Given the substantial amount of research investigating mail surveys, it is surprising that more has not been learned about what techniques consistently increase mail survey response rates. There have been few attempts to develop a theory of mail questionnaires. Two extensive reviews of research findings on techniques to increase responses to mail surveys conclude that there is very limited evidence upon which many widely accepted techniques are based (Linskey 1975, Kanuk & Berenson, 1975). The only two techniques which have been demonstrated to be consistently effective are followup letters with a copy of the questionnaire (Suchman & McCandless 1970, Kephart and Bressler 1958, Levine & Gordon 1958, Scott 1961, Watson 1965) and monetary incentives enclosed with the mail questionnaire (Hancock 1940, Kephart and Bressler 1958, Frankel 1960, Newman 1962, Watson 1965, Wotruba 1966, Erdos 1970, Blumberg et.al. 1974, Huck & Gleason 1974, Armstrong 1975). 1

The problem typically associated with mail surveys is low return rates. There are two reasons for concern with this problem. The first is that a low response rate decreases the accuracy with which the sample can be considered representative of the total population. The second is that non-respondents will differ in non-random ways from those who do respond (Suchman and McCandless 1940, Baur 1947, Frazen and Lazarsfeld 1945, Goode and Hatt 1952, Wallace 1954, Suchman 1962, Robins 1963, Vincent 1964, Ognibene 1970, Wilcox 1977, Bartos 1978). Mail questionnaires have the advantage of being less expensive than other methods, allowing the researcher to obtain information from a greater number of people. They allow privacy to the respondent, making them potentially more appropriate for collecting sensitive information (McDonagh and Rosenblum 1965, Knudson, Pope and Irish 1967, Wiseman 1972). They avoid biases which potentially accompany the interaction between respondents and interviewers (Selltiz et al 1951, Boyd and Westfall 1955, Boyd 1965, 1970, Schyberger 1967). And, they may be more valid than interviews because they allow respondents to check information by consulting records or other family members (Kahn and Cannell 1966, Rosenthal 1966). If the problem of low response rates can be overcome, mail questionnaires have some very clear advantages.

Recently survey researchers have been calling for more theory-based research in this area (Linskey 1975, Wiseman and McDonald 1978). Literally hundreds of studies have been reported investigating the effects of cover letters, postage, incentives, offer of survey results, and other factors on mail questionnaire response rates. However, until more is known about what determines the decision to respond or not respond there is little basis for discussing what variables are or are not important.

In a recent review of the nonresponse problem Wiseman and McDonald (1978) have emphasized the need for a theory or model of the decision process prospective respondents use in determining whether to participate in a survey. Few efforts have been made toward generating such a theory though some candidate theories have been indentified (Linskey 1975). Among theories that have been suggested as a framework for understanding mail questionnaire

response are reference-group theory, exchange theory, socialization and balance theory, and cognitive dissonance theory. Of these candidate theories. cognitive dissonance has probably received the most attention (Hackler and Bourgette 1973, Furse, Stewart, and Rados 1981). The present paper seeks to develop further a cognitive dissonance model of respondent decision making by examining and on integrating the available research questionnaire response. The response to a mail questionnaire is conceptualized as a series of decisions rather than a single response. Any negative decision in the entire series will result in a nonresponse. Cognitive dissonance theory is used as as explanatory framework for understanding the decision to respond or not respond. Response induction techniques are evaluated in terms of the particular decision within the total sequence that they influence.

COGNITIVE DISSONANCE AND SURVEY RESPONSE

Hackler and Bourgette (1973) have suggested that response rates could be increased by creating a feeling of cognitive dissonance among respondents - a dissonance that could be resolved by returning the questionnaire to the researcher. They mailed a dollar bill to potential respondents hoping that they would use the money and feel obligated to return the questionnaire. If the respondent objected to the questionnaire, s/he could return the dollar. Returning the dollar involved effort, however. On the other hand, to keep the dollar and not complete the questionnaire would create a state of dissonance in the respondent.

