 = It's better to persuade a reluctant respondent to participate than to accept a refusal, 0 = It's better to accept a refusal from a reluctant respondent.

**Efficacy:** Interviewers were asked the extent to which they agreed or disagreed with the following statement: With enough effort, I can convince even the most reluctant respondent to participate. Four-point ordinal scale, 1 = strongly disagree, 4 = strongly agree. High score indicates greater belief in self-efficacy.

### Interviewer behaviors:

**Authority:** Interviewers were asked how often they left various materials (request for appointment, copy of the advance letter, etc.) at respondents' home when they found no-one at home. The responses to these questions were combined to form a scale of frequency of use of these authority-enhancing materials. High score indicates greater use of authority.

**Reciprocation:** How often do you make a point of complimenting something about respondent's home or personal appearance? 1 = Always, sometimes, 0 = Rarely, never.

**Social validation:** How often do you say "Most people enjoy doing the interview"? 1 = Always, sometimes, 0 = Rarely, never.

**Saliency:** How often do you explain to respondents how the survey results could affect them personally? 1 = Always, sometimes, 0 = Rarely, never.

**Scarcity:** How often do you tell a respondent that the interview must be completed by a certain date? 1 = Always, sometimes, 0 = Rarely, never.

**Consistency:** Before a respondent has shown any sign of cooperating, how often do you begin asking the survey questions? 1 = Always, sometimes, 0 = Rarely, never.

**Repertoire:** A count of the number of unique things mentioned by interviewers in response to the above open-ended questions serves as an indicator of the repertoire of techniques available to the interviewer.

**Tailoring:** In a series of 15 behavior items, interviewers responded whether they always, sometimes, rarely or never performed such behavior. An indicator of tailoring in the application of various persuasion techniques is obtained by counting the number of times an interviewer used the middle categories (sometimes or rarely) to these questions. A high score thus indicates greater use of tailoring.



