STRATEGIES TO SECURE COMPLIANCE FOR A MALL INTERCEPT INTERVIEW

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Abstract Subjects in a shopping mall were approached with a request to participate in a survey. Half the subjects were touched and gazed at by interviewers and the other half were not. These nonverbal techniques increased compliance to participate in the interviewing task and somewhat decreased respondents' perceived burden. The touch and no-touch groups did not differ in response quality, apparent response bias, or volunteer bias. Compliance was related to the gender of the interviewer but not related to that of the respondent. Implications for mall intercept surveys are discussed.

In the last few years the mall intercept method of data collection has emerged as one of the most popular methods among marketing and consumer researchers. In fact, recent data (Schleifer, 1986) indicated that among those persons who participated in surveys in 1984, 33% were in mall intercepts compared to only 14% in personal interviews in homes. In another study, Market Facts, Inc. (Marketing News, 1983) showed that 90% of the market researchers it surveys in the United States use shopping mall interviews. There is growing evidence that mall surveys are also spreading to other countries (e.g., Jaffe, Pasternak, and Grifel, 1983). Lower cost, greater control, and flexibility in conducting various experiments are among the major reasons for the popularity of this survey method.

Unfortunately, mall surveys are vulnerable to haphazard sampling procedures and high nonresponse rates, with the attendant problem of possible survey bias. From an examination of the evidence on the nonresponse issue, Gates and Solomon (1982) show that 44% of those contacted refuse to participate. Comparing the results to response

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rates obtained by other survey methods, they claim that "the nonresponse rate of the mall intercept technique seems to be higher than average" (p. 46).

Schleifer (1986) argued that refusal at the initial contact in the mall may reflect failure of the interviewer to encourage compliance. Furthermore, incidents related to the interpersonal dynamics between the two may also influence respondent perception of task burden and respondent behavior during the interview. This suggests that rapport established during the initial contact might reduce refusals by reluctant respondents. Sudman (1980) has recommended a number of procedures for improving the quality of mall intercept samples. However, no major attempts have been made to investigate the nonresponse problem and recommend strategies to elicit respondent compliance.

This report describes and evaluates a method of increasing compliance which has received little attention in survey research—the use of nonverbal communication techniques to induce people to comply.

In most circumstances the solicitor has available a variety of verbal and nonverbal techniques to influence behavior. It has been shown (e.g., Hornik, 1982) that grammatical forms differ in the amount of pressure they seem to exert on the respondent to comply, the ingratiation appeal being the most effective. In addition, solicitors can use their physical appearance, interpersonal space, gesture, gaze, and touch to elicit compliance. Several demonstrations have shown that nonverbal combinations affect perception. Kleinke's (1977, 1980) work on gaze and touch is an exemplary study. He demonstrated that requester nonverbal behavior, especially gaze and light touch on the arm, serve the function, in addition to verbal behavior, of securing compliance to lend the experimenter a dime to make a telephone call. In a similar study, Willis and Hamm (1980) showed that the requester touch significantly intensified the effect of gaze on a request from students to sign a petition. On the other hand, others (e.g., Ellsworth and Langer, 1976; Patterson, Powell, and Lenihan, 1986) argued that the effects of gaze and touch might depend on contextual cues surrounding the conversation.

On the basis of the above evidence, it was speculated that gaze and touch, along with the appropriate selection of interviewer sex (Stier and Hall, 1984), would lead to greater compliance with a request to participate in a shopping mall interview concerning questions on advertising and television viewing behavior.

Survey Procedure and Design

The basic hypothesis evaluated was that the gaze and touch method will significantly affect response results. Also, female interviewers

were expected to elicit better response than male interviewers across all modes of requests. A gender effect was investigated to detect possible differences in response pattern resulting from interviewer–respondent interaction.