Hackler and Bourgette used comparable samples of 218 residents of a lower-middle-class neighborhood of Edmonton, Canada. Half of the sample received a dollar and half received no dollar. After seven days both groups received a follow-up postcard. At day eleven 83 percent of the dollar group had returned the questionnaire while only 53 percent of the no-dollar group had. After eleven days the no-dollar group received a dollar and another copy of the questionnaire making the two groups no longer comparable. After the no-dollar group had received the dollar, their response rate jumped and by day fifteen the two groups' response rates were 90 and 80 percent respectively. Hackler and Bourgette attribute the high response rates to the ability of the dollar to induce cognitive dissonance in respondents.

A more recent test of the dissonance hypothesis was carried out by Furse, Stewart, and Rados (1981) in a mail survey of 900 residential telephone customers. The effects of a 50-cent incentive enclosed with a mail questionnaire were tested in an initial and a follow-up mailing. One treatment group received a 50-cent coin and a second received no monetary incentive in the initial mailing. In the follow-up mailing, half of the non-respondents in each group received a 50-cent incentive with the follow-up letter and questionnaire, and half received no incentive. As expected, the response rate was significantly higher when a follow-up incentive was added for the group receiving no initial incentive, but there was no effect of either repeating or dropping the 50-cent incentive for the group who had received the 50 cents initially.

The authors concluded that the ability of the 50-cent incentive to induce dissonance among those not responding initially was not enhanced by repeating the incentive. These respondents were essentially dissonance resistant even though some had received a total of a dollar.

This finding differs with the conclusion implied in earlier studies that one could always increase the response rate by using monetary incentives in followup mailings. Offering the same level of incentive in the follow-up was no more effective than offering no monetary incentive with the follow-up. This was true despite the fact that respondents had now received double the initial incentive. Furse, Stewart, and Rados maintain that the initial incentive served to create dissonance among potential respondents, which was relieved by completing and returning the It was hypothesized that those questionnaire. respondents who did not return the questionnaire tended to be more tolerant of dissonance (the incongruity between accepting the incentive, yet not responding). There was no effect of repeating the same incentive in the follow-up since it had exhausted it efficacy as a dissonance agent during the initial wave.

A BRIEF REVIEW OF COGNITIVE DISSONANCE

Cognitive dissonance provides a useful general framework for explaining mail questionnaire response. However, before developing a specific dissonance theory of mail questionaire response it is worthwhile to develop some fundamental notions related to cognitive dissonance.

Cognitive dissonance theory, developed by Festinger (1957, 1963, 1964) is a tension reduction model in which dissonance is conceived as an unpleasant drive state. Dissonance is defined by Festinger (1956, p. 13) in a logical sense: "Two elements are in a dissonant relation if, considering these two alone, the adverse of one element would follow from the other." When two or more cognitive elements are dissonant there will be a pressure to reduce that dissonance. This pressure will be proportional to (1) the importance of the elements and 2) the proportion of cognitive elements that are dissonant. A person's efforts to reduce dissonance increase with the amount of dissonance created. Festinger has argued that dissonance has clear motivational properties.

Research on the motivational properties of dissonance is considerable. Kiesler and Pollak (1976) reviewed physiological correlates of dissonance manipulations and concluded that "the evidence, albeit largely indirect, indicates that manipulations typically used in dissonance experiments are arousing." Eagly and Himmelfarb (1978), Drachman and Worchel (1976), Zanna and Cooper (1976), and Zanna, Higgins and Taves (1976) all report similar findings. Zanna, Higgins, and Taves (1976) suggest that dissonance is an aversive state of arousal that can be differentiated from nonaversive states. Other studies have demonstrated that behavioral and/or attitudial changes may be induced by dissonance evoking manipulations (Festinger 1957, Festinger and Carlsmith 1959, Festinger and Aronson 1960, Brehm and Cohen 1962, Festinger and Bramel 1962, Festinger and Freedman 1964).

