THE PROBLEM WITH SURVEY RESEARCH AND WHAT TO DO ABOUT IT

The Problem with survey research (any instrument or procedure that asks questions of respondents) is that the answers are not reliable. When researchers only have answers to questions—whether questions are about objective or subjective phenomena—it's impossible for them, or anyone else, to know if the answers are accurate (Category One Answers) or are not (Category Two Answers). The *only* way to know if an answer is accurate/correct/complete is to check, or verify, it with information from additional sources of information; say, from observation, experimentation, and documents. Those who rely on the asking method—askers—do not have information from other sources and, therefore, all they have is The Problem; all they have is unreliable information.

Answers to questions are made unreliable by respondents and by asking. Because there are no answers without respondents and asking—and because both respondents and asking make answers unreliable—answers are, in that sense, inherently unreliable.

Respondents Make Answers Unreliable

Respondents make answers unreliable because all answers are produced by respondents and all respondents skew every answer they give. Respondents skew answers when they lie and when they do not have relevant and correct information. Also, respondents' values and norms bias answers, as do their interest in, and sensitivity to, the questions put to them. Moreover, there are many other ways respondents contribute to The Problem; some mentioned in the following pages.

Respondents Sometimes Lie

Virtually everyone knows that people, when asked, sometimes and, depending upon

circumstance—for example, who's asking whom, about what—often lie. Lying is a daily affair that permeates all of life. And no topic is immune from prevarication.

Devoid of Appropriate Information

Another reason respondents make answers unreliable is that some of them do not have relevant and accurate information. Rather than admit ignorance, many guess and, more than a few, incorrectly. Other respondents, devoid of appropriate information but thinking otherwise, also give answers that are off the mark.

Commonly Held Values and Norms

Respondents contribute to The Problem because they skew their replies to correspond to social values and norms, as well as to the priorities and perspectives associated with their organizational positions. For example, when asked about their behavior, responders affirm performing activity consistent with social and organizational norms when they haven't, and deny performing, or participating in, undesirable behaviors (Parry and Crossley, 1950; Phillips and Clancy, 1970; Riesman and Benny, 1956; Silver, Ambramson, and Anderson, 1986; Sproull and Kiesler, 1991).

Interest in Question Topics

The interest respondents have in topics of questions makes their answers unreliable. People who appear to be interested in a topic respond at a higher rate and, provide different answers than those who have less, or no, interest (Dolsen and Machlis, 1991; Jurkiewicz and Nichols, 2002). Thus, contents of questions—that is, the issues or topics investigated—can generate "selection bias", skewing results according to the concerns or interests of responders.

Sensitivity of Question Topics

The extent to which topics are considered sensitive by respondents makes answers to

questions unreliable. The greater the sensitivity of question topics, the greater the effects on rates of response and on reports of the behaviors and attitudes investigated. Moreover, sensitive question topics contribute to The Problem because what's considered sensitive varies by respondents' childhood experiences, peer and professional socialization, present and past socioeconomic statuses, organizational position and functions, plans for the future, and so on. Consequently, *any* question topic can be sensitive, and this means *any* topic or issue can skew answers.

Other Ways Respondents Contribute to The Problem

There are many other ways respondents contribute to The Problem. Some respondents—particularly politicians, corporate executives, and others obsessively committed to advancing their own convictions—disregard the questions put to them in favor of making their own points. Some respondents make answers unreliable by having others answer for them. Claiming to be "too busy", top-level corporate and government executives pass mailed questionnaires to lower level personnel. Some husbands oblige their wives to handle these inconveniences.

It's not uncommon for respondents to contribute to The Problem by marking middle or average positions on Likert scales, rather than carefully considering which position on the scale corresponds to their actual opinion or behavior.

Asking Makes Answers Unreliable

Asking makes answers unreliable because (1) specific characteristics of asking instruments, including wording of questions, (2) peculiarities of settings or environments in which questions are asked and answers given, and (3) attributes and behaviors of askers bias answers.