SUBJECTS

A total of 288 shoppers, half females and half males, were approached by interviewers in a suburban Chicago shopping mall. The sample size exceeded the minimum requirements under Feldt-Mahmond (1958) specifications. The selection of the mall intercept sample was based on the sampling procedures introduced by Sudman (1980). Specifically, interviewers were each stationed in a different mall entrance, and their location changed every four hours; interviews were conducted over three days and at different times of day. Special efforts were made to ensure that sample selection was not based on interviewers' judgments. Interviewers were instructed to draw a systematic sample from among the shoppers at the entrance. Specifically, a selection rule was instituted (and supervised) by which customers were counted as they passed from a specific direction (e.g., left to right) to a certain point in the corridor (about 50 feet from the interviewer), and every *n*th person was selected. The number of people to be skipped was set according to a predetermined measure of shopping traffic at each location. As Sudman (1980) argued, these procedures cannot ensure "full" protection against interviewer selection bias, but they help greatly to reduce it.

INTERVIEWERS

The personal contacts were made by interviewers who were graduate students enrolled in an advanced marketing research seminar. Their participation was part of a class assignment, and they were told their performance would be part of the seminar grade. Because of the complexity of the study procedure and the experimental manipulation, particular emphasis was given to interviewer training and control.

Before conducting the experiment, interviewers practiced with role-playing subjects. Professional observers recorded their behavior during the practice session to ensure that the experimental treatments could be manipulated in a consistent manner. These treatments included touching the subject on the arm or shoulder at the onset of the request and maintaining a constant gaze throughout the interaction. Interviewers were trained to look persistently at the subject's face or eyes regardless of the subject's behavior. The alternative nonverbal behavior was a control no-gaze/no-touch condition: interviewers were instructed and trained to maintain normal interviewing behavior, for

example, refrain from long eye contact with the subject, maintain the usual conversation distance without touchng, etc. These procedures correspond with Kleinke's (1980) recommendations, also validated in a number of studies, that the gaze and touch manipulations affected the rapport between solicitors and subjects.

Those students who felt severely uncomfortable with the methodological aspects of the experiment were allowed not to take part in the assignment.[1] In order to maintain equal numbers of male and female interviewers, four male and four female students were finally selected following the training sessions. Interviewers were requested to approach an equal number of subjects in each condition. They were not informed of experimental hypotheses. Interviewers were casually and neatly dressed. Because of concern for possible interviewer distortions, severe measures of control were also administered during the experiment. Specifically, each interviewer was attended by a member of the research team who supervised, from a distance, the entire procedure.

PROCEDURE

As a lone shopper entered the shopping mall, he or she was met by an interviewer who wished the individual good morning (evening) and offered him/her a gift in the form of a pocket address book (worth about $0.50) embossed with the name and logo of the sponsoring university. No subject who was offered the gift refused to take it. The interviewers then introduced themselves as students working on a university research project and asked subjects to participate in a short interview. Subjects were told that the interview would take about 10 minutes and were assured of confidentiality.

During the request and on alternate one-hour periods the interviewers either touched and gazed at the subjects or did not. Interviewers were at all times pleasant and friendly. They smiled during each approach and maintained a constant interaction distance in the touch/gaze and no-touch/no-gaze conditions. The mode of verbal request was an ingratiating appeal which has been shown (Hornik, 1982) to be the most effective in generating responses. Specifically, the following appeal (translated from Hebrew) was used: "We are *earnestly* asking for your *generous help* in answering a few questions about television and advertising" (italicized words were voice inflected).

Subjects who agreed to participate in the interview were asked a few questions and also asked to fill out, on location, a short self-admin-

1. One caveat in this regard is that this technique might not work for certain interviewers.

istered form. If a subject refused to participate, the interviewer recorded the subject's gender and the nonverbal condition.

The interviewer-administered form was a four-page instrument, and the consumer self-administered questionnaire was a two-page form returned in a sealed envelope. Both questionnaires contained predominantly fixed-response questions with a few open-ended questions. Respondents in pilot studies usually took 10–15 minutes to complete both tasks and exhibited high involvement and interest.

DEPENDENT VARIABLES

This experiment tested the effect of each of the two experimental conditions on five different types of response behavior: overall compliance (response rate), response quality, response bias, volunteer bias, and respondent burden. Response rate alone is an inadequate criterion with which to judge the effectiveness of inducement techniques. Methods that increase response rate may do more harm than good if they foster response bias, sample composition bias (Houston and Ford, 1976), or respondent negative reactions (Sharp and Frankel, 1983).

