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Yielding to Leading Questions:
Social Motives and Predisposing Personalities

Carol Milstone

A thesis submitted to the School of Graduate Studies of the University of Ottawa as partial fulfilment of the requirements for the degree of Doctor of Philosophy.

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CURRICULUM VITAE

Carol Milstone received an honour's Bachelor of Arts degree (Psychology) at the University of Victoria 1981, and a Master's in Public Administration in 1984 from the same university. Prior to commencing her doctoral degree in 1988, Ms. Milstone worked as a social policy analyst with the government of British Columbia, and as a program manager in the public and nonprofit sectors.

This thesis is dedicated to my husband, Dave, and my children,
Steven and Julia.

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ABSTRACT

This is a study of factors which may influence responses to leading questions within a questionnaire format. As such, this study provides insight into how and why leading questions exert social influence in the expression of attitudes.

Following an extensive interdisciplinary review of the literature, the effects of questionnaire wording are initially proposed as a form of *experimenter bias*; it is then pointed out that the respondents' *motives* in participating in a study have been identified as key to understanding the experimenter bias process. From there, the motives associated *informational social influence*, and *normative social influence*, are proposed as intervening motives when subjects yield to leading questions. The personality variables of *social desirability* (or approval dependency) and *self-monitoring* were predicted to predispose individuals to yield to leading questions.

This investigation was conducted within an opinion poll paradigm, whereby subjects completed an opinion poll with leading questions embedded within it; the leading questions for this study suggest their desired responses through parenthesized, numeric suggestions, or *cognitive anchors*. In order to test the various hypotheses, different conditions were created by varying the introductory remarks of the opinion poll.

Support for the role of informational social influence in yielding to leading questions was provided by the finding that people yield more to leading questions which are apparently designed by experts (professional pollsters) than by nonexperts (highschool students). Support for the role of normative social influence was provided by the significant association between responses which subjects provide for themselves, and responses which they provide to represent those of their peers -- i.e., subjects they tend to assume that their biased responses are congruent with those of their peers.

The personality variables of social desirability and self-monitoring were also found to affect responses to leading questions; the relationship between these two variables appears to be interactive, and not compounded as predicted. A post-hoc study suggests that the results may be confounded by the situational demands of the questionnaire, such as a situational demand for "honesty". This study's particular form of leading question may have also confounded the results, and more varied forms of leading questions would be worthy of future investigation.

TABLE OF CONTENTS

Curriculum Vitae	ii
Dedication	iii
Acknowledgements	iv
Abstract	v
List of Figures.....	x
List of Tables	xi
List of Appendices	xii
Introduction	1
Statement of Problem	1
Review of Literature	4
Questionnaire Wording	5
Effects of Leading Questions	7
Current Explanations on Leading Questions	13
Experimenter Bias	17
Social Influence	20
Development of Hypotheses	21
Social Motives	22
Informational Social Influence	22
Normative Social Influence	28
Social Desirability	32
Predisposing Personalities	35
Need for Social Approval	35
Self-Monitoring	40

/cont.

Effect of Social Desirability and Self-Monitoring	46
Summary of Hypotheses	51
Method and Results	53
Overview	53
Experiment 1: Development of Opinion Poll	54
Method	54
Subjects	54
Procedure	55
Results	56
Gender of Experimental Task	59
Experiment 2: Tests of Hypotheses re Social Motives	61
Method	61
Subjects	61
Procedure	62
Results	63
Preliminary Analyses	63
Data Screening	63
Tests of Assumptions	63
Gender Effects	64
Primary Analyses	65
Informational Social Influence	65
Normative Social Influence	65
Experiment 3: Tests of Hypotheses re Personality Variables	67

/cont.

Method	67
Subjects	67
Instruments	67
Opinion Poll	67
"About Yourself" Questionnaire" ...	67
Marlowe-Crowne Social Desirability Scale	67
Self-Monitoring Scale	69
Procedure	72
Results	72
Preliminary Analyses	72
Data Screening	72
Tests of Assumptions	74
Validation Check	75
Generalizability of Sample	76
Gender Effects	77
Primary Analyses	78
Discussion	81
Social Motives	81
Predisposing Personalities	82
Experiment 4: Post Hoc Study re Situational Demands of Questionnaire	85
Method	88
Results and Discussion	90
For Future Investigation	93
Conclusion	97
References	99

LIST OF FIGURES

1. Predicted Relationship Between Self-Monitoring and Social Desirability in Responding to Leading Questions	50
2. Interaction of Self-Monitoring and Social Desirability in Responding to Leading Questions	81
3. Predicted Interaction of Self-Monitoring and Expectations for Honesty in Responding to Leading Questions	88
4. Interaction of Self-Monitoring and Expectations for Honesty in Responding to Leading Questions	92

LIST OF TABLES

1. t-Test of Responses to Leading Question #5 for Leading vs. Neutral Wording	57
2. t-Test of Responses to Leading Question #9 for Leading vs. Neutral Wording	58
3. t-Test of Male vs. Female Weekly Hours Spent Tuned Into News	60
4. t-Tests of Male vs. Female Responses to Leading Questions	61
5. t-Tests of Responses to Leading Questions for Professional vs. Teen Version	65
6. Pearson Correlations for Responses to Professional Version with Peer Version	66
7. Statistics for Self-Monitoring Scale, Across Different Samples	76
8. Statistics for Social Desirability Scale, Across Different Samples	77
9. t-Tests of Male vs. Female Scores on Personality Scales	77
10. ANOVA for Effects of Social Desirability and Self-Monitoring on Responses to Leading Question #5	79
11. ANOVA for Effects of Social Desirability and Self-Monitoring on Responses to Leading Question #9	80
12. ANOVA for Effects of Self-Monitoring and Situational Demands on Responses to Leading Question #5, with Social Desirability as Covariate	90
13. ANOVA for Effects of Self-Monitoring and Situational Demands on Responses to Leading Question #9, with Social Desirability as Covariate	91

LIST OF APPENDICES

- Appendix A: Original (draft) "Views on Canada" Opinion Poll
- Appendix B: t-Tests of Responses to Leading vs. Neutral Questions in Original Draft Opinion Poll
- Appendix C: "Views on Canada" Opinion Poll, Professional Pollsters' Version
- Appendix D: "Views on Canada" Opinion Poll, Highschool Students' Version
- Appendix E: "Views on Canada" Opinion Poll, Requesting Perceived Responses of Peers
- Appendix F: Ethics Committee Correspondence
- Appendix G: Pre-Questionnaire Script for Experiment 2
- Appendix H: Consent Form for Experiment 2
- Appendix I: "About Yourself" Questionnaire
- Appendix J: Pre-questionnaire Script for Experiment 3
- Appendix K: Consent Form for Experiment 3
- Appendix L: "The Last Word", Validation Measure for Experiment 3
- Appendix M: "Views on Canada" Opinion Poll, High-honesty Version
- Appendix N: "Views on Canada" Opinion Poll, Ideal-responses Version

INTRODUCTION

Statement of the Problem

That the phrasing of questions affects the answers has been amply demonstrated. For example, "How tall was the basketball player?" yields considerably taller estimates of height than "How short was the basketball player?". The importance of questionnaire wording is underscored by the fact that questionnaires are an integral component of sound survey design within the social sciences. Examples of applications of questionnaires include attitudinal measurement, marketing surveys, opinion polling, prospective employee evaluation, educational assessment, and psychological assessment for therapeutic purposes.

The effects of questionnaire wording are potentially profound in terms of the responses they produce, and in terms of how their results are interpreted. These effects have been systematically investigated in a variety of academic fields, including psycholinguistics, cognitive psychology, and political science (opinion polling). Despite this documentation, however, little academic attention has been paid to the process whereby questionnaire wording affects its responses. Thus, the current theories on the effects of questionnaire wording propose that leading questions somehow distort, or alter, our cognitions in formulating responses; however, there is as yet only scant

postulation as to why such cognitions are altered, and there is no substantial accounting for individual differences in terms of responding to leading questions. From his review of studies on the effects of leading questions, Rasinski (1989) concludes: "Many studies have shown wording effects before, but we currently have little understanding about when and why such effects occur" (p. 54).

Further understanding into the effects of questionnaire wording would seem beneficial in terms of providing more accuracy in interpreting questionnaire results; for example, if it were determined that a certain segment of the population are potentially "biasable" (Crowne & Marlowe, 1964) with leading questions, then a "correction factor" may be warranted in the interpretation of questionnaire results. In reference to their finding that questions containing a perceived threat in opinion polls are underreported, Bradburn, Sudman, Blair, and Stocking (1978) suggest some adjustment methods to improve behavioral estimates from poll responses; similarly, if future investigations into responding to leading questions can clarify the role of personality variables, then certain adjustment methods may be both feasible and prudent in interpreting questionnaire results. More specifically, if individuals with certain personality characteristics were particularly predisposed to the influencing effects of leading questions, then the responses for their percentage of the population should be interpreted differently than for the other

respondents.

The purpose of this study is to examine the process whereby the phrasing of questions affects the subject's responses. This will begin with a review of the literature which demonstrates and exemplifies the effects of questionnaire wording on responses. Following this, a review and critique of current explanations to account for the effects of questionnaire wording will be provided.

An attempt will then be made to provide new insight into the effects of questionnaire wording. This will begin by proposing that bias from questionnaire wording is, in effect, a form of *experimenter bias*. The literature on *experimenter bias* has identified the respondents' *motives* in participating in a study as key to the *experimenter bias* process. Therefore, if questionnaire wording is indeed a form of *experimenter bias*, then the respondents' *motives* should also be key to understanding the process whereby subjects yield to leading questions.

Borrowing from the literature on social influence, (and conformity in particular), the motives associated with *informational social influence* and *normative social influence* will be proposed as intervening motives when subjects yield to leading questions.

It will then be argued that certain personality variables

should be predictive of acting on these social motives within a leading question paradigm. Specifically, *social desirability* (or approval dependency) and *self-monitoring* will be considered.

The hypotheses of this study will be tested within an opinion poll paradigm. The opinion poll is a specific form of questionnaire which measures attitudes among the general population, particularly for political purposes (Schuman & Presser, 1981). Opinion polling was selected as the form of questionnaire for this study because of the opportunity it provides for unobtrusive manipulation of wording. (In fact, a cursory review of public opinion polls makes it hard not to find blatantly leading questions -- see "Discussion" for examples.)

Review of Literature

The purpose of this literature review is to facilitate an understanding of the phenomenon of questionnaire wording, and leading questions in particular. This review will begin with the topics of questionnaire wording, effects of leading questions, and current explanations on leading questions. Following this, the topics of experimenter bias and social influence will be reviewed and introduced as possible, key concepts to the understanding of how leading questions affect their responses.

Questionnaire Wording

The questionnaire is a systematic tool for gathering information which cannot be gathered readily from direct observation or experimental manipulation (Sommer & Sommer, 1991). Its methodical application dates back to the work of Sir Frances Galton. Galton, a nineteenth-century British scholar, administered questionnaires to almost 10,000 people to collect data on visual recollection (Galton, 1907). Since the time of Galton, the questionnaire has gained respect among the social sciences as a cost-efficient and economical tool in survey research -- i.e. the systematic gathering of information about people's beliefs, attitudes, values, and behaviors (Sommer & Sommer, 1991). Questionnaires are a typical means of gathering information for social science research, marketing studies, assessment and diagnosis for individual treatment planning, and public opinion polls.

In his discussion on survey research, Davis (1976) warns that "slight changes in question wordings can produce distinct effects on item distributions" (p. 33). Brumla (1973) suggests that the types of questions which elicit the most biased answers are: questions which are leading, unrealistic, hypothetical, emotionally

laden, or ambiguous. Payne (1951) warns that:

When one-sided loading (of questions) is done for ethical reasons and with eyes wide open, no one should quarrel with it. But if the same thing is done in order to present a distorted view of public opinion or the view which the questioner thinks is the "right" view (or the view to obtain desired research results), then it becomes evasion of the truth, or the direct opposite of research" (p 12).

Questionnaire design is typically discussed in textbooks on research methodology for the social sciences (e.g. Sommer & Sommer, 1991). Typical cautions include the importance of the wording of the questions so that they are not "biased", or "loaded". While particular concern is when the bias of questions is in the direction to promote favourable results, caution is also occasionally advised against the effects of value-laden wording which may produce racist or sexist results (e.g. Gergen, 1989; Rekers, 1978; Scarr, 1989).

Curiously, some textbooks on the measurement of attitudes only mention the wording of questions tangentially (e.g. Dawes, 1985; Groves, 1989; Lemon, 1973; Mueller, 1986). Fortunately, the issue of questionnaire wording is dealt with directly in textbooks on the specific topic (Converse & Presser, 1986; Payne, 1951; Schuman & Presser, 1981; Sudman & Bradburn, 1974; Sudman & Bradburn, 1982).

Effects of Leading Questions

For purposes of this study, a *leading question* is defined as a question which suggests a desired response through its phrasing (Loftus, 1975). Effects of leading questions have been documented in a variety of academic fields, including psycholinguistics, cognitive psychology, and political science (opinion polling).

In a psycholinguistic study (Harris, 1973), subjects were told that "the experiment was a study in the accuracy of guessing measurements, and that they should make as intelligent a numerical guess as possible to each question" (p.399). After viewing a film, the subjects were then asked either one of two questions such as, "How tall was the basketball player?", or, "How short was the basketball player?". The subjects' mean guesses were about 79 and 69 inches, respectively. Similar results appeared with other pairs of questions, e.g. "How long was the movie?" led to a mean estimate of 130 minutes, whereas "How short was the movie?" led to 100 minutes.

The effects of questionnaire phrasing on responses has also been demonstrated by Loftus (1975) in the context of reporting on past personal experiences. In one study 40 people were interviewed about their headaches and about headache products, under the belief that they were participating in market research. Two of the

questions were crucial to the experiment:

(1a) In terms of the total number of headache products, how many other products have you tried? 1? 2? 3? (*italics added*) (yielding an average of 3.3 products)

(1b) In terms of the total number of products, how many other products have you tried? 1? 5? 10? (*italics added*) (yielding an average of 5.2 products)

The second key question asked about frequency of headaches in one of two ways:

(2a) Do you get headaches *frequently* (*italics added*), and, if so, how often? (average 2.2 per week)

(2b) Do you get headaches *occasionally* (*italics added*), and, if so, how often? (average 0.7 per week)

The effect of wording on questionnaire responses has also been studied in the context of public opinion polls. The earliest and largest collection of experiments appear in Rugg and Cantril (1944), under the heading "Deviations from 'Objective' Wording". This discussion focuses on experiments on prestige symbols (discussed below), as well as other types of specialized wording effects. The following example is from American opinion polls which were conducted at the outset of the Second World War:

(A) Do you think the United States will go into the war before it is over?

Yes 41% No 33% Don't Know 26%

(B) Do you think the United States will succeed in staying out of the war?

Yes 44% No 30% Don't Know 26%

More recently, Lockerbie & Borrelli (1990) conducted a retrospective content-analysis of opinion polls concerning U.S. public support for Contra aid from 1983-1986. They identified certain variations of wording in the survey items which can statistically account for variations in support for the Contras -- i.e. the poll results were substantially affected when mention was made of the ideological name of the Sandinistas, President Reagan, or amount of money spent.

Rasinski (1989) has studied the effect of questionnaire wording on public support for government spending in the U.S., finding that even minor changes can affect responses. Respondents were asked whether "we" (the U.S.) were spending too much, too little, or about the right amount on ... (various spending items). Examples of the percentage of respondents indicating "too little spending" are as follows:

assistance to big cities 21%	vs	solving problems of big cities 52%
assistance to blacks 27%	vs	improving conditions of blacks 37%
assistance to the poor 65%	vs	welfare 20%

Smith (1987) similarly found that the mere alteration of words (without obviously changing the meaning or intent of the question) can dramatically change the response distribution. For example, when people are asked to rate their feelings using a "feeling thermometer", the term "welfare" produced much more negative and less generous responses than "poor"; in a question on program priorities, the average support for more assistance for "the poor" was 39 percentage points higher than for "welfare".

Another example of the effect of questionnaire wording involves the use of "forbid" vs. "allow". Originally reported five decades ago by Rugg (1941), it was found that free speech in the United States was 21 percentage points higher when respondents were asked:

Do you think the United States should *forbid* (italics added) public speeches against democracy?

as opposed to being asked:

Do you think the United States should *allow* (italics added) public speeches against democracy?

These results were replicated three decades later by Schuman and Presser (1981). Significant results were similarly found in a later, more elaborate investigation into the possibility of confusion over wording, with education as a covariate. Comparative analyses were also conducted to contrast the effect of forbid vs.

allow in the contexts of the government "allowing (forbidding) X-rated movies", as well as "cigarette advertisements on television". A significant, but less-dramatic, difference of 5% was found for X-rated movies, yet not for cigarette advertisements. These results suggest an interaction effect between forbid vs. allow, and the topic of the question.

Clearly, the effects of questionnaire wording are intriguing in terms of results they produce. However, as already suggested in the example regarding cigarette advertising, changes in wording do not always yield different results. In the earlier study by Rugg & Cantril (1944,) one question also produced no response effect, despite substantial change in wording:

- (A) Some people say that since Germany is now fighting Russia, as well as Britain, it is not necessary for this country to help Britain. Do you agree or disagree with this?

Agree 20% Disagree 72% No Opinion 8%

- (B) Some people say that since Germany will probably defeat Russia within a few weeks and then turn her full strength against Britain, it is more important than ever that we help Britain. Do you agree or disagree with this?