Asking Instruments Contribute to The Problem

Asking instruments contribute to The Problem because the wording of instrument

invariably affects response rates and contents of answers. "Answers depend on questions and there is no single way to word most questions" (Schuman, 2008, p. 13).

Also, the words that constitute instrument questions are symbolic and unrealistic, and this means asking instruments tend to produce symbolic and unrealistic answers[i]. Words are verbal symbols that do not necessarily capture—sufficiently, or at all—the realities for which they are supposed to be referents. The word, "woman," for instance, *represents* a particular type of human being, but the word, "woman", is not a particular, real person in a particular, actual place with the unique characteristics of that particular woman in that particular place or situation.

Notoriously symbolic and unrealistic are asking instruments querying people about their values. Such questions do not take into account the fact that people hold numerous values and, in many real-life situations, some values conflict with others. Moreover, the extent of commitment to any one value and its effect on what a person says and does depends on how a particular value relates to other priorities in specific real-life situations.

Another indication that asking instruments produce unreliable answers is that when identical questions are put to the same populations or samples by various instruments, each instrument produces different response rates and/or different substantive answers than any other instrument (Asher, 2004; Hochstim, 1967; Hyman, 1944-45; Katz, 1942; Linn, 1965; Tourangeau, Jobe, Pratt, and Rasinski, 1997).

Also, asking instruments contribute to The Problem because they often generate inconsistent answers. Instruments that contain numerous questions on a particular topic—such as, illicit drug use, voting, abortions, or quality of life usually produce answers that affirm the

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[i] Unrealistic answers are also the consequence of unrealistic asking settings; a topic mentioned on pp. XX.

behavior or opinion investigated, whereas other responses imply, or explicitly state, the opposite (Bennett and DiLorenzo, 1992; Miller, 1997).

Reinterviewing instruments—such as panel studies—often generate inconsistent answers. Respondents give answers in repeat interviews that conflict with their responses to the same questions in initial asking sessions **(**Brehm, 1994; Fendrich and Vaughn, 1994).

Another characteristic of asking instruments that contributes to The Problem is that they produce nonresponse and, usually, a lot of it. Nonresponse makes answers unreliable because nonrespondents would likely—no one can know for certain—have given different answers than did respondents. Thus, the results of survey research efforts would be different if nonrespondents had responded. This is especially true for telephone surveys because responders to telephone surveys are different people than responders. As a consequence of nonresponse, important characteristics of samples are significantly overestimated and/or underestimated.

Asking instruments also tend to produce unrepresentative results and, in that respect, further contribute to The Problem. Results of asking instruments are unrepresentative when answers are from respondents who are not representative of the whole population that is investigated; that is, from respondents who do not share the same demographic or other relevant characteristics of the whole population. Those with the same demographic characteristics, the same life experiences, the same organizational position and functions, and so on, tend to say the same or similar words in response to a particular question or set of questions; whereas those experiencing different cultures, backgrounds, situations, and events answer accordingly and differently[ii]. Thus, responses of a representative sample can be generalized to the whole

[ii] The effects of particular settings and more inclusive environments on responses are discussed on pp. XX.

population, but answers of an unrepresentative sample cannot. The answers of an unrepresentative sample merely indicate what that particular group said and, in that sense, are unreliable indicators of what the whole group might have said.

Also, the wording of questions invariably contributes to The Problem because it's not possible to word a question so that the question has no effect on response rates and contents of answers. For example, much of every language is ambiguous. Jargon peculiar to certain topics is ambiguous to many respondents, thereby skewing answers into Category One or Category Two. Documented instances of ambiguous words in questions include: "needed services" (Asher, 2004, p. 168), violence (Gorner and Dell'Angela, 2001), quality ("Executives Believe Quality Contributes to Bottom Line", 2004), exercise (Asher, 2004), "`welfare'", "`big business'", "`civil rights'", "`profits'", "`energy crisis'", "`big government'", (Sudman, Bradburn, and Wansink, 2004, p. 120), and eldercare (*Exploring Employee Utilization of Employer-Sponsored Eldercare Programs*, 2003). Also, small changes in questions wording—such as "substituting `helping the poor' for `welfare'" (Vasu, Stewart, and Garson, 1998, p. 164)—affects answers, making them unreliable.