1. Response rate was defined as the percentage of total subjects approached who agreed to participate in the interview.
2. Two components of response quality were examined—item omission rate and completeness of answer. Item omission was measured by the number of fixed-response items omitted per returned questionnaire. Completion of answer was defined operationally by the number of items checked in responding to an open-ended listing-type question. The following example illustrates an open-ended question: "Please list some of your most favorite television programs."
3. Possible response bias was examined by comparing, for each one of the fixed-response items, the response distribution across treatments.[2]
4. Volunteer bias was measured by comparing demographic distribution of respondents (in addition to respondents' gender) across treament groups.
5. In order to assess possible effects of experimental manipulation on respondents' perceived social or psychological stress, two

2. The optimal assessment of response bias involves the use of validating information to compare reported and actual information for respondents across treatments (Houston and Ford, 1976). It is also common to observe the length and depth of response to open-ended questions. Because no validating item could be used, and because of the nature of the listing-type open-ended questions, the validation procedure and the question completion across treatments could not be examined.

measures of respondent burden were included. The first was a possible expression of negative reactions to the interview (e.g., "My overall impression is that the survey was not so important") or a lack of willingness to be reinterviewed ("I will be happy to take part in a similar interview in the near future"), ascertained by means of the last four attitude and behavior questions in the self-administered questionnaire. These four indicators were combined into an overall "response burden index" by creating a scale of all the variables and using an item analysis technique. The second was the interviewer report on various respondent negative behaviors: interview breakoffs or evidence of restlessness or discomfort. Both measures were used before and were shown to be highly reliable (Schleifer, 1986; Sharp and Frankel, 1983).

Results

The experimental results are reported for each dependent variable. Appropriate means and percentages are listed in Table 1. For response

Table 1. Response Rate, Response Quality, and Response Burden by Factor Combinations

		Response Quality		
		Item Omission		
Factor Combination[a]	Response Rate (%)	Mean	%	Multiple Mentions (%)
Gaze & touch/(M/M)	26/36 = 72.2	0.86	4.8	46.4
Gaze & touch/(M/F)	20/36 = 55.6	1.23	6.8	45.1
Gaze & touch/(F/M)	33/36 = 91.6	0.89	4.9	46.2
Gaze & touch/(F/F)	31/36 = 86.1	1.38	7.7	44.0
No gaze & touch/(M/M)	19/36 = 52.8	0.81	4.5	45.8
No gaze & touch/(M/F)	17/36 = 47.2	1.19	6.6	45.3
No gaze & touch/(F/M)	22/36 = 61.1	0.92	5.1	46.1
No gaze & touch/F/F)	20/36 = 55.6	1.27	7.1	43.7
Overall	188/288 = 65.3	1.07	5.9	45.3

[a] Gender combinations: M/M = male interviewer/male respondent; M/F = male interviewer/female respondent; F/M = female interviewer/male respondent; F/F = female interviewer/female respondent.

rate, subjects who participated in the interview were scored as compliers. Subjects who did not agree to take part in the interview were scored as noncompliers. No subjects were deleted.[3] Response rate was also tested as a dichotomized dependent variable (see Edwards, 1972:124) to assess main and interaction effects of nonverbal form, sex of interviewer, and respondent sex in the analysis of variance. Table 2 summarizes F values associated with main and interaction effects for each ANOVA. Standard ANOVA procedures were applied to the response burden index.

Response quality was measured by using item omission rates and completeness of answer. Although there are other measures of response quality, the measures used offer a more penetrating look at the impact of bias problems and are more amenable to standard ANOVA procedures. Finally, the significant main and interaction effect were followed by z-tests on the hypothesized pair differences to reveal the specific nature of such effects.

Results were first analyzed to reveal possible between-interviewer effects (within experimental groups) on the dependent variables. Experimental results by interviewers did not show significant differences between interviewer means and group means. Thus homogeneity of interviewers and procedure was assumed.