Agree 71% Disagree 19% No Opinion 10%

There is similarly no difference between responses to questions on "abortion" vs. "ending pregnancy" (Schuman & Presser, 1981), with both versions producing the same levels of support for

a woman's right to choose (62%), and with no significant differences between responses by sex, education, or age.

In their review of both significant and nonsignificant effects of wording changes on responses, Schuman and Presser (1981) conclude:

The more blatant the attempt to influence a respondent, the less likely it will be to succeed...It may be that the most obvious examples of bias in wording -- the ones that would be seized on most quickly by the survey profession as grossly improper -- are the least harmful in actual practice...Evidently such effects can be especially strong where they are most subtle". (p.296)

The process described by Schuman and Presser is known in social psychology as reacting -- i.e. where attempts to influence are so strong that the individual feels suspicious, or perhaps threatened in terms of his or her individual freedom to choose; thus, the typical response is to blatantly resist or even defy the attempts to influence (Brehm, 1966).

Another explanation to account for failed attempts at influencing attitude change through questionnaire wording comes from the observation that people are less susceptible to attitudinal change on topics for which they hold strong views (Krosnick, 1989; Fazio & Williams, 1986). This explanation seems plausible for emotional topics such as abortion, or going to war, where influencing attempts through questionnaire wording are not

successful. While factors involved in resisting social influence are beyond the scope of this study, they are important to consider for designing "effective" leading questions for purposes of scientific study (i.e. the attempts to influence should not be too obvious, nor on topics which are emotional or for which people hold strong views).

Current Explanations on Leading Questions

Despite the exceptions discussed above, it is clear that the wording of questionnaires can influence responses in the expression of attitudes. But what is not so obvious is why this should be so -- i.e. why some people accept social influence in the form of leading questions. Also, why are some individuals less affected by questionnaire wording, as if they are somehow immune to its influential effects?

The current explanations on leading questions are predominantly cognitive in nature. For example, it is postulated that upon receiving a leading question our cognitions are somehow unwittingly "distorted", or tampered with, as a result of the input of the biased information (Loftus, 1979; Yarmey, 1979).

Smith (1987) argues that different labels for issues may bring to mind different associations, thereby changing the situation to which the respondents are reacting; thus, the term "the poor" is

associated with more sympathetic evaluations of needy people than the term "welfare recipients".

Further, Converse and Presser (1986) regard leading questions as a process whereby respondents are supplied detail, or cues, as to information which is relevant to the responses. The purpose of such cues is to "stimulate" cognitions by presenting associations to the desired responses.

The effects of leading questions on cognitive processes are also suggested by Seggie (1987), who documented actual deviations from normative reasoning in responding to leading questions; in this study leading questions were presented to subjects in an exercise requiring the identification of necessary information for logical arguments.

Although not directly concerned with the effects of leading questions, the social psychology literature on the effects of *framing* and *anchoring* bears relevance to these cognitive explanations for leading questions. Framing refers to the process whereby our evaluations concerning objects or issues are affected by the manner in which information about them is presented; thus, when stimuli are described (framed) in positive terms, then favourable associations are evoked, thereby promoting more positive evaluations from the respondents (Levin, 1987; Neale & Bazerman, 1985). A previous example of leading questions which may be better

understood in terms of framing concerns whether respondents get headaches *frequently, or occasionally.*

Anchoring refers to the process whereby our judgements concerning numerical issues are affected by anchors, or reference points (i.e., numerical values which surround the issue); thus, low anchors produce lower estimates than high anchors, and vice-versa (Plous, 1989). A previous example of leading questions which may be better understood in terms of anchoring concerns how many headache products were purchased by respondents (1? 2? 3?) vs. (1? 5? 10?).

Thus, although the issues of framing and anchoring are typically presented within the contexts of demonstrating our tendency towards "cognitive efficiency", or acting as "cognitive misers", it is clear that these constructs are also applicable in terms of cognitive explanations on leading questions.

Studies on the phrasing of questions for recall of recently-witnessed events provide further insight. These studies are concerned with how, under certain circumstances, rehearsal of information can interfere with recollection, particularly if rehearsal includes exposure to new, potentially misleading information through leading questions. In "eyewitness" studies (Loftus, 1979) subjects typically view a film of a complex event, and immediately afterward are asked a series of questions. For

some subjects, some of the questions are designed to provide misleading information -- for example to suggest the existence of an object that did not exist. Thus, in one study subjects were asked "How fast was the white sports car going when it passed the barn while travelling along the dirt road?" No barn existed. Other subjects were asked a control question, such as "How fast was the white sports car going while travelling along the country dirt road?". All subjects were asked whether they had seen a barn. It was found that misleading questions increased by a factor of six the likelihood that the subjects would later report having seen the nonexistent barn, due to the false presupposition contained in the question.

The cognitive explanation for the effects of biased questions in circumstances such as this is that the false information which is embedded in the misleading questions becomes *integrated* into the person's recollection of events, thereby supplementing, or altering, or transforming, the content of the original cognitions and their subsequent recollection (Loftus, 1979; Loftus & Zanni, 1975).

Unfortunately, the explanations on leading questions which are provided to date are sketchy, and they fail to account for individual differences in responding to leading questions. This investigation will begin to expand the current understanding of wording effects by proposing that leading questions are a form of

experimenter bias and, as such, a form of social influence in the expression of attitudes.

Experimenter Bias

As already defined, leading questions suggest their desired responses through their wording. It is for this reason that leading questions should be regarded as a form of *experimenter bias*, even though they are not traditionally regarded as such in the literature. *Experimenter bias* (originally referred to as *experimenter expectancy effect*) refers to a form of social influence whereby researchers unwittingly bias their subjects' responses in the direction of their research hypotheses (Rosenthal, 1963).

The original investigations of *experimenter bias* were conducted in an extensive research program by Rosenthal (1963), involving a simple photograph rating task: Two groups of experimenters administered identical sets of photographs of persons to subjects who were to rate them for success-failure. Half of the experimenters were led to expect positive ratings, and the others were led to expect negative ratings (although the photographs were in fact neutral). When having been read identical instructions, ratings should not have been expected to differ. However, because the experimenters had unwittingly conveyed their hypotheses to their subjects, ratings were significantly different, as a function

of the experimenters' expectations.

Similar results were replicated by Adair and Epstein (1968), who obtained an even stronger experimenter effect when only the experimenter's tape recorded instructions were provided to the subjects. Apparently the experimenter's voice contained sufficient differential emphasis on the success or failure portion of the instructions to convey these cues to subjects as a guide for their behavior. Several subsequent investigations produced similar results with different stimuli and different methodologies (Duncan, Rosenberg, & Finkelstein, 1969; Duncan & Rosenthal, 1968; Rosenthal, 1967).

These findings suggest that the researcher's prior expectations of his or her study can unwittingly influence the results towards these expectations. The explanation provided by Rosenthal is that the experimenter's concern for favourable results leads to attempts to influence the subjects in the direction of the desired hypothesis. These attempts to influence may be subtle, and perhaps unconscious with regard to the experimenter. Nevertheless, the experimenter is somehow sending messages, through his or her behavior and by other features of the experiment, which serve to suggest the desired responses from the subject. These messages may be conveyed through nods, eye contact, or prosodic utterances (uh-huh, hmm, etc.). In the case of questionnaires, these messages may be conveyed in the *phrasing* of questions.

Adair provides the following summary of optimum conditions for the emission of experimenter bias:

- tasks or stimuli that are not highly structured, or are ambiguous (Adair, 1973; Shames & Adair, 1980; Weiss, 1969)
- experimenters who are prominent stimuli; i.e. dominant, older, or more professional (Rosenthal, 1969)
- subjects who are highly motivated to do well (Minor, 1970)
- experimenters who *verbally emphasize* (italics added) the appropriate directional response cues (Adair & Epstein, 1968; Duncan, Rosenberg & Finkelstein, 1969; Duncan & Rosenthal, 1968)

Thus, it is the verbal emphasis of response cues (last point) which is the form of experimenter bias at play when questionnaire items are phrased in a leading fashion.

To further the understanding of experimenter bias, Martin Orne (1962) referred to the directional messages as *demand characteristics* -- cues that so compellingly convey what is expected behavior that they appear to subjects to demand a particular response. As Adair points out, because much information is typically withheld from subjects throughout the study, the experimental demand characteristics becomes a *focal cue* for social

influence. Thus, experimenters are in a position where they can effectively provide such distinct cues that even subtle variations in their behavior (or their voice) can convey information about their hypothesis to otherwise uninformed subjects. In essence these cues form the focal point for the subject's perceptions, thoughts & feelings about the experiment as well as for his or her associated motives, intentions, and other internal response sets. To date, few investigations have been conducted into these aspects of subjects' reactivity (Adair, 1990) vis-a-vis experimenter bias. It seems, however, that the subjects' reactivity to the experiment (and their social motives in particular) would be key to understanding the intervening forces which are at play when subjects yield to experimenter bias in the form of leading questions.

Social Influence

It has already been suggested that when subjects respond to the implied demand characteristics of an experiment they are, in effect, yielding to *social influence*. In the case of yielding to leading questions within an attitude questionnaire, individuals are accepting social influence in the expression of their attitudes. Thus, the quest for relevant social motives vis-a-vis yielding to leading questions may appropriately begin with a review of the literature on social influence.

Social influence refers to the process whereby an individual's thoughts or actions are changed, or altered, by others (Cowan, Drinkard, & MacGavin, 1984). The genre of social influence exerted by leading questions is *conformity*, which refers to the alteration of thoughts (or actions) in order to adhere to implicit norms or expectations within a social setting (Moscovici, 1985).

Some early theories (Crutchfield, 1955) suggested that certain personality traits made individuals prone to conformity. This approach is of limited value, however, because few people conform all the time, and everyone conforms sometime, hence "we cannot develop a satisfying explanation simply by focusing on individual traits" (Worchel, Cooper, & Goethals, 1991, p. 418). However, researchers could focus on a specific form of conformity, thereby facilitating the study of the role of personality; this conformity-specific approach will be taken here while investigating social influence in the specific case of leading questions.

Development of Hypotheses

Because leading questions have been identified as a form of experimenter bias, it has been argued that the respondents' motives in participating in the study should be relevant to understanding this process. Leading questions have also been identified as a form of social influence, and conformity in particular. Thus, some social motives which are borrowed from the literature on social

influence and conformity may be pertinent to understanding the phenomenon of leading questions. This investigation will now shift to the development of hypotheses concerning social motives (informational social influence, normative social influence, and social desirability), and predisposing personalities (need for social approval and self-monitoring) vis-a-vis why leading questions affect their responses.

Social Motives

Informational Social Influence

Informational social influence refers to a social conformity process whereby we rely on groups for information about the answer to a question, what to believe, or how to behave (Asch, 1952; Deutsch & Gerard, 1955; Kelley, 1952). Informational social influence seems to be backed by a motive to appear correct, and it is especially at play if we doubt our own judgement (Campbell, Tesser & Fairry, 1986).

Deutsch and Gerard (1955) defined informational social influence as "influence to accept information obtained from another as evidence about reality"(p. 629). Campbell and Fairrey (1990) describe informational social influence as being "based on the desire to be accurate; others' responses are used as a source of information about reality, and people conform because they believe

that the others may be correct"(p. 127).

The historical roots of the study of informational social influence can be traced to Sherif (1936). In his experimental tasks, which were often difficult, ambiguous, or insoluble (e.g., the intrinsic merit of literary works), the judgements of others were considered to be as likely to be correct as one's own; therefore, conforming to them represented social influence which was rational, given that "others usually do provide one with useful or valid information"(p. 128).

Although questionnaire wording is not a traditional component of the literature on informational social influence, a theoretical link between the two may be beneficial to understand the former. Research on the inclusion of names of prestigious public figures in opinion polls and the resulting agreement effect could facilitate this link. For example, "Are you in favour of Bush's foreign aid policy?" produced higher levels of agreement in the U.S. than "Are you in favour of current foreign aid policy?" (Smith, 1990). Studies five decades ago similarly found that merely adding Roosevelt's name in the question produced more agreement in responses to foreign policy questions (Cantril, 1940; Rugg & Cantril, 1944). These findings suggest that the inclusion of prestige names provides apparent expertise and endorsement of the issue in question, thus providing valuable cues for answering the question "correctly". The exposure of subjects to persuasive

communications from prestigious individuals in inducing attitude change has been amply explored in the early literature (Hovland & Janis, 1959).

Further understanding of respondent motives vis-a-vis informational social influence may be gained from literature on acquiescence response set. The term "response set" refers to response biases which are formed by habitual response preferences (Crowne & Marlowe, 1964). With acquiescence response set (or acquiescence response bias, or agreement bias), subjects tend to favour the "agree" response to the "disagree" response (e.g. Toner, 1987); subjects' similarly tend to choose positive responses to negative responses (e.g. yes, true, agree, satisfied) (Verma, Menon, & Malhotra 1980; Van-Heerden & Hoogstraten 1979).

Acquiescence can be interpreted as "a way for a respondent to handle a question to which he or she has no real answer; that is, the agreeing form is perceived to provide a cue to an appropriate answer" (Schuman & Presser, 1981, p. 205). Thus, acquiescence could represent an attempt by the subject to provide an impression of him or herself as being knowledgeable, since "the experimenter must be smart and correct". In such cases, subjects may want to give correct responses for purposes of self-affirmation of their correctness, intelligence, wisdom, etc.

Further understanding of acquiescence in terms of

informational social influence can be gained by considering that across a variety of survey topics, the percentage of "don't know" responses declines as education increases, and as age increases (Sudman & Bradburn, 1974).

Schuman and Presser (1981) identified education as the key predictor of acquiescence response bias -- i.e. people who are less educated lack sufficient knowledge to respond honestly. They even suggest that this problem could disappear entirely with university student populations. Converse and Presser (1986) similarly observe that acquiescing in opinion polls is greatest among individuals who have had little schooling (pp 38-39).

Acquiescence is also more prevalent among younger respondents (Schuman & Presser, 1981; Sudman & Bradburn, 1974), apparently due to their uncertainty and reduced attitude accessibility. Insight is provided by the research of Krosnick and Alwin (1989), into the validity of the *impressionable years hypothesis*, which suggests that our attitudes are most profoundly shaped during people's teens and early twenties. Their longitudinal study (over three decades) examined attitudinal data from thousands of subjects, spanning all ages beginning with the teen years. As predicted, attitudes fluctuated most among subjects in their teens and early twenties.

It seems plausible, then, that one motive for subjects to participate in the experiment by yielding to leading questions may

be to appear "correct", or (as a corollary), to avoid giving the wrong answer. Associated cognitions may include "I want my opinion to be correct, or not in error, lest I look stupid". With questionnaires, individuals may interpret that the responses which are suggested by the leading questions are "correct", since they are designed by the "experts", or other authority figures.

Clearly, if subjects are to rely on the wording of the questionnaire for informational social influence, then the source of the questionnaire must play an important role -- i.e. the questionnaire's authors must be regarded as having expertise. The role of the experiment's source has been demonstrated in the literature on experimenter bias and social influence, as follows.

It has already been pointed out that experimenter bias is emitted more by experimenters who are dominant, older, or more professional (Rosenthal, 1966). Orne (1962) illustrates the importance of the experimental source by contrasting requests to do push ups (or any other imposition) from a friend with that of an experimenter, who is an authority figure.

Asch (1952) demonstrated the importance of the source of information in his line judgement tasks by contrasting the effects of normal-sighted confederates with confederates with thick glasses (with the latter causing a reduction in conformity since this

source was not reliable for informational cues). DeBono and Harnish (1988) more recently demonstrated the effect of "source expertise" on attitude persuasion.

The source of the questionnaire, in particular, has also been shown to affect results. For example, Katz (1942) has investigated the effects of interviewer characteristics on responses to attitudinal questionnaires. One such study (1942) found an average difference of 12 percentage points between Gallup and working class interviewers when interviewing union respondents on various labour issues (e.g., 80% of union respondents interviewed by working class interviewers favoured the closed shop, compared to only 67% of union respondents who were interviewed by Gallup interviewers, who are presumably less sympathetic to labour issues than working class interviewers). While these results may suggest differences in how comfortable the respondents felt, they may also be reflective of different response expectations (i.e., for "correct" responses) which were implied by the interviewers.

This hypothesis regarding the role of informational social influence in yielding to leading questions will be tested by contrasting the effects of identical leading questions which were apparently designed by different sources -- i.e. experts and nonexperts. The experts' version will be described to the respondents as an opinion poll which was "designed by professional pollsters". The nonexperts' version will be described as being

"designed by teenagers as a highschool project". Identical questions will be presented in each version.

Hypothesis #1:

Due to informational social influence, respondents will yield more to leading questions "designed by professional pollsters (experts)" than "designed by teens (nonexperts)".

Normative Social Influence

It seems plausible that yielding to leading questions may be partially a function of normative social influence, whereby subjects value "the norm" (i.e. endorsed by most people), and they also assume that the responses which are suggested by the leading questions represent the norm. This form of influence, in the form of peer consensus behavior vis-a-vis the expression of attitudes, is referred to as *normative social influence*.

Deutsch and Gerard (1955) defined normative social influence as "influence to conform to the positive expectations of others" (p. 629). Campbell and Fairly (1990) describe normative social influence as being based on "the desire to maximize social outcomes; even when people believe the others are wrong, they may conform in order to gain the rewards or avoid the punishments that

such agreement and disagreement mediate"(p.127).