FIGURE 1  
MODEL OF SURVEY PARTICIPATION  
Role of the Interviewer

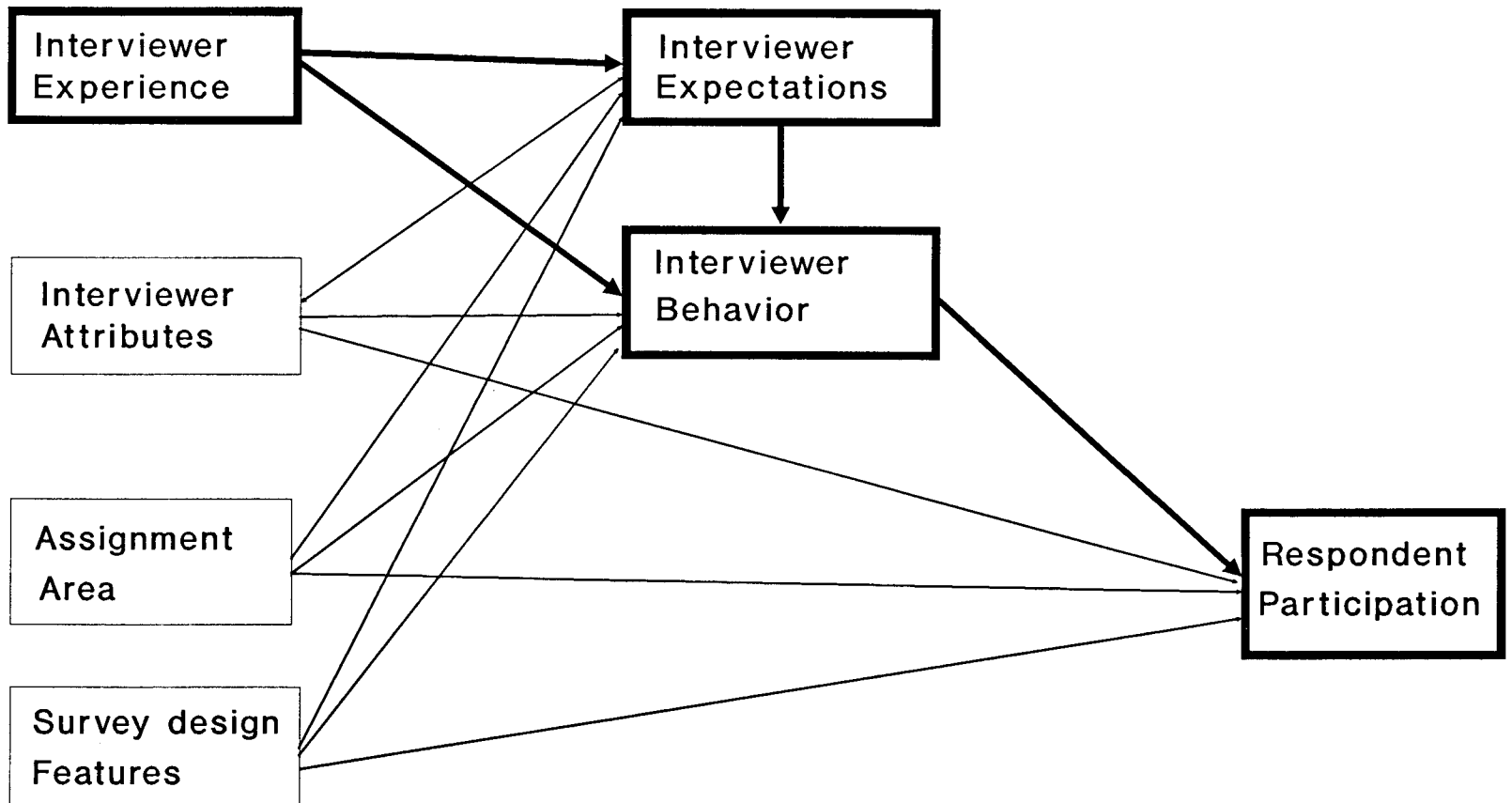


TABLE 1

	<u>Model 1</u>	
	<u>Coefficient</u>	<u>Std. error</u>
Intercept	104.62	(5.35)
<u>Assignment area:</u>		
Density	-0.00013 **	(0.000043)
Crime	-0.00018 **	(0.000057)
Aged	-0.050	(0.051)
Young	0.50 **	(0.17)
HH size	-5.32 **	(1.68)
Single HH	-0.15 *	(0.074)
<u>Survey:</u>		
NCS	7.14 **	(0.40)
HIS	6.04 **	(0.45)
<u>Interviewer experience:</u>		
Log(tenure)	0.54 **	(0.14)
Adjusted R <sup>2</sup>	0.317	
(n)	(875)	

\* p < .05  
 \*\* p < .01

TABLE 2

	<u>Model 2</u>		<u>Model 3</u>	
	<u>Coeff.</u>	<u>S.E.</u>	<u>Coeff.</u>	<u>S.E.</u>
Intercept	100.94	(5.57)	98.60	(5.66)
<u>Assignment area:</u>				
Density	-0.00015 **	(0.000031)	-0.00015 **	(0.000031)
Crime	-0.00020 **	(0.000058)	-0.00021 **	(0.000058)
Aged	-0.054	(0.053)	-0.055	(0.053)
Young	0.41 *	(0.18)	0.47 **	(0.18)
HH size	-4.70 **	(1.73)	-4.64 **	(1.75)
Single HH	-0.11	(0.077)	-0.091	(0.077)
<u>Survey:</u>				
NCS	7.16 **	(0.41)	7.12 **	(0.43)
HIS	6.03 **	(0.47)	6.12 **	(0.48)
<u>Interviewer experience:</u>				
Log(tenure)	0.47 **	(0.14)	0.51 **	(0.15)
<u>Interviewer expectations:</u>				
Confidentiality	0.38	(0.38)	0.35	(0.38)
Rate/quality	0.27	(0.41)	0.29	(0.48)
Efficacy	0.54 **	(0.16)	0.51 **	(0.16)
<u>Interviewer behaviors:</u>				
Authority			0.14 *	(0.057)
Reciprocation			0.76 *	(0.30)
Social validation			0.15	(0.32)
Saliency			-0.08	(0.34)
Scarcity			-0.59 *	(0.30)
Consistency			-0.18	(0.30)
Repertoire			0.020	(0.067)
Tailoring			0.017	(0.056)
Adjusted R <sup>2</sup>	0.324		0.330	
(n)	(836)		(829)	