Formats of asking instruments affect results—both response rates and content of answers—to various degrees; thus, formats of asking instruments contribute to The Problem (Couper, 2000). Formats are: (1) physical features of instruments, (2) structures of questions (for example, open-ended, and fixed response questions), and (3) patterns in which questions are related to each other (for instance, placing questions about personal matters—such as gender and income—before or after questions about the topic or issue being investigated).

It's also the case that asking instruments produce unreliable answers because the effects of various components of instruments on answers—such as question wording and instrument

format—are tangled, making it impossible to identify the specific effects that a particular instrument component has on the answers obtained (Tourangeau, Jobe, Pratt, and Rasonski, 1997). Moreover, the effects of instrument components on answers are also entangled with the effects of asking settings and askers themselves. To the extent effects of components of instruments, settings, and askers are tangled, it's not possible to know which component of the asking method is causing what amount of response bias.

Asking Settings Contribute to The Problem

Answers to questions are also made unreliable because answers are affected by the settings in which asking and answering occur. Generally, each asking setting or situation generates results (response rates and contents of answers) that are different than when the same or similar questions are asked in different settings.

There are two basic types of settings that affect responses: societal settings and immediate settings. Societal settings are the cultures experienced by respondents, and that includes social values, perspectives, illusions, religions, and understandings of politics and economics. Also included in respondents' societal settings are their positions in society—such as socioeconomic position, marital position or status, organizational position, and so on—as well as the norms and beliefs associated with these positions. Via socialization by parents, schools, the mass media, and colleagues, respondents take as their own the cultural and positional preferences, priorities, and outlooks they experience, and form their answers accordingly.

Immediate settings are the specific places where asking and answering occur; such as respondents' homes and workplaces, university classrooms when professors query students and obtain answers that become the bases for articles and conference papers, and rooms in survey research centers in which interviews and focus groups are administered.

Immediate asking settings are "contaminat[ed]", in that components of settings skew responses (Anderson and Silver, 1987, p. 539). These contaminations are "forces that affect" what people say about their attitudes and behaviors (Schuman and Johnson, 1976, p. 191). Many components of immediate asking settings—such as the presence of third parties, as well as the design, appearance, and comfort-level of buildings and rooms in which questions are asked—bias answers obtained in those settings (O'Rourke, 2000; Zanes and Matsoukas, 1979). A voice recorder during a face-to-face interview contaminates the setting because its existence makes respondents more cautious or careful in answering than would be the case if a recorder were not used.

Immediate asking settings also contribute to The Problem because different settings generate different answers to the same questions. In addition, many immediate asking settings skew answers because they are unrealistic, or "unnatural" (Morgan, 1997, p. 8); that is, the environments in which questions are posed are different in many significant respects than the situations or settings in which investigated opinions and actions are actually formed, stated, and performed. Specifically, and significantly, immediate asking situations are absent the social and organizational forces that shape respondents' words and actions in everyday life (Fendrich, 1967). Because asking situations do not and, usually, cannot, replicate situations in which investigated opinions, intentions, beliefs, knowledge, and actions have been, will become, or are, operative, answers obtained in asking settings are often different than answers in actual, lived situations and, moreover, do not indicate what respondents would say or do in real life circumstances.

Another characteristic of immediate asking settings that affects answers, and thereby contributes to The Problem, is that asking settings are separated in time from the phenomena being investigated. Thus, those asking for information are dependent upon the memory of

respondents (Ericsson and Simon, 1993) and must assume that respondents: (1) have actually experienced the phenomenon being investigated, (2) have retained the experience in their memory, and (3) have recalled the experience. There is room for error in all three memory-elements of answers.