In the classic conformity tasks of Solomon Asch (1952), subjects were given ample opportunity to examine unambiguous, perceptual stimuli while in the presence of confederates who were advocating responses which were clearly and substantially wrong (e.g., judging the relative lengths of straight lines). In these line judgement tasks, a full 76 percent of those tested in several different studies conformed with the group's false norms at least once. Conformity in cases such as these, where the norm was obviously incorrect, seemed to derive from the desire to avoid the social costs of disagreeing with the group, rather than from a belief that the judgements of the confederates were correct.

In order to further the theoretical link between normative social influence and social influence in the form of leading questions, the literature on *straw polls* is helpful. Straw polling is a procedure whereby group members indicate their current (perhaps temporary) preferences regarding a decision. Because these stated preferences are not binding on them, members are free to shift to other positions for their actual vote (Davis, Stasson, Ono, & Zimmerman, 1988); thus, straw polls provide an opportunity for social comparison, through finding out in advance how others are going to vote.

It has been shown that simply learning about the current

distribution of opinions within a group could have strong effects on the subjects' final opinions (e.g. MacCoun & Kerr, 1988). In a study by Davis et al. (1988), subjects first viewed a videotape of a mock trial and indicated their views about the guilt of the defendant. On the basis of these initial preferences, subjects were assigned to six-person groups in which three members believed the defendant was guilty and three not guilty. Straw polls were then conducted; in two conditions the polls were conducted sequentially, with one juror at a time indicating his or her opinion. In one case, the three jurors favouring a not-guilty verdict were polled first; in the other, those favouring a guilty verdict were polled first. In a third condition, all jurors indicated their opinion simultaneously by holding up cards. Relative to the simultaneous condition, a substantial proportion of jurors who favoured a guilty verdict were influenced to switch to a not-guilty verdict after hearing three other jurors report this preference first, and vice versa. Although not identified as such, this straw poll paradigm is demonstrative of normative social influence.

Normative social influence during straw polling is also evident among children. In attitude research with children, Leone, Musser, Graziano, & Lautenschlager (1984) asked third graders their opinions on a variety of subjects, such as whether *Star Wars* or *E.T.* was a better movie. Before publicly stating their opinions, some children were given a chance to see how others had answered

the same question. It was observed that a significant number of children "turned to the data on their peers and studied it long and hard before offering their own opinions", which tended toward agreement with their peers (p.23).

It is important to draw the distinction between informational social influence and normative social influence. With informational social influence, subjects do not possess personal access to the correct responses, hence they yield to the responses of others in the hopes of appearing correct. With normative social influence, however, subjects may not believe that the responses of the others are correct, but they yield in order to appear aligned with the norm.

In the case of leading questions, the responses which are suggested through their wording could be interpreted as representing the norm, regardless of whether or not they are also interpreted as being correct. Therefore, even though some subjects may not agree with the suggested responses, some may still yield to the leading questions due to normative social influence motives.

To test this hypothesis regarding normative social influence in responding to leading questions, subjects will first be asked to fill out the opinion poll for themselves. At a later point, they will again be asked to fill out the same opinion poll, but this time as if it were for the average university student, their peers,

etc. -- i.e. subjects will be requested to provide the answers which they feel represent the norm for their population.

Hypothesis #2:

Due to normative social influence, subjects' responses to leading questions will be significantly correlated to responses which they perceive to be from their peers.

Social Desirability

It is the casual observation of Weber & Cook (1972) that part of the subjects' motivation in cooperating in experiments is self-enhancing, thereby causing them to look for and respond to behaviors that they regard as *socially desirable*. Social desirability can be described as a motive to provide responses which would create a desirable, or self-enhanced impression. Thus, social desirability may be another plausible social motive for yielding to leading questions.

Although not labelled as such, evidence of a social desirability motive is typically found even in questionnaires where respondents remain anonymous. Research from the 1940's (Payne, 1951) reveals that anonymous respondents often built up their occupational titles beyond their actual importance -- e.g. self-administered employee questionnaires often produce more "foremen"

and "supervisors" than the actual payroll shows; education is often similarly up-graded; false claims are made of automobile ownership; some women underestimate their ages; and lower income earners inflate their actual earnings. Parry & Crossley (1950) found that over 10% of respondents exaggerated on verifiable "prestige" items such as possession of library cards and charitable contributions.

There has also been observed a propensity toward providing socially desirable answers in attitudinal questionnaires in terms of "political correctness" (Schuman & Presser, 1981). This form of social desirability bias has been observed in particular with questions dealing with racial, religious, ethnic, and sexual attitudes (Sudman & Bradburn, 1974).

A social desirability motive is also apparent in the questionnaire response set known as *uninformed response error*: Goldsmith (1986) found that of 270 shoppers completing a marketing survey, 103 respondents (38%) fictitiously indicated awareness of at least one bogus product. Uninformed response bias seems to stem from a concern that the subject not appear ignorant in the experimenter's eyes (thus the subject pretends to be knowledgeable of fictitious items).

Central tendency error is another response set which seems to indicate social desirability motives in questionnaire responses. Central tendency error refers to the respondents' tendency to avoid

the extremes in their responses (Rice, 1985). This preference for middle categories is prevalent when there is no room for explicit agreement (Verma, Menon, & Malhotra (1980), when the questionnaire items are judged as irrelevant to the subject (Kreitler & Kreitler, 1981), and when the questionnaire requires the evaluation of a subordinate (Rice, 1985). Central tendency error apparently reflects the subjects' reluctance to risk making grave errors, hence not going out "on a limb" lest his or her opinion be wrong.

Item nonendorsement in personality scales is another questionnaire strategy representing social desirability motives. Item nonendorsement can be partially explained as an avoidance of items which are associated with social "undesirability". Extensive research on thousands of personality test items have found a close relationship between the social desirability of personality statements and the likelihood that people will endorse them (Edwards, 1953; Edwards, 1966; Edwards, Klockars & Abbott, 1970; Hanley, 1956). Thus, *social desirability response set* refers to this strategy in taking personality tests whereby the individual attempts to create an evaluation of oneself in socially desirable terms. For each test item the choice of acknowledging or denying the represented trait, feeling, or symptom is made on the basis of creating the most socially favourable self-description (Crowne & Marlowe, 1964); thus, such subjects describe themselves in "improbably favourable terms"(p.16).

It seems logical that the responses which are suggested through the phrasing of leading questions would be perceived as being socially desirable -- i.e., in so far as they would be regarded to be correct or of the norm. Thus, the two social motives which are thus far hypothesized to lie behind yielding to leading questions (i.e., normative social influence and informational social influence) should also be components of social desirability motives.

Predisposing Personalities

Need for Social Approval

Based on the premise that informational social influence and normative social influence are functions of social desirability, it is logical that individuals who respond to these two motives by yielding to leading questions should possess higher needs for achieving social desirability than those who do not yield.

That people differ in terms of how motivated they are to achieve social desirability has been documented in the literature on the personality trait of "need for social approval", also referred to as "approval dependency" (Crowne & Marlowe, 1964).

In order to further understand this construct, Marlowe and Crowne (1961) devised a *Social Desirability Scale*; this scale was

designed to identify those who approach personality tests with a view to making favourable impressions, even to the point of denying socially undesirable aspects which are likely true of all people. Such individuals would also endorse socially desirable aspects which are not likely true of many people. What seems likely is that the motives which impel certain subjects to present a highly desirable (yet unrealistic) impression is their conformity to social stereotypes of what is good to acknowledge concerning oneself in order to achieve approval from others (p 26). Scores on the Social Desirability Scale, therefore, are an indirect measure of a need for approval, implying that:

- a) people differ in the strength of their need to be thought of well by others; and
- b) for those whose need is higher, we could assume a generalized expectancy that approval satisfactions are attained by engaging in behaviors which are [socially desirable] and approved. (Crowne & Marlowe, 1964, p 27)

As already suggested, socially desired behaviors would include yielding to leading questions due to the opportunities which they provide for appearing correct and appearing to be like others. Thus, need for approval should influence questionnaire strategies not only for personal inventories of themselves, but also for attitudinal questionnaires which contain leading questions. Leading questions have been described earlier as a form of experimenter bias. Indeed, in his work on experimental bias, Rosenthal (1963) found that those high in need for social approval were more biasable in terms of the implied demand characteristics

of his rating tasks.

The construct of "social desirability" incorporates a theory which relates strategies in personality inventories to the individual's goals and expectations in a wide array of other social situations. Further insight regarding leading questions and social desirability motives can be gained from research relating need for social approval to the areas of conformity to implied demands, and attitude change:

In a study by Marlowe and Crowne (1961), subjects were given a very boring, repetitive task (involving stacking spools of thread in a small box), to be performed over a protracted period of time. Subjects were later asked in a questionnaire, "Was the task interesting and enjoyable?". As predicted, subjects with high needs for approval provided more positive responses than those low in need for approval. As the authors point out, presumably the less favourable opinions of low need-for-approval subjects reflect, in part, their greater freedom from social pressures in forming and expressing their beliefs. A significant, negative correlation which was later found between the Social Desirability Scale and Barron's Independence of Judgement Scale (a paper-and-pencil test of conformity) supports this formulation. Unfortunately, the lack of a neutrally-worded, control question precludes any firm conclusion here -- i.e. the high-need subjects may have been responding to the wording of the questions (and their implied

demands for a positive response), as opposed to the perception that a positive response is inherently more desirable. To investigate this possibility, a neutrally-worded control question might be posed for comparison.

It has also been found that those high in need for approval are more likely to yield to group pressure even to the point of displaying unambiguous conformity. As Asch (1952) has pointed out, a meaningful definition of conformity requires that the individual demonstrably give up something of value or importance to him as a price of alignment with the group. He or she must therefore violate a personal norm, conviction, or strongly reinforced habit to be described as a conformer. Thus, in typical "Asch-type" of experiments, conformity refers to the public statement of a judgement or opinion coincident with that of an *incorrect majority*, in the absence of logical justification for that judgement.

In a series of Asch-type (Asch, 1951, 1952) visual and auditory discrimination tasks, Marlowe (1959) and Crowne and Marlowe (1964) found that subjects high in need for approval were more likely to yield to group pressure than those low in need for approval. Similarly, Marlowe, Stifler, and Davis (1962) found a strong relationship between need for approval and suggestibility, as measured by a heat illusion test (asking subjects to indicate whether they detect heat in an element which never actually warms up).

Suggestibility in attitude change has also been investigated as a function of approval dependency (Salman, 1964). Subjects were asked to engage in improvisation and role playing (i.e. public commitment) to persuade an audience on positions which were against their views. When later asked (once again) for their views, it was found that those high in approval-dependency showed higher levels of attitude change from their original position, presumably to reduce the cognitive dissonance caused by inconsistency; the low need-for-approval subjects seemed less concerned with such inconsistency since they felt that they were only asked to role play the opposite view.

As suggested by these studies, people high in approval-dependency value being desirable, even beyond the scope of enhanced self-images in personality inventories. As Crowne and Marlowe (1964) conclude, high need-for-approval persons are also more influenced by the demand characteristics of the experiment; in more general terms, they are more responsive to perceived situational demands and are more likely to respond to social influence. In the case of leading questions, this should translate to yielding to the desired responses which are suggested through the phrasing of the questions.

Hypothesis #3:

Subjects high in approval-dependency will yield more to leading

questions within an opinion poll paradigm than subjects low in approval dependency.

Self-Monitoring: Adaptation for Situational Correctness

In a discussion on the broader issue of experimenter bias, Adair (1990) points out that subjects enter experiments with a curiosity or desire to find a meaning or purpose for what they are asked to do. Sometimes the subjects will correctly perceive the experimenter's hypothesis as the purpose for the study; sometimes they won't. What is more important is that whatever they perceive as the purpose of the study will be a prime determinant of their behavior.

Thus, another plausible motive for yielding to leading questions may be inferred from the observation that subjects have a very powerful urge to cooperate with the experimenter. According to Adair, when asked, subjects will consistently tell you that cooperation is their foremost obligation as subjects (Adair & Spinner, 1983; Epstein, Suedfeld & Silverstein, 1973; Shulman & Berman, 1975). The subjects' response set, then, would be to cooperate with whatever they perceive to be the purpose of the experiment. -- i.e. the situational demands of the study.

Although the urge to cooperate may have a social desirability element, the personality which specifically serves to value and

act on "situationally correct" behavior is *self-monitoring* (Snyder, 1987). Self-monitoring refers to the extent to which individuals are sensitive to the subtle cues in others, and their ability to manage the impressions that others have of them (Snyder, 1979). Thus, Snyder's Self-Monitoring Scale measures people's concern with the appropriateness of their self-presentation, whether they look to others for cues as to how to act appropriately, and whether people can use these cues to modify their behavior.

High self-monitors report that they have good control of their expressive behaviors, that they decide how to behave based on the social setting, and that they change their behavior (or self-presentation) depending on social cues as to what is appropriate. Low self-monitors report that they are not good actors and that they behave according to their inner traits and feelings, rather than the social setting. In other words, high self-monitors seem to be "social chameleons" who change their behavior to suit their audience and to fit the norms of the situation (Danheiser & Graziano, 1982; Lippa, 1976, 1978). Low self-monitors are more "true to themselves" and behave in a manner that is more consistent with their inner traits, attitudes, and beliefs (Snyder & Swann, 1976; Snyder & Tanke, 1976; Tunnell, 1980).

In the area of interpersonal relations, high self-monitors tend to be more extraverted, friendly, conformist, and adaptive

(Berscheid et al., 1976; Gabrenya & Arkin, 1980; Briggs & Cheek, 1988; Briggs, Cheek, & Buss, 1980). Low self-monitors are more attracted to others on the basis of their inner characteristics (attitudes, values, traits), whereas high self-monitors are attracted more on the basis of external appearances (Snyder, Berscheid, & Glick, 1985; Snyder, Berscheid & Matwychuk, 1988). Concerning self-presentation, outward appearance is more important to high self-monitors (Glick, 1985; Snyder, Berscheid, & Glick, 1985), whereas low self-monitors place more value on humour, personality, and common interests (Glick, DeMorest, & Hotze, 1988). In the area of recreation and friendship formation, high self-monitors will choose, for example, a tennis player based on how well they play tennis; low self-monitors choose their partners based on how much they like the other person (Snyder, Gangestad, & Simpson, 1983; Jamieson, Lydon, & Zanna, 1987).

The literature on self-monitoring is immense, demonstrating how self-monitoring affects diverse areas of people's lives outside of self presentation and interpersonal relations. For example, as consumers high self-monitors tend to prefer attractive products to a greater extent than do low self-monitors (Zuckerman, Gioioso, & Tellini, 1988; DeBono & Snyder, 1989). In the area of job preference, high self-monitors prefer jobs where job performance is spelled out in great detail; low self-monitors don't mind jobs which are vaguely described, but they prefer jobs whose requirements are matched with their personalities (Caldwell &

O'Reilly, 1982; Snyder & Gangestad, 1982).

The areas of self-monitoring research which bear the most relevance to this thesis on yielding to leading questions concerns attitude accessibility and conforming behavior. As previously discussed, low self-monitors are marked by consistency in behavior across situations; they have a clearer self-image and are truer to that self-image than high self-monitors. Thus, low self-monitors are more likely to enter situations that are consistent with their self-image, and behave in ways that are consistent with their attitudes (Snyder & Gangestad, 1982).

As Snyder points out (1979, 1987), high self-monitors have a pragmatic concept of the self -- they define themselves in terms of their roles and behaviors in different social settings ("I am treasurer of my sorority, a social organizer at family gatherings, the second violin in the orchestra..."). In contrast, low self-monitors have a principled concept of the self -- they define themselves in terms of their inner values, beliefs and traits ("I am liberal, free-thinking, honest, reserved..."), which is also reflected in a correspondence between their feelings and attitudes, and their behavior. In a study by Jones, Brenner & Knight (1990), subjects were asked to play a morally reprehensible person; in response to feedback from a simulated audience, high self-monitors were most positive when they succeeded in playing a "bad guy"; low self-monitors, on the other hand, responded most positively when

they failed in pretending to be such a person (Jones, Brenner, & Knight, 1990).

Concerning the expression of attitudes, it seems that high self-monitors don't want to put themselves "out on a limb" by owning their statements, opinions, perspectives, perceptions, etc. This inference is based on the observation by Ickes, Reidhead & Patterson (1986) that when engaged in casual conversation, low self-monitors are more likely to speak in the first person (I, me, my), while high self-monitors speak in the third person (he, she, they); high self-monitors are apparently more concerned with what others do and how others react, whereas low self-monitors concentrate on their own behavior and reactions.

Low self-monitors can also access their attitudes from memory more quickly than high self-monitors (Kardes et al., 1986). Values and principles seem more important to low self-monitors than to high self-monitors, and they come to mind faster. In one study, low self-monitors supported a woman suing a university for sex discrimination to a degree that was predictable from their attitudes about affirmative action. The support of high self-monitors, however, was not consistent with their affirmative action attitudes, but rather was consistent with the views which were expressed in reports from other students (Snyder & Swann, 1976).

Concerning conforming behavior, research shows that high self-

monitors are indeed more sensitive to situational demands than low self-monitors, and their behavior is more variable across situations. Snyder & Monson (1975) measured the conformity of psychology students participating in a group discussion, which was either private or videotaped for class observation. In private discussions, high self-monitors tended to conform (presumably to get along with others), whereas in the videotaped condition they tended not to conform (presumably to display their independence to their classmates, who would value independence). Low self-monitors maintained a relatively stable degree of conformity in the two situations.