RESPONSE RATE

Table 1 contains the number of subjects who complied and who failed to comply in relation to the nonverbal condition, the gender of the interviewer, and the gender of the subject. The overall percentages of compliance were 76.4% for the touch and gaze condition and 53.4% for the no-touch condition. These were somewhat higher than results reported in other studies (Kleinke, 1977; Willis and Hamm, 1980), possibly reflecting the effect of the gift as an added incentive. The response rates show considerable variation between treatments, ranging from a low of 47.2% for the no-gaze and no-touch/male interviewers/female respondents to a high of 91.6% for the gaze and touch/female interviewers/male respondents.

The results of the ANOVA (Table 2) indicate that the main effects of nonverbal communication and gender of interviewers are statistically significant. Female interviewers have a significantly greater response rate than males. Among the two-way interactions in the analysis, the

3. It should be noted that seven subjects, two from no-touch and five from touch treatments, indicated that they would be willing to participate later for various reasons (meet someone, pick up something, etc.). The interviewers agreed. Four subjects returned, all from the touch group, and they were coded as compliers.

Table 2. Summary of ANOVA Results: *F* Ratios

Source of Variation	Response Rate	Response Quality		Response Burden	
		Item Omission	Multiple Mentions	Respondent Report	Interviewer Report
Main effects					
Nonverbal form (A)	8.15***	<1	<1	2.35*	2.16*
Interviewer sex (B)	4.85**	<1	<1	1.62	<1
Respondent sex (C)	<1	2.37*	1.22	<1	<1
Interaction effects					
A × B	1.51	<1	1.12	1.27	<1
A × C	<1	1.58	<1	1.42	<1
B × C	3.37**	1.30	<1	<1	1.19
A × B × C	3.14	<1	<1	<1	<1

* $p < .10$. ** $p < .05$. *** $p < .005$.

interviewer by respondent sex interaction is significant.[4] This interaction indicates that response rate differences between male and female interviewers are linked to the sex of respondents. Specifically, both male and female interviewers accomplished higher rates of compliance from male respondents than female respondents. But the differences in rate of compliance between male and female respondents were higher within the male than female interviewers. The significant three-way interaction (nonverbal form by interviewers by respondents) represents a gender effect (interviewer/respondent) along with the nonverbal communication effect. Thus, the gender interaction effect is more apparent under the gaze and touch treatment compared to the no-gaze and no-touch condition.

RESPONSE QUALITY

As indicated by Table 1, the nonverbal conditions did not provide a significant change in items reported or item omission rates. The percentages are very close, and the values of the critical ratio are insignificant. The overall mean of item omission is 1.07, accounting for only 5.9% of questions. Coupled with ANOVA results (Table 2), the only main effect of marginal significance at the $p < .10$ level is sex of respondent. The two main effects of nonverbal communication and sex of interviewer are insignificant, and no significant interaction effects are revealed.

Results suggest possible item omissions due to sex of respondent. Male respondents appear to take their time in the mall or to attach greater importance to providing a complete set of replies. Observed mean differences do not reveal a single significant mean difference for the two groups of interviewers.

Open-ended items allow respondents to articulate their own answers. The number of different responses that respondents give to open-ended questions in the experimental conditions is a useful variable for the amount of effort respondents give to the task, or the extent to which the answers fully characterize their thoughts.

Only the first two mentioned answers were coded for each of the four open-ended items.[5] This practice was implemented and defended by Groves (1978). Table 1 reports the percentages of respondents, among those answering the question, who gave at least two answers (i.e.,

4. A chi-square analysis was performed on the data. The results confirmed those in Table 2.

5. Because treatments were assigned randomly to respondents, and because most respondents gave at least one response regardless of experimental conditions, any bias that might have resulted from zero or one answer was distributed randomly and in a way that should not affect the analysis.

"Don't knows," etc., were excluded). Results for the two nonverbal conditions show similar proportions of multiple mentions across the experimental treatments. The ANOVA analyses do not show any main or interaction effects. In fact, the differences are negligible and statistically insignificant.

RESPONSE BIAS

To investigate whether nonverbal treatments, though affecting response rate, might cause any differences in answers, comparison was made across mean answers on each one of the fixed-response items for all treatment groups. No significant mean differences within treatment groups were revealed. The overall nonsignificant results indicate that response bias was not affected. Because the results do not lead to differences in response distortion, the means and test scores are not reported.