Other researchers have sought to examine individual differences with respect to cognitive dissonance. Aronson (1973) has summarized these

differences:

- People differ in their ability to tolerate dissonance. It may take a greater amount of dissonance to bring about dissonancereducing behavior in some people than in others.
- What is dissonant for one person may not be dissonant for someone else. People may differ in what events they regard as dissonant.
- People differ in their perferred mode of dissonance reduction. People will use different means for reducing dissonance.

Although dissonance may have motivational or drive properties it appears that people will differ with respect to how much dissonance is required to produce a dissonance reducing response, what events will induce dissonance, and the dissonance reducing behavior they employ.

A third set of research studies has sought to examine the relationship between cognitive dissonance and incentives (Cohen 1962, Rosenberg 1965, Festinger and Carlsmith 1959, Nuttin 1964, Aronson 1966, Carlsmith, Collins, and Helmreich 1966, Linder, Cooper, and Jones 1967). Although specifically concerned with attitude change rather than behavioral compliance, these studies have particular relevance for a theory of mail questionnaire response since they specifically sought to examine whether dissonance or a monetary incentive was a more important determinant of attitudinal or behavioral change. The rather complex findings of these studies appear to indicate that under conditions of freedom of choice a small incentive appears to create dissonance while a large incentive appears to have reinforcing properties. Linder, Cooper, and Jones (1967) also argue on the basis of this literature that the incentive must be one of the conditions potentially affecting the decision to comply rather than a reward for having already so decided if dissonance is to be created. This research provides strong support for the notion that a small incentive tends to bring about compliance via dissonance rather than as a compensation for services. Large incentives and promised rewards are more likely to be evaluated as compensation for the behavior.

A TENTATIVE MODEL OF MAIL QUESTIONNAIRE RESPONSE

We hypothesize that dissonance reduction is an important, although potentially not the only, component in the decision to respond to mail questionnaire. The receipt of a questionnaire and cover letter asking for cooperation is the stimulus event which precipitates a decision process. An individual may choose to respond or not to respond. Almost no one actually enjoys filling out a questionnaire, and there is little opportunity of convincing respondents that they will benefit personally from participation. However, failure to respond may be inconsistent with an individual's self-perception of being a helpful person, being an opinion leader or at least one who responds to reasonable requests made by others. In such cases failure to respond will produce a state of dissonance which the individual may seek to redress by responding to the questionnaire. If the mailing looks important or the

need for the response urgent or it has a monetary incentive enclosed, non-response is made even more awkward.

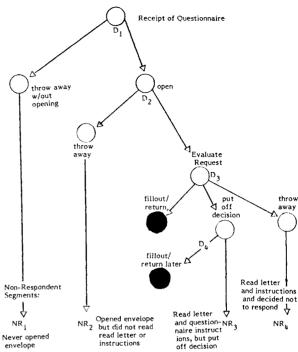
However, questionnaire response is not a single decision. It is more useful to conceptualize it as a group of sequential responses to stimuli associated with the questionnaire rather than as a single decision to respond or not respond (Figure 1). Upon receipt of the questionnaire the respondent first must decide whether to open it or throw it out along with other unsolicited mail (See DI in Figure 1). If the letter is opened, the respondent may throw it away after cursory examination indicates there is nothing enclosed that the individual needs, or s/he could decide to investigate further (D2) if the request appears to be interesting and reasonable. S/he may then decide (D3) either to fill out the questionnaire, to throw it out, or put it aside for later decision. If the individual puts off the decision, he may either complete and return the questionnaire eventually (D4) or forget about it. Putting off the decision may be a mechanism for some individuals to avoid filling out the questionnaire without having to reject the request overtly and experience dissonance. So putting off the decision may be itself a dissonance reducing response. A similar series of decisions would be involved in a follow-up request except that there are now proportionately more resistant respondents, characterized as one of four general types depending on when in the decision sequence they became a nonrespondent. Each is likely to respond differently to follow-up techniques and to be differentially tolerant of further attempts to create dissonance.