Interestingly, high self-monitors will act more in accordance with their attitudes when the importance of being consistent is made salient -- i.e. if that is what is expected (Snyder & Kendzierski, 1982). In one study, high self-monitors were more cooperative with the researchers when they anticipated future interaction than when they didn't; low self-monitors were equally cooperative whether they anticipated future interaction or not (Danheiser & Graziano, 1982).

Literature on the role of self-monitoring in responding to questionnaires is limited to a single study. Lassiter, Stone and Weigold (1987) found that, in terms of incorporating post-event information in their reported recall of events, high self-monitors are more susceptible to the effects of misleading questions than

low self-monitors. While Lassiter et al. were concerned with elaborating on previous findings that high self-monitors are more accurate in recalling detail (Hosch & Platz, 1984), their findings suggest that high self-monitors may be better to read the cues (or implied demand characteristics) for desired responses within research settings, including questionnaires.

In the case of leading questions within an opinion poll paradigm, it has already been suggested that the implied demand characteristics are contained in the suggestive phrasing of the questions. Thus, based on the high self-monitors' ability to perceive situational demands and modify their behavior accordingly, high self-monitors are expected to respond to the situational demands of the leading questions by yielding to them more than low self-monitors.

Hypothesis #4:

High self-monitors will yield more to leading questions within an opinion poll paradigm than low self-monitors.

Effect of Social Desirability and Self-Monitoring

Research suggests that those high in the need for social approval may actually be deficient in social skills hence severely limited in their ability to secure that approval. For example,

people with high need for approval are less able than those with low need to communicate either positive or negative affect in either the facial or vocal channels of communication (Zaidel & Mehrabian, 1969); in this study, the socially desirable response (and the one which would gain the researcher's approval) was the accurate expression and communication of affect. Thus, although high-need-for-approval individuals may be motivated to modify their expressive self-presentation in order to gain approval, they apparently lack the necessary self-control abilities and skills.

In a sociometric study involving members of a fraternity, those high in need for approval were typically described by their peers as loners who spent most of their time by themselves, did not go out of their way to make friends, were not very conversational, and were not friendly toward other fraternity members (Bank, reported in Crowne & Marlowe, 1964, pp.162-163). Thus, although people with high scores on the Marlowe-Crowne Social Desirability Scale may be motivated to gain social approval, they apparently lack the necessary expressive self-presentational abilities and skills which are possessed by high self-monitors.

In another study on verbal conditioning, high need for approval subjects were no better than low need for approval subjects in successfully modelling the behavior of a peer (actually a confederate) whom they had previously observed perform the experimental task appropriately (Crowne & Marlowe, 1964).

Correlations between the Self-Monitoring Scale and the Social Desirability Scale were sought by Snyder (1974), in an attempt to provide evidence for the discriminant validity of the Self-Monitoring Scale. In a sample of 191 undergraduate students, there was found a slight negative relationship between the two scales ($r = -.19, p < .01$). Thus, "individuals who report that they observe, monitor, and manage their self-presentation are unlikely to report that they engage in rare but socially desirable behaviors" (p.25). It is further concluded by Snyder that "if in fact the Social Desirability Scale is a measure of need for approval, this need is not related to the ability to control and monitor one's self-presentation and emotional expressive behavior on the basis of situation-to-situation variation in contingencies of social appropriateness" (p.25).

This lack of self-presentational skills, however, does not necessarily extend to experimental situations. It has been demonstrated that in a wide variety of experimental situations, subjects with a high need for social approval can indeed provide socially desirable responses. As summarized by Crowne and Marlowe (1964), individuals with high need for approval conform more than low need-for-approval in Asche-type of studies; they verbally condition better; they do not show overt hostility toward one who has insulted and double-crossed them; and they are less likely to

report "dirty words" in a perceptual defense task.

Due to this ability for socially desirable adaptation within experimental paradigms (which provide contingencies of social approval from experimenters), individuals with high need for approval would presumably possess the skills necessary to produce desirable responses in attitude questionnaires with a view to presenting themselves desirably.

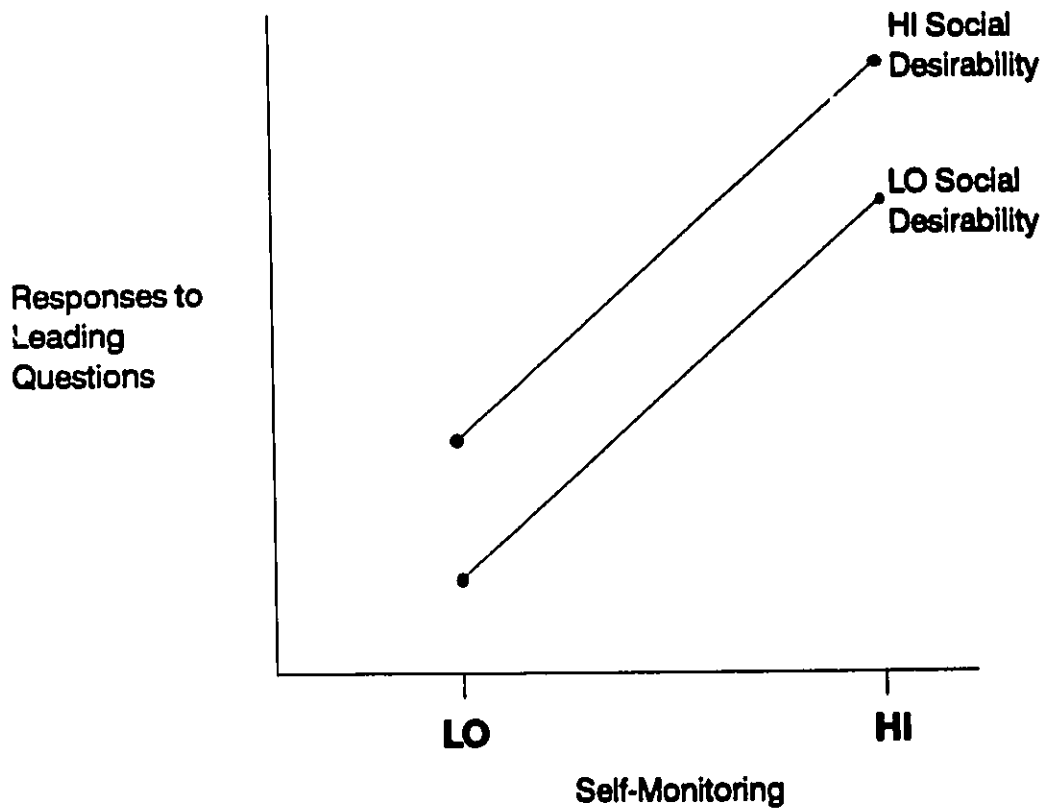
Based on these observations, a compounded effect is expected, concerning individuals who are both high in social approval motives and high in self-monitoring skills. It is expected that these individuals would be particularly biasable within a leading question, opinion poll paradigm, since they are highly motivated to present themselves in a desirable fashion (social desirability) and they would be particularly adept at deciphering and responding to the questionnaire's demand cues for desired responses (self-monitoring). The nature of the predicted relationship between these two variables is graphically demonstrated in Figure 1.

Hypothesis #5:

A compounded effect of social desirability and self-monitoring is predicted, whereby subjects high in both variables will yield more to leading questions than subjects who are only high in either one of these traits.

Figure 1

Predicted Relationship Between Self-Monitoring and Social Desirability in Responding to Leading Questions



Summary of Hypotheses

For purposes of quick reference, and to facilitate a connected view of this thesis, the hypotheses which have been developed in the previous discussion are summarized in list format, below.

Hypothesis #1:

Due to informational social influence, respondents will yield more to leading questions "designed by professional pollsters (experts)" than "designed by teens (nonexperts)".

Hypothesis #2:

Due to normative social influence, responses to leading questions will be significantly correlated to responses which they perceive to be from their peers.

Hypothesis #3:

Subjects high in approval-dependency will yield more to leading questions within an opinion poll paradigm than subjects low in approval dependency.

Hypothesis #4:

High self-monitors will yield more to leading questions within an opinion poll paradigm than low self-monitors.

Hypothesis #5:

A compounded effect of social desirability and self-monitoring is predicted, whereby subjects high in both traits will yield more to leading questions than subjects who are only high in either one of these traits.

METHOD AND RESULTS

Overview

In order for the hypotheses to be tested, it was first required that a suitable questionnaire be developed. Thus, the first experimental task was the development of a questionnaire with some effective leading questions embedded within it. The development of this questionnaire will be described below, "Experiment 1: Development of Opinion Poll".

Following the development of the opinion poll, each of the hypotheses were to be tested. The testing of hypotheses concerning social motives (informational social influence and normative social influence) and personality variables (social desirability and self-monitoring) were run as two separate experiments, since they involved different groups of subjects and different sets of instruments. Thus, the method and results for the tests of hypotheses are described below under separate experiments, as follows:

Experiment 2: Tests of Hypotheses re Social Motives (#1 & 2)

Experiment 3: Tests of Hypotheses re Personality Variables
(#3, 4, and 5).

Each experiment was conducted in accordance with ethical

guidelines set out by the University of Ottawa's Ethics Committee. Statistical analyses for all the experiments were performed with SPSSx statistical package. Missing data were handled through dropping those cases with missing data for the analysis at hand (i.e., listwise deletion of data), as per the default option for SPSSx.

Experiment 1: Development of Opinion Poll

The hypotheses of this study are concerning why certain individuals yield to leading questions. Thus, the hypotheses would most effectively be tested with questions which were predetermined to be leading. In order to determine that the key questions are in fact leading, the responses to the proposed leading questions were compared with the responses to neutrally-worded, control questions. This *split-ballot* technique to analyze the effects of question wording was introduced by Payne (1951), and has been implemented and analyzed by Schuman & Presser (1981).

Method

Subjects

Subjects for the development of the opinion poll were 129 undergraduate students from the University of Ottawa, ranging in

age from 17 to 39 years ($M=22$). There were 32 males (25%) and 97 females (75%), from a variety of academic disciplines.

Procedure

Due to the timeliness of Canadian unity, it was decided that an appropriate topic for the opinion poll would be "Views on Canada". The nature of this poll was a simulation of typical public opinion polls which are frequently commissioned by the government, or reported in the popular press. This type of poll is ideal to emulate for this study, because it is not "personal" in nature; this aspect is essential in order to enhance the effectiveness of the leading questions, as well as to prevent collinearity with Marlowe-Crowne's Social Desirability Scale.

The objectives in producing a successful opinion poll were to design it in a realistic-looking fashion, with a few effective, leading questions unobtrusively embedded within it. In order to design effective leading questions, various phrasing techniques (from the literature) were attempted. These techniques were: inclusion of a prestige figure ("Do you agree with Wayne Gretzky that ..."); suggestive adjectives, or cognitive framing ("Should the Prime Minister *frequently* [italics added] visit..."); information for social comparison ("Do you agree with the majority of Canadians ..."); and suggestion through example, or cognitive anchoring ("...e.g. 10? 18? 23?"). A neutral version of this

opinion poll was also created, containing parallel (but neutrally-worded) key questions. The original draft of the opinion poll, in both the leading and neutral version, are presented in Appendix A.

One version of the opinion poll (i.e., either leading or neutral) was randomly administered to each subject. The effectiveness of each of the proposed leading questions was tested with a t-test, to compare responses of the leading vs. neutral versions, as per the split-ballot technique described above.

Results

The results of these analyses (summarized in Appendix B) indicate that the leading questions which contained suggestion through example, or cognitive anchoring, produced the most statistically significant results, with the largest ranges of responses. Based on the literature on questionnaire wording, it could be speculated that the inability of the other techniques to bias responses may be due to: a) the specific topics of the questionnaire items, or b) the high educational levels of the subjects relative to the general population (on whom previous studies on wording effects are based). Further investigation would be of interest to the effects of specific question wording, although this topic is beyond the scope of this study.

Based on the information from this analysis, a new opinion

poll was drafted, containing two key leading questions which suggest their desired responses through providing numerical examples as cognitive anchors. A control version for each question was also created, containing neutral (but parallel) key questions. These two versions were administered to a new group, who were blind to the first draft. Each subject was randomly assigned to one version of the opinion poll (leading or neutral). The two key questions (both neutral and leading versions), and their t-test summary data, are as follows (the leading versions contain the information printed in italics; the neutral versions do not):

5. How many times per year should the Prime Minister visit Canada's far North? (e.g. 7? 13?) (italics added to denote leading version)

approximately _____ times per year

Table 1

t-Test of Responses to Leading Question #5 for Leading vs. Neutral Wording

Version	N	Mean	SD	t-value	df	p
Leading	53	7.06	6.20	3.30	99	<.01
Neutral	48	3.58	2.16			

9. How often per month do you feel the Prime Minister should hold news conferences? (e.g. 10? 18? 23?) (italics added to denote leading version)

approximately _____ times per month

Table 2

t-Test of Responses to Leading Question #5 for Leading vs. Neutral Wording

Version	N	Mean	SD	t-value	df	p
Leading	55	5.14	5.38	3.30	100	<.01
Neutral	47	1.62	0.82			

In order to test the different hypotheses, three different conditions were created from the leading question version of the opinion poll. These conditions were created by varying the introductory statement at the top of the opinion poll. The three conditions are as follows:

- A "professional pollsters' version" (Appendix C), which was described as being "designed by professional pollsters as part of a nation-wide survey"; this wording was to imply expertise by the experimenters.
- A "teenagers' version", which was described as being part of a "highschool students' project" (Appendix D); this wording was designed to imply lack of expertise by the experimenters. Responses to the leading questions under these two conditions (professional and teenagers) were to be compared in order to test the hypothesis concerning informational social influence in accounting for why

people yield to leading questions.

- A reproduction of the "professional" version, with instructions to fill out the same questionnaire but this time as they feel their peers would respond (Appendix E); the purpose of this request was to determine how respondents perceive the responses of their peers, in relation to their own responses. This relation was to be determined in order to test the hypothesis concerning *normative social influence* in explaining the effects of leading questions.

Gender of the Experimental Task

It has been determined in the literature that the nature of experimental tasks and apparatus in terms of being masculine or feminine effects conformity -- i.e., women are more conforming with masculine tasks, and vice-versa (Eagly & Carley, 1981). As Baron and Byrne point out, "since individuals generally yield more readily to social influence when they are uncertain about how to behave than when they are more confident in this regard, it is hardly surprising that females demonstrate higher levels of conformity [with masculine tasks]" (1991, p 320). In fact, Sistrunk and McDavid (1971) found that when tasks are more feminine in nature, then men are more conforming, thus underscoring the importance of not confounding gender with familiarity of task.

The gender of the opinion poll was checked by comparing the number of hours spent "tuned into the news, per week", as reported by male and female subjects in item #8 of the opinion poll (see Table 3).

Table 3

t-Tests of Male vs. Female Weekly Hours Spent Tuned Into News

Sex	N	Mean	t-value	df	P
Male	62	9.03	3.30	167	<.01
Female	107	6.25			

Although the results of this analysis reveal a significant sex difference in responses, the mere fact that female subjects report spending over six hours per week tuned into the news would preclude the conclusion that an opinion poll on current affairs is predominantly masculine (i.e. there would presumably be a ceiling effect in terms of sex differences vis-a-vis conformity to the opinion poll). This assumption was verified by noting that female subjects did not yield more to the leading questions than male subjects (i.e. for each of the two leading questions, a two-tailed test of significant differences between group means was conducted with a student's t-test -- see table 4).

Table 4

t-Tests of Male vs Female Responses to Leading Questions

Leading question	Sex	N	Mean	t-value	df	p
#5 (re visits north)	Male	64	7.48	.69	167	>.05
	Female	105	6.80			
#9 (re news conferences)	Male	64	5.31	.29	168	>.05
	Female	106	5.06			

Experiment 2:

Tests of Hypotheses re Social Motives (#1 and 2)

Method

Subjects

Subjects were 60 undergraduate students at the University of Ottawa, ranging in age from 18 to 42 years ($M=26$); there were 15 males (25%) and 45 females (75%).

Procedure

The procedure described in this and the remaining experiments was conducted in accordance with the University of Ottawa's Ethics Committee regulations (see Appendix F for correspondence). The questionnaire materials were administered on a classroom basis, with permission from the course professor. Prior to distribution of material, a Pre-questionnaire script was read to each participating class (Appendix G). Subjects who volunteered to participate in the study were distributed two copies of the Consent Form (Appendix H), along with the experimental questionnaires.

It was hypothesized that people yield to leading questions partially due to informational social influence (i.e., to be correct). To test this hypothesis, scores on the two key questions from the opinion poll were compared under a "professional pollsters" condition, to imply expertise (Appendix C) and under a "highschool students project" condition, where no expertise is implied (Appendix D). Each version was randomly administered to half of the participating class (n=30 for each).

It was also hypothesized that people yield to leading questions partially due to normative social influence (i.e. to be like the others); thus, some subjects may assume that the responses which are suggested in the questions' wording are the responses

which represent the norm (i.e. which "most people" would endorse). This was tested by asking the same subjects from above to complete the survey once again, four weeks later, but this time as they think "their peers would answer" (Appendix D). Subjects responses to the "professional" version were matched up with their responses to the "peers" version, using a personal identification code (n=30).