In addition, emotions generated by societal and immediate settings affect answers to questions (Turner and Krauss, 1978) and, thereby, contribute to The Problem.

The effects of societal and immediate asking settings on response rates and contents of answers (as well as unrepresentative results; see pp. XX, above) prevent the generalization of asking results to other situations or settings; i.e., answers obtained in one setting do not indicate answers to the same questions in any other setting.

Askers Contribute to The Problem

Askers contribute to The Problem because they "cue" (Cannell and Kahn, 1968, p. 550; Fendrich and Vaughn, 1994, p. 119) and induce (Ferber and Wales, 1952; Cahalan, Tamulonis, and Verner, 1947; Rice, 1929) response rates and reports by their styles of behavior while asking; by their personal attributes, such as their judgments when coding responses; and by their experiences, competencies, ethnicity, socioeconomic features, gender, and age.

Also, askers contribute to The Problem because they skew results by doing "everything possible" to obtain higher response rates and more reports (Hochstim, 1967, p. 977). These efforts for more responses and more reports that skew answers into Category One or Category Two include wording and phrasing questions, defining words, controlling, persisting, shaming, intimidating, bribing, and recruiting respondents. Askers also bias answers when they promise anonymity and confidentiality, probe, prompt, use props, con, tinker, and when they perform alchemy by transforming nonresponse into response and answers into statements of fact.

Effects of Asker Behaviors and Attributes Tangled

The Problem is further fostered because the effects of asker behaviors and attributes are tangled. The effects of body language on answers are comingled with the effects of askers' age and/or gender. Effects of interviewers' education and age are tangled with effects of interviewers' training (Andersen and Olsen, 2002).

Effects of Askers Tangled with Effects of Asking Instruments and Settings

Also, askers make answers unreliable because the effects of asker characteristics (such as gender, age, and ethnicity) on answers are tangled with effects produced by other components of asking efforts; such as asking instruments and settings. Moreover, the influence of the behavior of interviewers is "confounded" with the influence of incentives (Willimack, Schuman, Pennell, and Lepkowski, 1995, p. 81). These entanglements, or mixings, make it impossible to identify which component has what effect on results. Thus, whether or not one or more answers are in Category One or Category Two cannot be established.

Answers Manufactured

The effects of instruments, settings, and askers on answers mean that answers to questions are not "out there" to be found, nor are they generated from within respondents, nor are answers voluntary. Answers are responses to the stimuli and reinforcements of asking. Answers are produced or "manufactured" (Prior, 2003, p. 44) by components of the asking method; that is, by asking instruments, asking settings, and askers themselves. No matter how many identical, similar, and/or different questions are asked, regardless of which asking instruments are used, despite the settings in which questions are asked and answers given, irrespective of the attributes and behaviors of askers, answers to questions remain skewed or biased by the components of the asking method and, thus, unreliable.

The conclusion so far is this: Although every answer—whether about objective or subjective phenomena—is skewed by both respondents and by asking, it's possible that answers are skewed so that they are accurate, complete, right; that is, it=s possible that responses are Category One Answers. The other possibility is that answers are skewed so that they are inaccurate, incomplete, wrong; that is, it's possible that responses are Category Two Answers. This is to say, *all* answers to questions *are* skewed, *and* answers are either Category One Answers (accurate or true) or, Category Two Answers (inaccurate or false). When researchers only have answers to questions all they have is The Problem because it's not possible to know if the answers have been skewed into Category One or Category Two.

Proper Methods of Data Collection and Proper Research Designs

Accurate information is acquired by what I call "proper" methods of data collection (observation and analysis of documents) and proper research designs (experimentation, multiple sources, formal model building and testing, and comparison). With the use of proper methods and research designs, problem identification and amelioration are enhanced.