Since respondents do not benefit directly from participation, there is a built-in disincentive to participate in surveys. The researcher can promise a reward for participation, but promised rewards are typically far less than adequate compensation for the effort. Research in this area has consistently demonstrated that promised rewards are relatively ineffectual. The key to generating high response rates in mail surveys at an affordable cost lies not in attempting to compensate respondents, but in creating dissonance among those considering non-response at each stage of the response decision process. A review of the most effective techniques for increasing response suggests that different techniques have their effect at different stages.

Linskey (1975) and Kanuk and Berenson (1975) in major reviews of mail survey research conclude that there is substantial evidence that the following techniques are effective at increasing response rates:

- 1. The use of follow-ups, or reminders, sent to initial non-respondents Follow-up letters with a copy of the questionnaire are most effective, although reminder post cards, letters sent out and calls are also effective if conducted within a few days of the initial mailing of the questionnaire.
- 2. <u>Pre-contact by mail, telephone, or earlier personal contacts</u>
- 3. Type of postage on outgoing and return mail The more "high powered" mailings, such as air mail and special delivery, are superior to first or third class; hand stamped return envelopes are more effective than postage permits; registered mail and special delivery follow-ups are especially effective.

FIGURE I Response Decision Process



- 4. Enclosed cash rewards in any amount (amounts as small as a quarter appear to be very effective at increasing response rates)

 Smaller amounts are substantially less effective than a quarter and larger amounts, while effective at increasing response, bring proportionately smaller increases.
- 5. The organization that appears as sponsor of the study and title of the person signing the cover letter seem to be important, at least in some cases

Table 1 relates techniques to different decisions in the response process on which they are likely to have the greatest impact.

Factors Affecting Response/Nonresponse Decisions

The first decision facing the respondent is whether to open the letter at all. Given the large volume of unsolicited mail that most people receive, it cannot be taken for granted that respondents will even see the cover letter and questionnaire. Both the type of postage on the envelope and prior notification would have a positive effect on getting the letter opened (D1). Many respondents who ordinarily throw away unsolicited mail, may feel uncomfortable about throwing away an air mail or special delivery letter or one about which they had received prior notification.

The next decision after opening the letter is whether or not to read it. From our own experience a great deal of mail that is opened is not read carefully unless it is clear immediately that there is a benefit to the recipient of doing so. Here again pre-contact by mail or phone may cause the respondent to fee obligated at least to consider the request (D2), especially if there had been an opportunity earlier to decline participation (the familiar "foot-in-the-door" phenomenon). Enclosed rewards, especially money, may also cause the respondent to feel dissonance for

not at least evaluating the request carefully. Reading the cover letter and the questionnaire instructions are the most forbidding aspects of the task for prospective respondents. Once this is done, the actual task of filling out the questionnaire is relatively easy, and at this point the respondent may feel some level of investment in and involvement with the project. To keep the money, even if only a token amount, without reading the cover letter and looking over the questionnaire may be inconsistent with personal values related to fairness and reciprocity. Since dissonance has motivational and drive properties some individuals would seek to reduce the dissonance by responding to the questionnaire. However, there will be those individuals who may be sufficiently motivated by dissonance to read the letter, but their response will be something other than returning the questionnaire, (e.g., denigrating the researcher and the purpose of the study, etc.) Also, the literature on individual differences would suggest that not all persons will consider the decision not to respond to be dissonant with other cognitive elements. For example, Gelb (1975) found that middle class respondents were more likely than lower social class respondents to return a mail questionnaire with an enclosed monetary incentive.

After evaluating the requirements of the task, respondents must still decide whether or not to respond (D3). The source of the survey, the title of the person signing the cover letter, and whether a postage paid return envelope is enclosed would become important for inducing dissonance among those considering non-response at this stage. An enclosed incentive may also have an effect at this stage of the decision process by causing respondents to delay a decision by putting aside the questionnaire to fill out later if time allows thus avoiding the dissonance associated with accepting the money without returning the questionnaire. Other factors, such as the type of appeal in the cover letter, could also have an important impact on persuading individuals to respond (or conversely generating dissonance if they elect not to respond). The few studies which have treated cover letter appeal offer no insights to the most appropriate formulation (Kanuk and Berenson 1975, p. 450). Since the effectiveness of alternative cover letter appeals for different study populations, varv generalizations would be difficult.