Results

Preliminary Analyses

Data screening. Inspection of the histograms of the responses to the two leading questions revealed no apparent univariate outliers. This was confirmed by calculating the scores which would be beyond three standard deviations around the mean, and noting that there was a zero frequency of scores outside of this range for either of these variables.

Tests of assumptions. The distribution of responses to both leading questions, for all three versions ("professional", "teen", and "peers") were checked for normality.

For the "professional" version, kurtosis and skewness for question #5 were sufficiently near zero (.33 and .84, respectively), and the shape of the distributions seemed

sufficiently normal, such that data transformations were not warranted (Tabachnick & Fidell, 1989). Kurtosis and skewness values for question #9 were high (4.19 and 1.98, respectively), and they were improved significantly through a logarithmic transformation (to -.56 and .40, respectively).

For the "teen" version, kurtosis and skewness for questions #5 and #9 were sufficiently near zero (.33 and -.49, respectively, for question #5; .86 and .15 for question #9), and the shapes of the distributions seemed sufficiently normal, such that data transformations were not warranted (Tabachnick & Fidell, 1989).

Responses to the "peer" version revealed a need for logarithmic transformation for both questions, #5 and #9; for question #5 the kurtosis and skewness values were changed from 2.31 and 1.41, respectively, to -.93 and .31, respectively; for question #9 these values were changed from 1.99 and 1.71, respectively, to .60 and .63, respectively.

Gender effects. Data analysis revealed no statistically significant sex differences ($p > .01$) for responses to either leading question, for either version. This is consistent with the results for test of gender effects in Experiment 1: Development of Opinion Poll. Therefore, the data were pooled across sex for the primary tests of hypotheses.

Primary Analyses

Informational social influence. The responses to the two key questions, for both the "professional" version and the "teen" version, were compared using a student's t-test for between subjects design. The results reveal a statistically significant difference in the predicted direction for leading question #9, but not for question #5 (see Table 5).

Table 5
t-Tests of Responses to Leading Questions for Professional Version vs. Teen Version

Leading question	Version	N	Mean	t-value	df	p
#5 (re visits north)	Prof'al	30	7.50	.89	55	>.05
	Teen	27	6.22			
#9 (re news conferences)	Prof'al	30	6.20	1.87 ^a	55	<.05
	Teen	27	3.74			

a : separate variance estimate, instead of pooled variance estimate, since the assumption of homogeneity of variance was violated (F=4.00, p<.01)

Normative social influence. The role of normative social

influence in yielding to leading questions was tested by correlating the responses which subjects provide for themselves, and those which they provide for their peers. The results of this analysis (presented in Table 6) reveal statistically significant correlations in the predicted direction, for each leading question. For question #5, 28% of the variance is shared between the responses which subjects provided for themselves and for their peers; for question #9, 33% of the variance is shared.

Table 6

Pearson Correlations for Responses to Professional Version with Peer Version

Leading question	N	Correlation	P
#5 (re visits north)	30	.527	<.05
#9 (re news conferences)	30	.580	<.01

Experiment 3:

Tests of Hypotheses Re Personality Variables (#3, 4, & 5)

Method

Subjects

Subjects were 210 undergraduate students at the University of Ottawa (primarily from introductory psychology classes), ranging in age from 18 to 51 years ($M=26$). There were 71 males (34%) and 139 females (66%), from a variety of academic disciplines.

Instruments

"Views on Canada" Opinion Poll. For this experiment, subjects were administered the "professional version" of the "Views on Canada" Opinion Poll (Appendix C).

"About Yourself" Questionnaire. The About Yourself questionnaire (Appendix I) is comprised of the Marlowe-Crowne Social Desirability Scale (33 items), and Snyder's Self-Monitoring Scale (25 items), described below.

Marlowe-Crowne Social Desirability Scale. The Marlowe-Crowne Social Desirability Scale (M-C; Crowne & Marlowe, 1964) consists of

33 statements concerning personal attitudes and traits. (These items are embedded in "About Yourself" Questionnaire, Appendix I.) For each statement, subjects are asked to indicate whether it is true or false as it pertains to them personally (e.g., "I like to gossip at times", "I am always careful about my manner of dress").

A major aim in the development of the M-C was the elimination of items with psychopathological content. Prior to the M-C, the usual procedure in constructing measures of individual differences in social-desirability response set was to draw items from personality inventories, and have independent judges rate them as to their social desirability or undesirability. However, as recognized by Crowne & Marlowe (1964), the items were drawn from clinical scales and may be characterized by their pathological content as well as by social desirability, e.g. "Criticism or scolding hurts me terribly", or "I feel anxiety about something or someone almost all the time". Failure to endorse these items may imply a social-desirability response set, but it is also conceivable that subjects responding false may simply not feel generally anxious or be traumatized by criticism. This issue in interpretation is particularly problematic among a nonclinical population such as undergraduate university students. Thus, the achievement of high social-desirability scores in these earlier scales may have reflected only the low frequency of maladjustive symptoms in this population, as opposed to the disposition of these subjects to present themselves in a favourable light.

To devise items for the M-C, a number of personality inventories were consulted. To be included, an item had to meet the criteria of cultural approval, and yet be untrue of virtually all people, with minimal pathological or abnormal implications. Further selection was made by ten judges who were instructed to score each item in the socially desirable direction from the perspective of college students. As a major aim was to eliminate items with psychopathological content, additional, independent judgements were made for ratings of degree of maladjustment.

A preliminary version of the M-C was administered to 76 introductory psychology students. An item analysis revealed that 33 items (those comprising the M-C) discriminated at the .05 level or better between high and low total scores; 18 are keyed true, representing culturally acceptable but probably untrue statements; the remaining 15 items are scored false, representing probably true but undesirable statements. These 33 items are indicated with an asterisk in Appendix I, "About Yourself".

To determine scale reliability, both internal consistency and test-retest coefficients were obtained; the internal consistency coefficient was .88; test-retest, over a one-month interval, was also .88.

Self-Monitoring Scale. The Self-Monitoring Scale (S-M;

Snyder, 1974) consists of 25 true-false self-descriptive statements which are embedded in "About Yourself", Appendix I. These statements describe, among other things, concern with situational appropriateness, attention to social cues, ability to control expressive behavior, and situation to situation shifts in expressive self-presentation. Items typically endorsed by high self-monitors include:

"I would probably make a good actor" (item 8).

"In different situations and with different people, I often act like very different persons" (item 13).

"I'm not always the person I appear to be" (item 16).

Moreover, high self-monitors report that what they say and do does not necessarily reflect what they really believe; they regard themselves as actors sufficiently skilled to display whatever self-presentation seems immediately appropriate.

Low self-monitors claim, among other things, that:

"I can only argue for ideas which I already believe" (item 4).

"I would not change my opinion (or the way I do things) in order to please people or win their favour" (item 17).

"I have trouble changing my behavior to suit different people and different situations" (item 21).

In addition, low self-monitors do not believe that they possess the self-presentational skills that would permit them to adopt any

other orientation other than "being themselves" (Snyder, 1987, pp 16-17).

The 25 Scale items were selected from a larger pool through item analysis, to maximize its internal consistency. Its internal consistency coefficient is .66; test-retest reliability coefficients range from .83 over one month, to .77 over 3.5 months (Snyder, 1974). Numerous studies using the S-M have demonstrated remarkable stability in the distribution of scores, across geographical regions; the mean and median scores (out of 24) are typically 12, with a standard deviation of 4; there have not been found any meaningful sex differences in scores (Snyder, (1974).

Concerning base rates of membership into the classes of high and low self-monitors, six quasi-independent methods of base-rate estimation has consistently yielded proportions of 41% belonging to the high self-monitoring class, and 59% belonging to the low self-monitoring class, with an 89% rate of correct estimations (Snyder & Gangestad, 1986).

In order to validate the S-M, individual profiles have been verified through peer ratings. Criterion groups (i.e. groups demonstrating skill at self-expressive behavior) have also been found to have predicted high self-monitoring scores -- i.e. stage actors and politicians. Discriminant validation efforts have demonstrated statistical distinction from social desirability,

Machiavellianism, extraversion, locus of control, self-esteem, field dependence, hypnotic susceptibility, neuroticism, etc. (summarized in Snyder, 1987).

Procedure

As with the procedure for Experiment 2, the questionnaire materials were administered on a classroom basis, with permission from the course professor. Prior to distribution of material, a pre-questionnaire script was read to each participating class (Appendix J). Subjects who volunteered to participate in the study were distributed two copies of the Consent Form (Appendix K), along with the "Views on Canada" opinion poll (professional pollsters' version, Appendix C) and "About Yourself" questionnaire, described above (Appendix I).

Results

Preliminary Analyses

Data screening. From the 210 packages of material distributed to undergraduate students, 19 were discarded from the sample for any of the following reasons: returned empty, completed in a hostile fashion (e.g. ludicrous answers for age), incomplete towards the end of the survey (apparently for lack of time), or completed with error on optical scan sheets.

As a check on data entry, a review of the descriptive statistics (in particular, minimum and maximum values, means and standard deviations) for each of the variables was examined for plausibility. Two cases were rejected for appearing to be out of the plausible range (for indicating that the Prime Minister should hold "99" news conferences per month, and for indicating that the P.M. should visit Canada's far North 365 times a year).

Inspection of the histograms of the two independent variables (self-monitoring and social-desirability) and the dependent variables (responses to leading questions) revealed no apparent univariate outliers. This was confirmed by calculating the scores which would be beyond three standard deviations around the mean, and noting that there was a zero frequency of scores outside of this range for either of these variables.

Multivariate outliers were also checked for unusual combinations of personality scores; this check was performed statistically with SPSSx, through computation of Mahalanobis distance for each case, with the ten most extreme cases being selected out (through the OUTLIERS specification within the RESIDUALS subcommand). These analyses revealed three cases whose Mahalanobis distance was beyond the relevant critical value for the ungrouped data; two cases were similarly detected for the high/low groups in the two personality variables of social desirability and self-monitoring (so classified for ANOVA). These cases were

deleted from the data.

Tests of assumptions. The main hypotheses of this study are regarding the effects of social desirability and self-monitoring on responses to leading questions. The possibility of collinearity between the predictor variables (self-monitoring and social desirability) was checked by noting that the correlation ($R = -.36$) is only moderate.

The assumption of normal distribution of scores was tested for the two personality variables (self-monitoring and social-desirability). The kurtosis and skewness values for self-monitoring ($-.36$ and $-.04$, respectively) and for social desirability ($-.64$ and $.03$) seemed close enough to zero to avoid data transformations, particularly given the visual appearance (bell-shape) of the distributions and the large sample size (Tabachnick & Fidell, 1989).

The distribution of responses to the key questions in the opinion poll ("professional" condition) were not normally distributed in this sample. The shape of the distributions for each of the leading questions suggested improvement through a logarithmic transformation (Tabachnick & Fidell, 1989). For question #5, this transformation reduced the kurtosis value from 2.19 to $-.51$, and the skewness value from 1.54 to $.01$; for question #9, kurtosis was reduced from 2.44 to $-.61$, and skewness was

reduced from 1.67 to .19. These values were considered to be sufficiently close to normality, particularly given their normal distributions, and the large sample size ($n=182$) (Tabachnick & Fidell, 1989).

Validation check re experimenter bias. In order to safeguard from confounding interpretations based on experimenter bias, it is recommended by Adair (1990) that subjects be asked for their understanding of the study's purpose. In one of the introductory psychology classes ($n=69$), a form entitled "The Last Word" (Appendix L) was included in their research material package. This form requested the subjects to provide their ideas as to what they thought the study was "really about". Twenty-three subjects (33%) indicated that they thought they "figured out" the study and provided a brief interpretation. Approximately half of these interpretations concerned relations between personality and attitudes (e.g., "authoritarian people are ignorant concerning immigrants", "people should be more tolerant in order to help Canada's unity problems"), and the remainder focused on either the substance of the opinion poll (Canada unity, language issues, etc.), or on particular aspects of the personality questionnaire (with no reference to the opinion poll). Because there was no mention of the wording of the any of the survey's questions in terms of being leading or biased, it is inferred by the author that the subjects were blind to the purpose of the study, hence experimenter influence is presumed to not be a factor.

Generalizability of sample. As a check on the generalizability of this study's sample, a comparison was made between the personality scores of this sample, and large samples in the literature. Specifically, the means and standard deviations for the Social Desirability and Self-Monitoring Scales were compared between this sample, and those in the literature. These comparisons are summarized in Tables 7 and 8, respectively. For the two scales, the three comparisons between each possible pair of studies were statistically tested by conducting single-sample z-tests (Coldeaway, 1989); each test produced a z-score which was outside the two-tailed critical region of ± 2.33 ($\alpha = .01$), thereby demonstrating comparable means and standard deviations across studies.

Table 7

Statistics for Self-Monitoring Scale, Across Different Samples

	Sample:		
	This study (n=179)	Snyder (1972) (n=533)	Gangestad & Snyder (1985) (n=1918)
mean	12.88	12.51	12.48
SD	4.07	4.11	3.90

Table 8**Statistics for Social Desirability Scale, Across Different Samples**

	Sample:		
	This study (n=179)	Marlowe (1959) (n=1418)	Marlowe (1962) (n=108)
mean	15.02	15.94	14.96
SD	4.87	5.54	4.70

Gender effects. The possibility of sex differences in scores on the personality scales was checked with a student's t-test for between subjects design, using two-tailed probability statistics (see Table 9).

Table 9**t-Tests of Male vs. Female Scores on Personality Scales**

Scale	Sex	N	Mean	t-value	df	p
Social Desirab'y	Male	64	15.97	2.04	169	<.05
	Female	107	14.41			
Self- Monitor- ing	Male	64	12.94	.08	169	>.05
	Female	107	12.89			

The lack of statistically significant sex differences for self-monitoring is consistent with the literature (Snyder, 1987). The statistically significant sex difference for social desirability is also consistent with the literature, which reports slightly higher scores for females (Crowne & Marlowe, 1964).

Primary Analyses

The creation of high and low dimensions for each personality variable was based on a median split, with the removal of subjects whose scores were equal to the median for either variable. This left 169 cases.

The initial analysis was conducted with a two-way analysis of variance, to test the effects of social desirability (high, low) and self-monitoring (high, low) on responses to leading questions. Initially, separate analyses were run for each of the two leading questions, and for each sex (due to the sex difference with social desirability). For both questions, the separate analyses by sex produced the same pattern of interaction between personality variables; therefore, the results were pooled across sex for the primary analysis of each question. This decision to pool the data is further supported by the fact that overall, there are no statistically significant sex differences in responses to the two leading questions (see "Gender of Experimental Task", above). The

resulting ANOVAs, for leading questions 5 and 9, are contained in Tables 10 and 11 respectively.

Table 10

ANOVA for Effects of Social Desirability and Self-Monitoring on Responses to Leading Question #5

Source of variance	SS	df	MS	F	p
Main effects	.36	2	.18	1.72	>.05
Social Des'y	.04	1	.04	.38	>.05
Self-Mon'ing	.22	1	.22	2.07	>.05
Interaction	.59	1	.59	5.65	<.05
Explained	.95	3	.32	3.03	<.05
Residual	13.79	132	.10		
Total	14.74	135	.11		

Table 11**ANOVA for Effects of Social Desirability and Self-Monitoring on Responses to Leading Question #9**

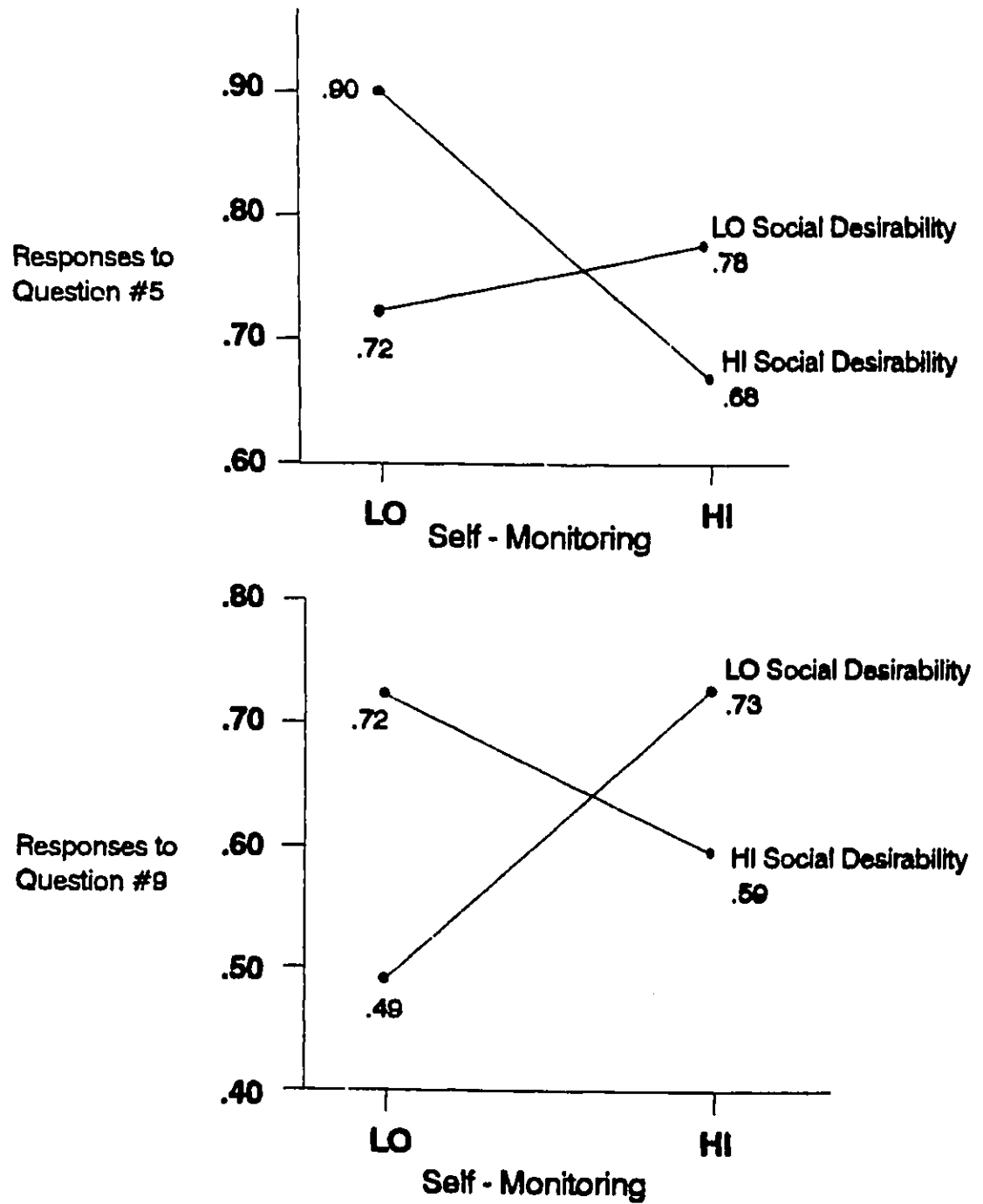
Source of variance	SS	df	MS	F	p
Main effects	.08	2	.04	.34	>.05
Social Des'y	.03	1	.03	.27	>.05
Self-Mon'ing	.07	1	.07	.61	>.05
Interaction	1.03	1	.03	8.67	<.05
Explained	1.11	3	.37	3.12	<.05
Residual	15.67	132	.12		
Total	16.78	135	.12		

The results of these analyses of variance reveal a significant interaction between social desirability and self-monitoring on responses to both leading questions; thus, social desirability moderates the effects of self-monitoring in responding to leading questions, and vice-versa. The cell means (for transformed data) were sought and then plotted for each leading question (see Figure 2) in order to visually answer the following questions:

How does social desirability affect responses to leading questions differently for high self-monitors than for low self-monitors?