VOLUNTEER BIAS

To check whether the source manipulations influenced the composition of the respondent group, volunteer bias was measured. Chi-square tests and Kruskal-Wallis one-way analysis of variance (which, for two groups, reduces to the Mann-Whitney test statistic) were utilized to test for relationships between nonverbal stimuli and the variables of age, education, and shopping frequency. No relationships were found between the experimental conditions and the three descriptive variables included in this study, meaning that the experimental manipulation may not induce certain consumer groups to respond more than others.[6]

RESPONDENT BURDEN

Survey researchers have recently raised the issue that asking people to participate in surveys might entail a sacrifice of time as well as some psychological discomfort, depending on the nature and situation of the inquiry. Therefore, more and more researchers have suggested testing the effect of survey procedure on respondent burden (e.g., Sharp and Frankel, 1983; Schleifer, 1986). Such a test should supply information on respondents' feelings, if the survey was completely fielded with pleasant, friendly, and tactful interviewers, and whether the respondents felt that they have been induced to participate.

6. Obviously, these three variables are not representative of the full domain of descriptive variables. One can speculate that certain personality or psychographic variables (e.g., submissive people) might result in volunteer bias.

Analysis of repondent and interviewer reports on the burden measures suggests that the experimental manipulations did not create significant feelings of irritation or annoyance. Nevertheless, the gaze and touch conditions seem to produce slightly less perceived burden by respondents and by interviewers. In fact, there are marginally significant results for both the composite index of respondent burden and the burden reported by interviewers (Table 3), thus suggesting the possibility that nonverbal strategies like gaze and touch yield not only higher compliance but also an improved social and interpersonal feeling perceived by both interviewers and respondents.

Discussion and Conclusions

The fundamental problem with mall intercept surveys is that although sampling errors are largely controlled, nonsampling errors are not (Bush and Hair, 1985). In a period of increasing mall intercept surveys, research on methods to increase compliance is needed more than ever. Without such research, response behavior is likely to diminish, affecting the validity of mall intercept findings. The study reported in this

Table 3. Respondent Burden Indicators by Nonverbal Condition (in Percentages)

Indicators	Nonverbal Condition: Gaze & Touch	Nonverbal Condition: No Gaze & Touch	Sig.
a. Respondent unwilling to be reinterviewed next time	9	13	$p < .10$
b. Overall, interview was "not very interesting" or "not at all interesting"	11	13	n.s.
c. Interviewer was "not pleasant and not so friendly"	8	10	n.s.
d. Survey was "not so important"	7	12	$p < .01$
Response burden index[a]	9.15	12.65	$p < .10$
e. Respondent reported by interviewer as "preoccupied" during interview	6	10	$p < .10$

[a] Indexed from questions a, b, c, and d.

paper attempted to investigate whether certain nonverbal stimulating strategies will affect repondents' cooperation.

Apparent variations in response behavior to survey solicitation by nonverbal manipulation were verified empirically. Although results were not all highly statistically significant, the following conclusions emerge: First, the results provide evidence for the proposition that certain nonverbal stimulations like touch and gaze can be manipulated. Individuals seem to be sensitive to nonverbal appeals in a public solicitation environment.

Second, the gaze and touch technique, which was predicted to exert more pressure, was effective in generating compliance, particularly for female solicitors. Nonverbal communications have a stimulating effect upon respondents. It seems that subjects comply when their initial contact and interpersonal dynamics with the solicitor are sufficiently pleasant to justify compliance.

Third, although significant gender interaction effects within the nonverbal conditions are not always large, systematic differences as a function of solicitor gender are apparent, particularly for female respondents.

Fourth, none of the nonverbal manipulations have a consistent or large effect on response bias and volunteer bias, but they do have some positive effect on respondent burden. These issues received special attention in order to explore the possibility that nonverbal manipulation might affect the validity of the studies. Consequently, results suggest that mall intercept researchers can use nonverbal inducement techniques to produce larger samples without risking selection bias. Moreover, the touch and gaze conditions produced fewer complaints by respondents and interviewers, reflecting less perceived burden imposed by task and interviewer.

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