Observation

Answers to questions are not needed because information or data about what's really going on can be acquired observation. Specifically, observe "`something doing'"; that is, "observ[e]. . . . actually performed . . . activities" (Bentley, 2008, pp. 176, 187, 180): working, warring, cooperating with others, competing, buying and selling, hiring and firing, renting and not renting apartments to minorities, implementing and not implementing policies and programs, organizational management (Mintzberg, 1973, 226-29), and so on. The consulting firm, Aubrey Daniels International, Inc., bases its recommendations for increasing performance, leadership

development, and other organizational improvements on observation (Daniels, 2000; Daniels and Daniels, 2004; Daniels and Daniels, 2005).

In addition to observing actual behaviors in real life settings, observations of the "physical traces surviving from past behavior" provide reliable information of past behaviors and events (Webb, Campbell, Schwartz, and Sechrest, 2000, p. 35). Today's trash cans contain observable physical traces of what people eat, and the extent of food wasted and alcohol consumed, as well as what is more or less valued. The University of Arizona's Garbage Project[iii] is a research unit exploring what trash says about culture. Every interaction with a Personal Computer (PC) leaves trace data behind. Thus, PCs are investigated for traces of behaviors in order to recover files that are used, lost, damaged, hidden, or deleted.

Observation and Subjective Phenomena

Observation can be used to obtain reliable information about subjective phenomena. What people believe, and the attitudes they hold, can be uncovered by "watching [observing] what they do" (Lee, 2000, p. 1). This is to say, attitudes are implicit in actions. For example, information about attitudes of white residents toward African-Americans living in the neighborhood can be obtained by observing white residents in real life, neighborhood, situations. If they are observed behaving in racially discriminatory ways, it's reasonable to conclude the white residents hold racist attitudes. Roberts (2009) provides another, and more specific, example when he writes: it's "foolish to judge former President George W. Bush's predispositions about government intervention in the economy based only on his statements, without regard to his conduct in moments of crisis" (p. 772).

And when the inevitable discrepancies between statements and conduct appear, it's the

[iii] "Garbage" is an unfortunate choice of words in this instance. "Refuse" or "trash" are better.

conduct, the behavior, which tells the investigator what's really going on. Moreover, when you have data from observation there's no need to ask.

Researchers have observed the behaviors of children and adults in various settings from which they inferred various attitudes (Chess, Thomas, Birch, and Hertzig, 1960-1961; Webb, Campbell, Schwartz, and Sechrest, 2000). Observations of attendance at local government council sessions, public hearings on proposed utility regulations, and the like, and at churches, synagogues, and mosques can be used to gage interest in politics and religion. Also, observations of people's faces communicate reliable information, not only about interest but also about other subjective phenomena, such as "happiness, surprise, . . . fear, sadness, anger, and disgust or contempt" (Harper and Wiens, 1979, in Sechrest, p. 61).

Observations of physiological reaction—such as pupil dilation, heart beat, and electronic brain activity—to pictures, words, objects, and the proximity of spouses have been used to support estimates of opinions, attitudes, beliefs, and feelings (Cook and Selltiz, 1964).

Moreover, subjective states can be identified by "looking at physical evidence of various kinds" (Lee, 2000, pp.1-2); such as clothing. Men who cover their heads with certain shaped cloths and hats are men who hold certain religious and political beliefs (Lee, 2000).

Experiment

In an experiment, one or more changes are made, say, to a program in order to identify and explain the changes that occur (Montgomery, 2001). Typically, in a social science experiment, the investigator administers to samples or groups of people interventions or treatments (such as, various levels of expenditures for a social program, or different degrees of participation in decision making) to measure what effect, if any, the treatment(s) has—in these examples—on program effectiveness or individual productivity. Social science experiments

attempt to establish causality: does the intervention or treatment (independent variable) cause a change of direction—once again in these examples—in effectiveness or productivity (dependent variable)?

Multiple Sources

The results of any effort to find out what=s really going on—including data acquired by proper methods and research designs; such as observations of behavior and traces of behavior, as well as the results of experiments—may be biased. It's possible that even the most highly trained observers under the best conditions will miss at least a few relevant phenomena. Or, certain activities and/or indicators of behavior will be incompletely perceived and, thus, not properly accounted for in experiments. Moreover, and invariably, all measurements are less than 100 percent accurate.