How does self-monitoring affect responses to leading questions differently for subjects with high needs for social desirability than for subjects with low needs for social desirability?

Figure 2
Interaction of Self-Monitoring and Social Desirability
in Responding to Leading Questions



DISCUSSION

Social Motives

It was hypothesized that people yield to leading questions in part from a social motive to appear correct (informational social influence). Support for the role of informational social influence is provided by the finding that people yield more to responses which are suggested by experts (professional pollsters) than by nonexperts (highschool students), in particular for question #9. The lack of significant results for question #5 may be due to the specific form of the leading question (i.e., providing numeric, cognitive anchors to suggest desired responses), or to the precise topic of the question; these limitations will be discussed below.

It was also hypothesized that people yield to leading questions in part to appear similar to others with regards to attitudes (normative social influence). Support for the role of normative social influence is provided by the statistically significant association between responses which subjects provide for themselves, and responses which they provide to represent "the norm", or "their peers" -- i.e. the responses which are suggested through the questions' phrasing are somewhat perceived to represent the responses of the norm.

Predisposing Personalities:

Social Desirability and Approval Dependency

As predicted, the personality variables of social desirability (or approval dependency) and self-monitoring affect responses to leading questions. However, the nature of the effect of these two variables is not as predicted.

Inspection of the plotted cell means (figure 2) reveal that for subjects with low needs for social approval, the role of self-monitoring is as predicted -- i.e. high self-monitors yield more to leading questions than low self-monitors. However, for subjects with high needs for social approval, the role of self-monitoring is the opposite of what was predicted -- i.e. the low self-monitors yield more to leading questions than the high self-monitors. Conversely, for low self-monitors, the role of social desirability is as predicted -- i.e. subjects with high needs for social approval yield more to leading questions than subjects with low needs for social approval; however, for high self-monitors, the role of social desirability is the opposite to what was predicted -- i.e., subjects with low needs for social approval yield more than those with high needs for social approval.

It was assumed in this study that leading questions present a situational demand for desirable responses. Perhaps the high self-

monitors were less likely to respond to situational demands for desirable answers (i.e., by yielding less to the leading questions) because they perceived another situational demand of the opinion poll. This other situational demand may be related to an implicit demand for honest responses. Thus, high self-monitors may infer that opinion polls which are "professional", and "nation-wide", and request "accurate" responses (as described in its introductory statement) place a high premium on honest answers which are free of bias from persuasive attempts. This interpretation is supported by the previous study (reviewed in the Literature section) which demonstrated how high self-monitors will provide more "honest" answers when the importance of consistency and honesty is emphasized (Snyder & Kendzierski, 1982).

The role of honesty may be particularly important for those high self-monitors with concurrent high needs for social desirability, as they may perceive that responding to the opinion poll's demands for honesty would gain them social approval. In contrast, high self-monitors with low needs for social desirability would be less concerned with gaining social approval, hence they are more likely to yield to the cognitive influence which is exerted by the leading questions in the form of phrasing and anchoring.

Low self-monitors are regarded as being less responsive to situational demands than high self-monitors, hence their behavior

is more resistant to "what's expected of them" (i.e., regardless of the situational demands). Thus, the more important determining factor for responding to leading questions may be their need for social approval -- i.e., low self-monitors with high needs for social approval seem to yield more to social influence in the form of leading questions than those with low needs, presumably as an attempt to gain social approval.

Experiment 4:

Post hoc Study re Situational Demands of Questionnaire

Because high self-monitors are so motivated by situational correctness, research into the role of self-monitoring must be very clear as to the situational demands of the experiment in order to correctly interpret the motives and behavior of high self-monitors. In the previous experiment, the interpretation of the high self-monitors' motives is partially based on a post-hoc supposition that high self-monitors were interpreting a situational demand for honest answers. For the integrity of this supposition, it was decided to rerun this opinion poll, on a new sample, with an aim to verify the role of situational demands for "honest answers" vs. "experimentally ideal" (low honesty) responses. This verification required the creation of two clearly-distinct conditions (or situational demands), as follows:

- 1) a *high-honesty condition*, with a situational

demand for honesty, whereby the instructions to the opinion poll will stress the importance of honest answers, which are free of bias (see Appendix M)

- 2) a *low-honesty* condition, with a situational demand for experimentally ideal responses, whereby the instructions to the opinion poll will point out that those respondents with "experimentally ideal" responses will later be identified (by their confidential respondent code) and also requested to participate in further research, which will be conducted during minimal class time and will involve monetary compensation (Appendix N).

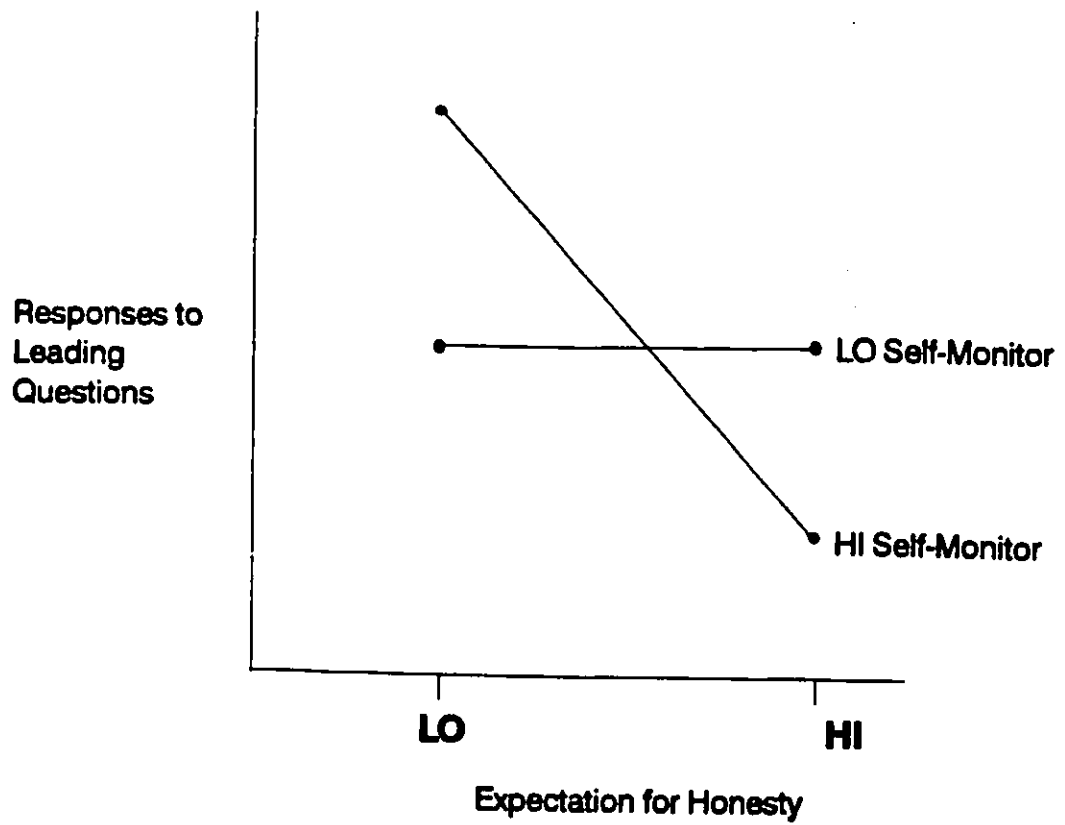
Based on the interpretation of results from the original study, an interaction of self-monitoring (high, low) and situational demand for honesty (high, low) is expected. The primary analysis will be a two-way analysis of variance; due to the confounding (and tenuously understood) role of social desirability, this variable will be entered as a covariate. The predicted nature of the interaction of self-monitoring and honesty is such that:

- A) under a condition for *high* honesty, low self-monitors will yield to the leading questions more than high self-

monitors (i.e., since high self-monitors would perceive the situational demands for honest answers they would resist influencing attempts); and

- B) under a low-honesty condition (for "experimentally ideal" responses), high self-monitors are expected to yield more than low self-monitors (i.e., since they would perceive the situational demand for "experimentally ideal" responses, and yield to the suggested responses accordingly). This predicted interaction is represented in Figure 3.

Figure 3
Predicted Interaction of Self-Monitoring and Expectations
for Honesty in Responding to Leading Questions



Method

The questionnaires were administered to 228 introductory psychology students at the University of Ottawa. Each subject completed the "About Yourself" questionnaire, which contains the Marlowe-Crowne Social Desirability Scale and Snyder's Self-Monitoring Scale (Appendix I); and either the high or low honesty version of the "Views on Canada" (Appendices M and N, respectively).

After the data were screened for incomplete questionnaires, and univariate and multivariate outliers, the subject pool consisted of 216 students ranging in age from 17 to 38 years ($M=22$); there were 72 males (33%) and 144 females (67%).

Inspection of the data for normality revealed a need for the responses to the leading questions to undergo a logarithmic transformation, for both versions.

The formation of high/low groups for self-monitoring was based on a median split, and removing the median ($n=27$).

A two-way analysis of variance to test the effects of self-

monitoring (high, low) and situational demand for honesty (high, low) on responses to leading questions was conducted, with social desirability as a covariate, for questions #5 and #9.

Results and Discussion

The results for the above-described analyses are presented in tables 12 and 13, below.

Table 12

ANOVA for Effects of Self-Monitoring and Situational Demands on Responses to Leading Question #5, with Social Desirability as Covariate

Source of variance	SS	df	MS	F	p
Covariate					
Social Des'y	.02	1	.02	.38	>.05
Main effects					
Self-Mon'ing	.24	1	.24	3.71	<.05
Sit'al Demand	.00	1	.00	.00	>.05
Interaction	.00	1	.00	.06	>.05
Explained	.26	4	.07	1.04	>.05
Residual	9.95	157	.06		
Total	10.21	161	.06		

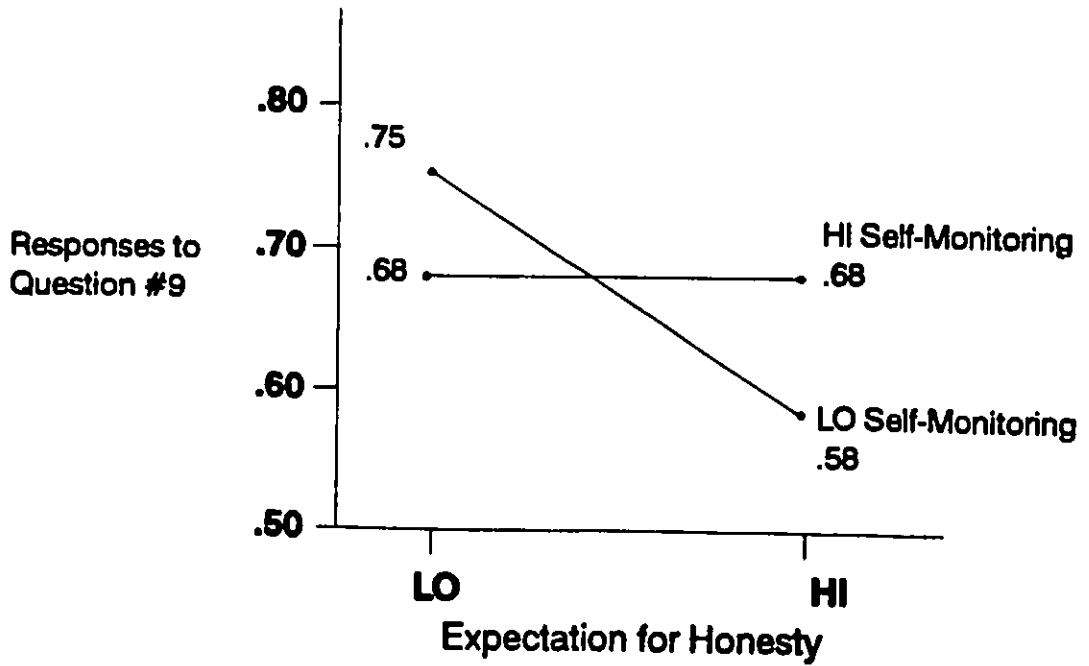
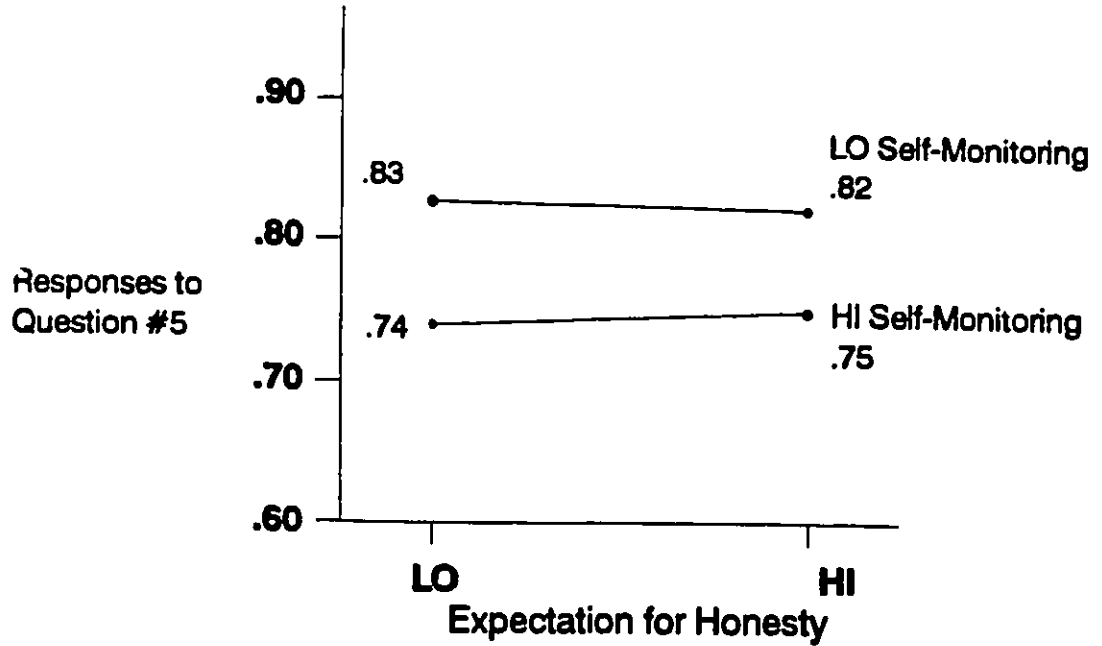
Table 13

ANOVA for Effects of Self-Monitoring and Situational Demands on Responses to Leading Question #9, with Social Desirability as Covariate

Source of variance	SS	df	MS	F	p
Covariate					
Social Des'y	.00	1	.00	.00	>.05
Main effects					
Self-Mon'ing	.01	1	.01	.09	>.05
Sit'al Demand	.31	1	.31	4.40	<.05
Interaction					
Explained	.58	4	.15	2.07	>.05
Residual	11.02	157	.07		
Total	11.60	161	.07		

The results reveal a significant interaction of self-monitoring and situational demand on responses to leading questions for question #9 but not for question #5; for question #5 there is a statistically significant main effect for self-monitoring. In order to visually interpret these results, the cell means (for transformed data) were sought and then plotted (Figure 4).