Among those who put off filling out or returning the questionnaire (D4), a reminder post card or telephone contact may be effective. Reminders are typically most effective if conducted within a few days after the questionnaire is received and before it has been misplaced or discarded (Erdos 1970), or when the follow-up includes another copy of the questionnaire (Kanuk and Berenson 1975).

Non-response Segments

Four general types of non-respondents to the initial mailing can be identified. First, there are those who throw away the mailing without opening it (NR1). Second are those who open the mailing, but discard it without really evaluating the request (NR2). Third are those who evaluate the task, but put off filling out the questionnaire until they lose it or discard it possibly after concluding that it is now too late to respond (NR3). Fourth are those who evaluate the task, but elect not to respond (NR4). Since each non-response segment dropped out at a different stage of the response process, each is likely to be responsive to

TABLE 1
Dissonance Inducing Techniques in Initial Mailing

Stage in Response Process:		Applicable Techniques		
ום	(throw away w/out opening)	type of postage, pre-contact by mail or telephone		
D ₂	(throw away w/out reading)	pre-contact by mail or phone, enclosed monetary or non-monetary premiums		
n ₃	(evaluate request)	cover letter appeal, source, signature, title of signer, return envelope & postage, enclosed premium		
D ₄	(put off filling out)	reminder card, call, or letter within a few days of the mailing		

TABLE 2

Dissonance Inducing Techniques in Followup
Contact with Non-respondents

Type of non-response

	NR ₁	NR ₂	NR ₃	<u>NR</u> 4
Followup techniques	never opened envelope	opened envelope, but did not read letter or instruct ions	read letter and instructions, but put off decision	read letter and instructions and decided not to respond
telephone contact before followup mailing	х			Х
increase postage on followup	X			
use enclosed incen if none used in initial mailing or increase enclosed reward if initial response low	tive	x		x
enclose copy of questionnaire in followup	x	x	x	x
enclose shorter version of questionnaire			×	x
change cover letter appeal			×	х

different techniques for increasing response. Table 2 relates follow-up techniques to the potential segment most likely to respond.

DISCUSSION

The framework presented here represents one potential starting point for development of a theory of mail questionnaire response. Cognitive dissonance as well as other candidate theories of mail questionniare response need to be more thoroughly explored in future research. Previous research has been concerned with demonstrating whether a particular technique does or does not produce increased response rates or does or does not bias survey results. There have been very few comprehensive theory based studies to explain why a particular method should be expected to work.

The cognitive dissonance framework has some appealing qualities. It is capable of dealing with individual differences and has demonstrable motivational properties. An effective theory of mail questionnaire response requires a means for dealing with both motivation and individual differences in order to answer the questions: Why do people respond? and Why are there differences in how people

respond and what they respond to? Cognitive dissonance theory provides a mechanism for integrating much of the empirical literature on response induction techniques within a single model of response.

The conceptualization of mail survey response as not one, but a series of decisions has both theoretical and applied implications. It is consistent with the findings regarding hierarchical decision making in the consumer decision process literature and explicitly recognizes that there may be several different and independent mechanisms which affect the decision to respond to a mail questionnaire. Segmenting nonrespondents based on where in the decision process they drop out as potential respondents can benefit the marketing researcher who is designing a mail questionnaire study. Pre-testing of questionnaires on small samples with call-backs could define where problems exist (e.g., in getting the respondent to open the mailing, getting respondents to fill out the questionnaire immediately, etc.) Corrective action can then be taken prior to the full-scale mailing to increase initial response and to select the follow-up techniques most likely to be effective.

Alternative models of mail questionnaire response may eventually be specified which are more appropriate than cognitive dissonance, but to date such models are not available in the literature. Cognitive dissonance provides a reasonable framework for conceptualizing mail questionnaire response and pointing directions for both the academic and applied research in this area.

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