The well-recognized procedure, or research design, that counters—but can never eliminate—biases inherent in results from any single method of data collection or research design is the generation of data, or measurements, from multiple sources. This can be done by the use two or more methods of data collection (such as, observation and document analysis[iv], the use of two or more multiple research designs (such as experimentation and comparison[v]), or the use of two or more combinations of data collection methods and research designs **(**Campbell and Fiske, 1959; Gorard, with Taylor, 2004; Sharpe and Koperwas, 2003; Webb, Campbell, Schwartz, and Sechrest, 2000).

Formal Models

Constructing and testing formal models is a proper research design for acquiring reliable data. Formal modeling occurs "in all *scientific* analysis" (Cohen and Cyert, 1965, p. 17); thus, building and

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[iv] See pp. XX for comments about document analysis.

[v] See pp. XX for comments about comparison.

testing models is a proper research design for *social* science.

A formal model is a set of simplified assumptions that describes what's being investigated—for example, budget making in government agencies—from which testable conclusions are deduced. Empirical support for the conclusions is support for the assumptions in the model. As a model's deduced conclusions and assumptions are empirically substantiated, "the model as a whole" (Cyert and March, 1963, 1992, p. 87) becomes a more complete explanation of what's really going on. Many models are constructed with computer software. A computer model is often referred to as a "simulation", a simulation model, or a computer simulation (Gilbert and Troitzsche, 1999).

Document Analysis

Another proper method for collecting data or information about what's really going on is document analysis (Bryman, 1989; Prior, 2003; Ventresca and Mohr, 2005). Budgets of organizations are increasingly important documents because organizations are the dominant institutions of the modern world. Whenever possible, primary, rather than secondary, documents should be used because when initial or primary documents, reports, and budgets are restated, abbreviated or, in other ways, interpreted and presented, information and data often are lost, skewed, and/or misstated[vi].

Comparison

Comparison is another proper social science research design that can produce reliable

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[vi] Because of the tendency to rely on secondary sources and not to compare secondary sources with primary sources, the extent of error and misrepresentation in secondary sources, although not known, is—given human fallibility and conflicting interests, priorities, and values—most likely, great. It's also necessary to check secondary *and* primary documents with data from sources other than documents. See above, Multiple Sources, pp. XX.

descriptions and explanations of objects of investigation. "Basic to scientific evidence . . .is the process of comparison, of recording differences, or of contrast. Any appearance of . . . intrinsic knowledge about singular isolated objects . . . is found to be illusionary upon analysis. Securing scientific evidence involves making at least one comparison" (Campbell and Stanley, 1963, p. 6)

In one type of comparative research design, an "ideal type" of the phenomenon being investigated—for example, bureaucracy or organizational structure—is presented. Then the ideal type is compared or contrasted with actual instances of the phenomenon and, on the basis of the similarities and differences, hypotheses that postulate explanations—causes—for the similarities and differences are constructed and tested.

Another variety of comparative research design begins with the identification of similarities and differences between two or more *actual* instances of the phenomenon being investigated. After comparisons are made, causal explanations for the differences and similarities are hypothesized. Empirical evidence is acquired, and the relationships are, or are not, supported.

Additional Methods and Research Designs

To optimize the advance of knowledge about human behavior and its causes and effects requires more than the use of proper methods of data collection and proper research designs by individual researchers. Also required is work by the whole community of researchers and investigators to improve proper procedures and to develop additional methods and research designs. As Webb, Campbell, Schwartz, and Sechrest (2000) put it: "if the social sciences are to fulfill their promise . . . individual creativity [will not] suffice. Threats to validity in the social sciences, as in all the sciences, never end. They are inevitable in the continuing search for knowledge. The effort to deal with them requires ingenuity, not just of the individual scholar but of the shared enterprise" (p. xvi).

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