Figure 4
Interaction of Self-Monitoring and Expectations for Honesty in Responding to Leading Questions



For question #5 it can be seen that low self-monitors yield more to the leading question than high self-monitors, regardless of the situational demand; for question #9 the nature of the interaction of self-monitoring and situational demand is contrary to what was predicted -- i.e., the extent of yielding by high self-monitors was not determined by the situational demand for honesty; conversely, the low self-monitors did differ in extent of yielding based on situational demand.

The results of this post-hoc study are difficult to interpret based on the available information. Clearly, future investigations into other, confounding variables may be worthwhile in order to further understand the phenomenon of individual differences in responding to leading questions.

For Future Investigation

The importance of future investigation into leading questions in order to clarify unresolved issues should not be underrated. It has already been pointed out that the implications of leading questions span the broad area of questionnaire research within the social sciences, and include the specific fields of attitudinal measurement, marketing surveys, opinion polling, prospective employee evaluation, educational assessment, and psychological assessment for therapeutic purposes.

As an example of the latter (psychological assessment), the instructions to the Dyadic Adjustment Scale present the presupposition that "Most persons have disagreements in their relationships". They then ask subjects to indicate on a 7-point Likert-type scale their extent of agreement or disagreement on various items (finance, recreation, etc.). Also, one item (#31) asks the subjects to indicate their degree of happiness in their relationship, on a 7-point scale ranging from extremely unhappy to perfect, then informs subjects that "The middle point, 'happy', represents the degree of happiness of *most* (emphasis added) relationships. Although the intent of these questions is presumably to reduce the clients' defensiveness, they provide information for normative comparison which may bias the results.

Opinion polling is a \$250 million industry in Canada (Canadian Press, in *Ottawa Citizen*, July 18, 1991), and important public policy decisions are based on the results of polls. Despite these facts, however, examples of leading questions in public opinion polls abound. For example, a recent survey prepared for and presented in *The Province* (July 28, 1991) polled over 5,000 adults, and contained blatantly leading questions (e.g., "Are you in favour of B.C. separating from Canada?", as opposed to "How would you feel about B.C. separating from Canada?") ("Do you think that Canada as it now exists is vulnerable to absorption by the U.S.?").

A recently-publicized poll of 1,500 people for several

Canadian labour organizations contained the following statement requesting level of agreement: "A lot of people criticize public employees" (emphasis added). Even the wording of the national referendum on constitutional reform was leading, as it began with "Do you agree that ..." (predisposing for acquiescence bias).

Given the high incidence of leading questions across a variety of topics, it is clear that further understanding into the process whereby individuals yield to leading questions would be beneficial. For example, it has already been suggested that a thorough understanding of individual differences in responding to leading questions may lead to some adjustment methods for more accurately interpreting the results of leading questions.

It has also already been suggested that the effects of personality variables on responding to leading questions may be confounded by other variables which were not addressed in this study. In particular, the discrepant results for the two leading questions suggest a possible "topic effect", whereby the specific topic of the leading questions may influence people's tendency to yield to them. It has already been demonstrated that the effect of using "forbid" vs. "allow" to assess attitudes is moderated by the specific topic of the question (e.g., an effect is found for a question concerning free speech, but not cigarette advertising) (Rugg, 1941; Rugg & Cantril, 1944; Schuman & Presser, 1981). Similarly, people's motivation to yield to leading questions

concerning the Prime Minister's visits to the North may be different than to leading questions concerning the Prime Minister's news conferences.

The particular form of leading questions in this study has also been suggested as a limitation of this study. The leading questions in this study suggest their desired responses through parenthethized numeric examples, or *cognitive anchors*. As discussed in the Introduction, cognitive anchors tend to bias responses while demonstrating evidence for "cognitive efficiency", or acting as "cognitive misers" (Plous, 1989). It is plausible, however, that this "cognitive efficiency" may confound the results in a manner which may not generalize to other forms of leading questions. Thus, further investigation into more varied forms of leading questions would seem worthy of future investigation.

As a casual observation, there also seems to be a possible "respondents' mood effect" which may be worth investigating (e.g., Fiske & Taylor, 1991); specifically, the university classroom subjects from a mid-morning class at the start of the semester presented a higher co-operation rate, and fewer spoiled questionnaires, than subjects from a late-afternoon class at the end of the semester (both classes were for introductory psychology, with the same professor).

Finally, the generalizability of results to other university

populations has been demonstrated through a series of z-tests with other research data; however, the generalization of results to the remainder of society should also be addressed in future research, through a wider, cross-section of the general population. Due to the real-life applications of opinion-polls to the general population, this recommendation would be of theoretical and pragmatic benefit.

Conclusion

Despite the limitations for comprehensive conclusions regarding the role of personality, this study has provided some insight into the process whereby respondents yield to leading questions. Specifically, the breadth of coverage on the effects of questionnaire wording and leading questions is unprecedented. The uniqueness of this contribution to the field also lies in its interdisciplinary approach; in particular, theoretical links are drawn by citing research from cognitive psychology, social psychology, and political science.

The research conducted herein suggests that the quest for new explanations of leading questions is assisted by identifying leading questions as a form of experimenter bias and, as such, as a form of social influence. Also, the social motives of wanting to appear correct (informational social influence), and wanting to appear like the others (normative social influence), seem to

partially account for why respondents yield to leading questions. Finally, the personality variables of social desirability and self-monitoring also seem relevant and worthy of future investigation into the process whereby individuals yield to leading questions.

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Appendix A

Original (draft) "Views on Canada" Opinion Poll.

Leading and Neutral Versions

(leading version)

VIEWS ON CANADA

This questionnaire consists of selected items from recent, public opinion polls on Canadian issues.

EVERY question must be answered in order for an accurate and thorough analysis to be conducted.

1. How would you describe your emotional attachment to Canada?
(circle one number)

9-----8-----7-----6-----5-----4-----3-----2-----1
profoundly somewhat not sure hardly not at all
attached attached attached attached attached

2. When you hear our national anthem, do you

- often feel emotional, sometimes cry
- sometimes feel emotional
- seldom feel emotional
- never feel emotional

3. Do you agree with Wayne Gretzky that lacrosse (as opposed to hockey) should be retained as our official national sport?
(circle one number)

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree agree not sure disagree strongly disagree

4. What do you feel is the main cause of Canada's current unity crisis?

- system of government in Canada
- French-English incompatibility
- the current government in particular
- other _____

(OVER)

5. Do you agree that national unity is an issue requiring urgent attention?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly disagree

6. Canadian author and historian Pierre Burton recently stated that "Everything that holds this country together is being destroyed -- transportation, broadcast, and social services". Do you: (circle one number)

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly disagree

7. Do you feel the Prime Minister should frequently visit the Canadian far North? _____ How many times per year?

approximately _____ times per year

8. Do you agree with the majority of Canadians who support our current multi-cultural provisions?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly disagree

9. What is your opinion on Senate reform?

- should remain as is
- should be reformed, as follows: _____
- no opinion on this topic

10. How often per month do you feel the Prime Minister should hold news conferences? (e.g. 10? 18? 23?)

approximately _____ times per month

(neutral version)

VIEWS ON CANADA

This questionnaire consists of selected items from recent, public opinion polls on Canadian issues.

EVERY question must be answered in order for an accurate and thorough analysis to be conducted.

1. How would you describe your emotional attachment to Canada?
(circle one number)

9-----8-----7-----6-----5-----4-----3-----2-----1
profoundly somewhat not sure hardly not at all
attached attached attached attached attached

2. When you hear our national anthem, do you

- often feel emotional, sometimes cry
- sometimes feel emotional
- seldom feel emotional
- never feel emotional

3. Do you feel that lacrosse (as opposed to hockey) should be retained as our official national sport? (circle one number)

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly
agree agree agree agree disagree

4. Some people feel that Canada lacks real heroes. Do you:

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly
agree agree agree agree disagree

(OVER)

5. Do you believe that national unity is an issue requiring urgent attention?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree agree not sure disagree strongly disagree

6. "Everything that holds this country together is being destroyed -- transportation, broadcast, and social services". Do you: (circle one number)

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree agree not sure disagree strongly disagree

7. Do you feel the Prime Minister should occasionally visit the Canadian far North? _____ How many times per year?

approximately _____ times per year

8. Do you support Canada's current multi-cultural provisions?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree with them agree not sure disagree strongly disagree with them

9. What is your opinion on Senate reform?

- should remain as is
- should be reformed, as follows: _____

- no opinion on this topic

10. How often per month do you feel the Prime Minister should hold news conferences? (e.g. 2? 5? 8?)

approximately _____ times per month

Appendix B

t-Tests of Responses to Leading vs. Neutral
Questions in Original Draft Opinion Poll

Question #	Wording	N	Mean	SD	df	t-value
3	Leading	65	4.18	1.83	127	1.50
	Neutral	64	3.73	1.58		
5	Leading	65	7.31	1.48	127	1.12
	Neutral	64	7.61	1.58		
6	Leading	64	5.81	1.97	126	.27
	Neutral	64	5.91	1.93		
7	Leading	60	3.33	2.18	118	2.46**
	Neutral	60	2.55	1.16		
8	Leading	65	6.78	1.53	126	3.04*
	Neutral	63	5.84	1.95		
10	Leading	63	6.95	6.10	122	5.57*
	Neutral	61	2.51	1.66		

* one-tailed prob. < .01

** one-tailed prob. < .05

Appendix C

"Views on Canada" Opinion Poll, Professional Pollsters' Version

**VIEWS ON CANADA:
A NATION-WIDE "CANADA UNITY" PROJECT**

This opinion poll was designed by professional pollsters as part of a nation-wide survey of views on current Canadian issues.

EVERY question must be answered in order for an accurate and thorough analysis to be conducted.

1. How would you describe your emotional attachment to Canada?
(circle one number)

9-----8-----7-----6-----5-----4-----3-----2-----1
 profoundly somewhat not sure hardly not at all
 attached attached attached attached attached

2. When you hear our national anthem, do you

- often feel emotional, sometimes cry
 sometimes feel emotional
 seldom feel emotional
 never feel emotional

3. Is national unity an issue requiring urgent attention?

9-----8-----7-----6-----5-----4-----3-----2-----1
 strongly agree not sure disagree strongly
 agree disagree disagree

4. Do you think that Canada's vast, geographical size plays a part in Canada's unity problems?

9-----8-----7-----6-----5-----4-----3-----2-----1
 strongly agree not sure disagree strongly
 agree disagree disagree

PLEASE TURN OVER ...

5. How many times per year should the Prime Minister visit Canada's far North? (e.g. 7? 13? 24?)

approximately _____ times per year

6. Do you support Canada's current multi-cultural provisions?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree agree not sure disagree strongly disagree

7. What is your opinion on the proposed "Triple E" Senate?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree agree not sure disagree strongly disagree

8. How many hours per week do you normally spend "tuned in" to the news (television, radio, newspaper)?

approximately _____ hours per week

9. How often per month do you feel the Prime Minister should hold news conferences? (e.g. 10? 18? 23?)

approximately _____ times per month

YOUR AGE: _____ years SEX: () male () female

DEPARTMENT: _____ DEGREE SOUGHT: _____

LAST FOUR DIGITS OF YOUR PHONE NO. _____ (this is an arbitrary identification code for future data collection)

Appendix D

"Views on Canda" Opinion Poll, Highschool Students' Version

**VIEWS ON CANADA:
A "CANADA UNITY" POLL DESIGNED BY TEENS**

This opinion poll was designed by grade ten students as part of a highschool "Canada Unity" project. Completion of this highschool students' survey is now required by university students such as yourself in order to contrast the views of teenagers with those of university students.

EVERY question must be answered in order for an accurate and thorough analysis to be conducted.

1. How would you describe your emotional attachment to Canada?
(circle one number)

9-----	8-----	7-----	6-----	5-----	4-----	3-----	2-----	1
profoundly attached	somewhat attached	not sure	hardly attached	not at all attached				

2. When you hear our national anthem, do you

- often feel emotional, sometimes cry
- sometimes feel emotional
- seldom feel emotional
- never feel emotional

3. Is national unity is an issue requiring urgent attention?

9-----	8-----	7-----	6-----	5-----	4-----	3-----	2-----	1
strongly agree	agree	not sure	disagree	strongly disagree				

4. Do you think that Canada's vast, geographical size plays a part in Canada's unity problems?

9-----	8-----	7-----	6-----	5-----	4-----	3-----	2-----	1
strongly agree	agree	not sure	disagree	strongly disagree				

PLEASE TURN OVER ...

5. How many times per year should the Prime Minister visit Canada's far North? (e.g. 7? 13? 24?)

approximately _____ times per year

6. Do you support Canada's current multi-cultural provisions?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly disagree
agree

7. What is your opinion on the proposed "Triple E" Senate?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly disagree
agree

8. How many hours per week do you normally spend "tuned in" to the news (television, radio, newspaper)?

approximately _____ hours per week

9. How often per month do you feel the Prime Minister should hold news conferences? (e.g. 10? 18? 23?)

approximately _____ times per month

YOUR AGE: _____ years SEX: () male () female

DEPARTMENT: _____ DEGREE SOUGHT: _____

Appendix E

"Views on Canada" Opinion Poll, Requesting Perceived
Responses of Peers

**VIEWS ON CANADA:
HOW WOULD YOUR UNIVERSITY PEERS ANSWER?**

We are now interested in how university students perceive the views of their peers regarding current Canadian issues -- i.e. how do you think most, typical university students would answer this opinion poll?

Please fill out this opinion poll again, but instead of providing your own views, provide answers which you think would represent the views of typical university students.

EVERY question must be answered in order for an accurate and thorough analysis to be conducted.

1. How would you describe your emotional attachment to Canada?
(circle one number)

9-----8-----7-----6-----5-----4-----3-----2-----1
profoundly somewhat not sure hardly not at all
attached attached attached attached attached

2. When you hear our national anthem, do you

- often feel emotional, sometimes cry
- sometimes feel emotional
- seldom feel emotional
- never feel emotional

3. Is national unity an issue requiring urgent attention?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly
agree disagree disagree

4. Do you think that Canada's vast, geographical size plays a part in Canada's unity problems?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly
agree disagree disagree

PLEASE TURN OVER ...

5. How many times per year should the Prime Minister visit Canada's far North? (e.g. 7? 13? 24?)

approximately _____ times per year

6. Do you support Canada's current multi-cultural provisions?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly
agree disagree

7. What is your opinion on the proposed "Triple E" Senate?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly
agree disagree

8. How many hours per week do you normally spend "tuned in" to the news (television, radio, newspaper)?

approximately _____ hours per week

9. How often per month do you feel the Prime Minister should hold news conferences? (e.g. 10? 18? 23?)

approximately _____ times per month

YOUR AGE: _____ years SEX: () male () female

DEPARTMENT: _____ DEGREE SOUGHT: _____

LAST FOUR DIGITS OF YOUR PHONE NUMBER: _____

Appendix F

Ethics Committee Correspondence

UNIVERSITY OF MONTREAL RESEARCH ETHICS COMMITTEE
**QUESTIONNAIRE ON RESEARCH PROCEDURES
 CONCERNING RESEARCH CONDUCTED USING HUMAN SUBJECTS**

A typewritten response would be appreciated. Please answer all the questions. Use additional sheets where insufficient space is provided on this questionnaire.

Name(s) of Principal Investigator(s) CAROL MILSTONE (PHD THESIS) DEAN H.P. EDWARDS	Department PSYCHOLOGY	Office Address 	Telephone 813 702 110
---	---------------------------------	--------------------	---------------------------------

1 Title of Research Project
**RESPONDING TO LEADING QUESTIONS:
 AN INDIVIDUAL-DIFFERENCE PERSPECTIVE**

To what funding source is the application being submitted, if any?

2 Who are the subjects (please be as specific as possible)
**UNDERGRADUATE STUDENTS OF THE U OF OTTAWA,
 FROM VARIOUS DISCIPLINES.**

3 Number of subjects to be involved in the study
200 - 300 SUBJECTS

4 How will the subjects be recruited for this study?
**PROFESSORS WILL BE APPROACHED WITH A BRIEF DESCRIPTION OF THE
 STUDY. PERMISSION WILL BE REQUESTED FOR 10 MIN. OF CLASS TIME.**

5 How will you obtain the informed consent of the subject(s) (and where applicable, of parents/guardians)?
 N.B. append a copy of the informed consent form or information sheet to be used in this research.
**I WILL FIRST READ THE APPENDED SCRIPT TO EACH CLASS, THOSE STUDENTS
 WHO AGREE TO PARTICIPATE WILL SIGN 2 COPIES OF CONSENT FORM, AND KEEP ONE.**

6 Specify the level (none, low, moderate or high) and describe the nature of risk (legal, physical, psychological or social) associated with each major procedure with human subjects in this research. Justify the choice of this procedure(s) and state how you propose to minimize the risk.
**IN THE VIEW OF MY THESIS COMMITTEE AND MYSELF, THERE IS ESSENTIALLY
 NO RISK ASSOCIATED WITH THIS STUDY, WHICH IS QUESTIONNAIRE FORMAT.**

7 Specify the level (none, low, moderate or high) and describe the nature of discomfort (legal, physical, psychological or social) associated with each major procedure with human subjects in this research. Justify the choice of this procedure(s) and state how you propose to minimize the discomfort.
**ESSENTIALLY NO DISCOMFORT. ONE QUESTIONNAIRE IS MODELLED ON PUBLIC OPINION
 POLLS WHICH ARE ADMINISTERED TO THE PUBLIC BY TELEPHONE. THE OTHER
 QUESTIONNAIRE IS NON-CLINICAL, BASED ON 2 PERSONALITY SCALES WHICH ARE
 ACCESSIBLE IN UNDERGRADUATE TEXTBOOKS AND DO NOT REQUIRE ANY SPECIAL PERMISSION.**

8 Specify the method(s) by which you plan to ensure the anonymity of subjects and the confidentiality of the data. If you are not using pooled data, indicate clearly how anonymity of subjects will be protected. Where subjects are interviewed, state whether the interviewee(s) will be quoted and if so, how anonymity will be ensured. If interviewee(s) are not to remain anonymous, how will permission to quote be obtained?
**THE QUESTIONNAIRES DO NOT REQUIRE THE RESPONDENTS' NAMES. THE CONSENT
 FORMS WILL BE COLLECTED SEPARATELY FROM THE QUESTIONNAIRES. THERE
 WILL BE NO WAY TO MATCH THEM UP.**

9 Briefly outline what the subject(s) will be required to do. Indicate the number of sessions required per subject and the length of each session. Submit a copy of protocols, questionnaires or other relevant materials to be administered to subjects. Do not submit mechanical apparatus. Where scientific instruments are to be used which involve covert or overt physical contact (e.g. electrodes, sensory devices), provide a clear description of the apparatus and its function.
**SUBJECTS WILL COMPLETE A 2-PAGE OPINION POLL ON CANADIAN
 ISSUES (5 MIN); AND A 58-ITEM, TRUE-FALSE PERSONALITY QUESTIONNAIRE (5 MIN)
 WHICH IS COMPRISED OF MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE,
 AND SNYDER'S SELF-MONITORING SCALE.**

I agree to abide by the procedures, guidelines, ethical principles and code of ethics adopted by the UHREC and its subcommittee, and where applicable, by those of the granting agency to which this proposal is being submitted, and by those of my profession or discipline, as well as by those of the facility or institution in which the research is undertaken. I am aware of my personal responsibility to be familiar with these standards. I further agree to notify the UHREC of any substantive changes in the use of human subjects in this research and to comply with requests by UHREC or its subcommittee for other information/documentation during the life of this research.

SIGNATURE OF PRINCIPAL INVESTIGATOR(S)
C. H. Edwards

28 10 24 12
 JAR MONTL



UNIVERSITÉ D'OTTAWA
UNIVERSITY OF OTTAWA

ÉCOLE DE PSYCHOLOGIE
SCHOOL OF PSYCHOLOGY

March 24, 1992

Carol Milstone
6594 Delorme Avenue
Orleans, Ontario
K1C 6N6

Dear Carol:

RE: Research project: Responding to leading questions: An individual
difference perspective

At a meeting held on March 23, 1992, the Human Research Ethics Committee of the School of Psychology has reviewed the above mentioned project with the following recommendations:


- a) ✓ In the recruitment script, delete the sentence "Thank you for agreeing to assist with my study" since the students have not yet agreed to participate at this point.
- b) ✓ In the recruitment script, you state that there are two or three questionnaires which will require ten or fifteen minutes to fill out, but in the consent form, you state there are two questionnaires which will require 10 minutes to fill out. Please clarify.
- c) // In the consent form: (i) the description of the study is too vague; (ii) the name of the advisor and his telephone number should be added; (iii) explain how anonymity is secured; (iv) add that there will be a summary of the results, and explain how it will be distributed.
- d) ✓ In the consent form and recruitment script, delete the sentence "Of course you may refuse to complete any part of the questionnaire, although your results may not be included in this study" so as to avoid putting pressure on participants.
- e) ✓ Since the study will be done in a classroom setting, please inform the participants, in advance, that they will be getting different versions of the questionnaires. Debriefing should be done afterwards.

.../2

Thank you for submitting your proposal to the Ethics Committee. Your collaboration is most appreciated.

Please send all requested modifications to Jeannine Cameron, Secretary of the Ethics Committee, Room 352-C, Lamoureux (564-9151). Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Leclerc', written in a cursive style.

Robert Leclerc, Ph.D.
Chair of HRECSP

RL/jc

Appendix G

Pre-Questionnaire Script for Experiment 2

Pre-Questionnaire Script

I am currently involved in research into university students' views on Canada. If you agree to participate in this study, you would be required to fill out a brief opinion poll on Canadian issues.

This study involves essentially no discomfort, and your responses are totally anonymous. Of course, you may refuse to participate in any part of the opinion poll, although your results may not be included in this study.

If you agree to this study, please read the enclosed Consent Form, and sign the two copies. Keep one copy for yourself, and the other will be collected separately from your completed questionnaire.

Please read the instructions to the Opinion Poll carefully, and try to answer every question.

Thank you for volunteering your time and efforts to assist with this research.

Appendix H

Consent Form for Experiment 2

CONSENT FORM

When a research project is undertaken by a member of the University of Ottawa, its Ethics Committee requires the written consent of the participants.

Ph. D. candidate Carol Milstone is conducting research on university students' attitudes towards current Canadian issues. This research is under the direction of Dean H.P. Edwards.

Participation in this study requires the anonymous completion of a brief opinion poll on Canadian issues. The study involves essentially no discomfort or risk. Your name is not requested on the questionnaires, and they will be collected separately from the Consent Form. Therefore, complete anonymity is assured, as there will be no way to identify respondents.

If you agree to this study, please complete these consent forms. Keep one copy for yourself, and the other copy will be collected separately from the completed questionnaires.

For further information, please contact Carol Milstone, at 837-0210, or Dean H.P. Edwards, 564-2250.

I, _____, agree to
(please print)

participate in the study that is described above.

Date: _____ Signature: _____

Optional: If you would like a summary of this study's results mailed to you, please complete the following:

Name: _____

Address _____

_____ Postal Code _____

Appendix I

"About Yourself" Questionnaire

Note: This questionnaire is comprised of the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964) as items:

1, 3, 5, 7, 9, 11, 13, 16, 18, 20, 22, 24, 26, 29, 32,
34, 36, 39, 41, 43, 46, 49, 52, 54, 56

and the Self-Monitoring Scale (Snyder, 1974) as items:

2, 4, 6, 8, 10, 12, 14, 15, 17, 19, 21, 23, 25, 27, 28,
30, 31, 33, 35, 37, 38, 40, 42, 44, 45, 47, 50, 51, 53,
55, 57, 58.

ABOUT YOURSELF

Please provide your answers to this questionnaire on the computerized, optical scan sheet provided. HB pencils only.

If a statement is either true OR mostly true as it applies to you, fill in the number "1" (True).

If a statement is either false OR not usually true as it applies to you, fill in the number "2" (False).

Please answer EVERY item.

- | TRUE | FALSE | |
|------|-------|--|
| 1 | 2 | 1. I find it hard to imitate the behaviour of others. |
| 1 | 2 | 2. Before voting I thoroughly investigate the qualifications of all the candidates. |
| 1 | 2 | 3. My behaviour is usually an expression of my true inner feelings, attitudes, and beliefs. |
| 1 | 2 | 4. I never hesitate to go out of my way to help someone in trouble. |
| 1 | 2 | 5. At parties and social gatherings, I do not attempt to do or say things that others will like. |
| 1 | 2 | 6. It is sometimes hard for me to go on with my work if I am not encouraged. |
| 1 | 2 | 7. I can only argue for ideas which I already believe. |
| 1 | 2 | 8. I have never intensely disliked anyone. |
| 1 | 2 | 9. When I am uncertain how to act in a social situation, I look to the behaviour of others for cues. |
| 1 | 2 | 10. On occasion I have had doubts about my ability to succeed in life. |
| 1 | 2 | 11. I can make impromptu speeches even on topics about which I have almost no information. |

(OVER)

TRUE FALSE

- | | | |
|---|---|--|
| 1 | 2 | 12. I sometimes feel resentful when I don't get my way. |
| 1 | 2 | 13. I guess I put on a show to impress or entertain others. |
| 1 | 2 | 14. I am always careful about my manner of dress. |
| 1 | 2 | 15. My table manners at home are as good as when I eat out in a restaurant. |
| 1 | 2 | 16. I would probably make a good actor. |
| 1 | 2 | 17. If I could get into a movie without paying and be sure I was not seen, I would probably do it. |
| 1 | 2 | 18. In a group of people I am rarely the centre of attention. |
| 1 | 2 | 19. On a few occasions, I have given up doing something because I thought too little of my ability. |
| 1 | 2 | 20. I rarely seek advise of my friends to choose movies, books, or music. |
| 1 | 2 | 21. I like to gossip at times. |
| 1 | 2 | 22. In different situations and with different people, I often act like very different persons. |
| 1 | 2 | 23. There have been times when I felt like rebelling against people in authority even though I know they were right. |
| 1 | 2 | 24. I sometimes appear to others to be experiencing deeper emotions than I actually am. |
| 1 | 2 | 25. I can remember "playing sick" to get out of something. |
| 1 | 2 | 26. I am not particularly good at making other people like me. |
| 1 | 2 | 27. There have been occasions when I took advantage of someone. |

TRUE	FALSE	
1	2	28. I'm always willing to admit it when I make a mistake.
1	2	29. I'm not always the person I appear to be.
1	2	30. I always try to practice what I preach.
1	2	31. I don't find it particularly hard to get along with loud mouthed, obnoxious people.
1	2	32. I would not change my opinions (or the way I do things) in order to please someone or win their favour.
1	2	33. I sometimes try to get even, rather than forgive and forget.
1	2	34. I laugh more when I watch a comedy with others than when alone.
1	2	35. When I don't know something I don't at all mind to admit it.
1	2	36. I have considered being an entertainer.
1	2	37. I am always courteous, even to people who are disagreeable.
1	2	38. At times I have really insisted on having things my own way.
1	2	39. I have never been good at games like charades or improvisational acting.
1	2	40. There have been occasions when I have felt like smashing things.
1	2	41. Even if I am not enjoying myself, I often pretend to be having a good time.
1	2	42. I would never think of letting someone else be punished for my wrongdoing.
1	2	43. I have trouble changing my behaviour to suit different people and different situations.
1	2	44. I never resent being asked to return a favour.

(OVER)

TRUE	FALSE	
1	2	45. I have never been irked when people expressed ideas very different from my own.
1	2	46. At a party I let others keep the jokes and stories going.
1	2	47. I never make a long trip without checking the safety of my car.
1	2	48. There have been times when I was quite jealous of the good fortune of others.
1	2	49. I feel a bit awkward in company and do not show up quite as well as I should.
1	2	50. I have almost never felt the urge to tell someone off.
1	2	51. I am sometimes irritated by people who ask favours of me.
1	2	52. I can look anyone in the eye and tell a lie with a straight face (if for a right end).
1	2	53. I have never felt that I was punished without cause.
1	2	54. In order to get along and be liked, I tend to be what people expect me to be rather than anything else.
1	2	55. I sometimes think when people have a misfortune they only got what they deserved.
	2	56. I may deceive people by being friendly when I really dislike them.
1	2	57. I have never deliberately said something that hurt someone's feelings.
1	2	58. I sometimes feel resentful when I don't get my way.

Appendix J
Pre-Questionnaire Script for Experiment 3

Pre-Questionnaire Script

I am conducting research on attitudes towards current Canadian issues; I am also looking at aspects of personality. If you agree to participate in this study, you would be required to fill out a brief opinion poll on Canadian issues, and a True/False questionnaire about yourself.

This study involves essentially no discomfort, and your responses are totally anonymous. Of course, you may refuse to participate in any part of the questionnaires, although your results may not be included in this study.

If you agree to this study, please read the enclosed Consent Form, and sign the two copies. Keep one copy for yourself, and the other will be collected separately from your completed questionnaire.

Please answer the Opinion Poll directly onto the sheet, and answer the questionnaire About Yourself onto the computer scan sheet (with pencil).

Please read the instructions to each questionnaire carefully, and try to answer every question.

Thank you for volunteering your time and efforts to assist with this research.

Appendix K

Consent Form for Experiment 3

CONSENT FORM

When a research project is undertaken by a member of the University of Ottawa, its Ethics Committee requires the written consent of the participants.

Ph.D. candidate Carol Milstone is conducting research on university students' attitudes towards current Canadian issues, and the possible role of personality. This research is under the direction of Dean H.P. Edwards. Participation in this study requires the anonymous completion of two questionnaires, as follows:

- 1) "Views on Canada" -- an opinion poll survey
- 2) "About Yourself" - 58 True/False items

Completion of these questionnaires will take 10-15 minutes. The study involves essentially no discomfort or risk. Your name is not requested on the questionnaires, and they will be collected seperately from this Consent Form. Therefore, complete anonymity is assured, as there will be no way to identify respondents.

If you agree to this study, please complete these consent forms. Keep one copy for yourself, and the other copy will be collected seperately from the completed questionnaires.

For further information, please contact Carol Milstone, at 837-0210, or Dean H.P. Edwards, 564-2250.

I, _____, agree to
(please print)

participate in the study that is described above.

Date: _____

Signature of participant: _____

Optional: If you would like a summary of this study's results mailed to you, please complete the following:

Name: _____

Address: _____

Appendix L

"The Last Word", Validation Measure for Experiment 3

THE LAST WORD ...

With research in the social sciences, it is normal for participants to try to "figure out" what the experiment is "really about". It would assist in interpreting the results of this study if we could find out to what extent this may have been occurring. If you have any ideas as to why we were asking the questions in this study (i.e., "Views on Canda", and "About Yourself"), please indicate your ideas below:

I have no idea of what this study was really about.

or

I think that I may have "figured out" this study, and I will attempt to describe it as follows:

***** THANK YOU *****

Appendix M

"Views on Canada" Opinion Poll, High-honesty Version

VIEWS ON CANADA:
A POST-REFERENDUM OPINION POLL

Currently in Canada there are many public opinion polls which contain leading questions and produce biased results.

The purpose of this opinion poll is to obtain YOUR OWN views, which are free of bias from others. Therefore, please complete this opinion poll honestly, and provide your responses directly onto these pages.

EVERY question must be answered for an accurate and thorough analysis.

1. How would you describe your emotional attachment to Canada?
(circle one number)

9-----	8-----	7-----	6-----	5-----	4-----	3-----	2-----	1
profoundly attached	somewhat attached.	not sure	not sure	not sure	hardly attached	hardly attached	not at all attached	not at all attached

2. When you hear our national anthem, do you

- often feel emotional, sometimes cry
- sometimes feel emotional
- seldom feel emotional
- never feel emotional

3. "National unity is an issue requiring urgent attention". Do you ...

9-----	8-----	7-----	6-----	5-----	4-----	3-----	2-----	1
strongly agree	strongly agree	agree	agree	not sure	not sure	disagree	disagree	strongly disagree

4. Do you think that Canada's vast, geographical size plays a part in Canada's unity problems?

9-----	8-----	7-----	6-----	5-----	4-----	3-----	2-----	1
strongly agree	strongly agree	agree	agree	not sure	not sure	disagree	disagree	strongly disagree

PLEASE TURN OVER ...

5. How many times per year should the Prime Minister visit Canada's far North? (e.g. 7? 13? 24?)

approximately _____ times per year

6. Do you support Canada's current multi-cultural provisions?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly
agree disagree

7. How many hours per week do you normally spend "tuned in" to the news (television, radio, newspaper)?

approximately _____ hours per week

8. How often per month do you feel the Prime Minister should hold news conferences? (e.g. 10? 18? 23?)

approximately _____ times per month

YOUR AGE: _____ years SEX: () male () female

DEPARTMENT: _____ DEGREE SOUGHT: _____

Appendix N

"Views on Canada" Opinion Poll, Ideal-responses Version

VIEWS ON CANADA:
A POST-REFERENDUM OPINION POLL

The purpose of this opinion poll is to identify certain, university students whose views on Canada are considered to be "experimentally ideal".

Therefore, based on the responses given in this opinion poll, some students will be selected for further research. The further research will involve minimal time before class and will also provide some financial payment.

Please provide your responses directly onto these pages.

EVERY question must be answered for an accurate and thorough analysis.

YOUR PERSONAL IDENTIFICATION CODE = _____
(Please record this code for future reference, in case you are selected for future study, based on your opinion poll responses.)

1. How would you describe your emotional attachment to Canada?
(circle one number)

9-----8-----7-----6-----5-----4-----3-----2-----1
profoundly somewhat not sure hardly not at all
attached attached attached attached attached

2. When you hear our national anthem, do you

- often feel emotional, sometimes cry
- sometimes feel emotional
- seldom feel emotional
- never feel emotional

3. "National unity is an issue requiring urgent attention". Do you ...

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly
agree disagree

PLEASE TURN OVER ...

4. Do you think that Canada's vast, geographical size plays a part in Canada's unity problems?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly
agree disagree

5. How many times per year should the Prime Minister visit Canada's far North? (e.g. 7? 13? 24?)

approximately _____ times per year

6. Do you support Canada's current multi-cultural provisions?

9-----8-----7-----6-----5-----4-----3-----2-----1
strongly agree not sure disagree strongly
agree disagree

7. How many hours per week do you normally spend "tuned in" to the news (television, radio, newspaper)?

approximately _____ hours per week

8. How often per month do you feel the Prime Minister should hold news conferences? (e.g. 10? 18? 23?)

approximately _____ times per month

YOUR AGE: _____ years SEX: () male () female

DEPARTMENT: _____ DEGREE SOUGHT: _____