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THE PROBLEM OF VERBAL REPORTS IN RECREATION RESEARCH: REVIEW, RECOMMENDATIONS, AND NEW DIRECTIONS.

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ABSTRACT. -- Recent work of cognitive and social psychologists has questioned the ability of subjects to accurately remember and report their experiences. This has particular significance for recreation research as the survey questions we ask of visitors change from more stable visit and group characteristics to reports of conditions, experiences and feelings. Strategies exist to encourage accurate recall, particularly by minimizing the delay between event and report such as is provided by the Experience Sampling Method.

INTRODUCTION

Many past studies of outdoor recreation have been based on the verbal reports of visitors about their experiences. Not only have respondents been asked to recall and quantify conditions they encountered on their trip, but they are often asked to identify the feelings and concerns they had while making the trip. Some studies have asked subjects to project from their experience to hypothetical situations, in order to locate their preferred and ideal conditions for such a recreation experience. Each of these approaches assumes that not only will respondents honestly report their opinions, but that they have access to accurate recall of the on-site experience and their psychological state at the time.

The ability of subjects to accurately remember and report their cognitive and emotional states has come under scrutiny (for example, Nisbett and Wilson, 1977; Stewart and Hull, 1992; Mannell and Iso-Ahola, 1987). These authors question whether subjects can recall or identify the significant events or stimuli that may cause a change in cognitive or behavioral states. This has led some writers to question the validity and generalizability of findings based on verbal reports. People may have little awareness or memory of actual events, their own behavior, or the physical components of the environment (Nisbett and Wilson, 1977; Daniel and Ittelson, 1981; Ericsson and Simon, 1980; Bernard et al., 1984). Instead, subjects use easily observed or remembered cues to invoke broader cultural or environmental norms (Bradburn et al., 1987). These more generic cognitive structures (memories, opinions, stereotypes, etc.) often provide the basis for after-the-fact or post-hoc judgments. Thus, verbal reports may represent little more than constructed memories or reports. (In some cases the constructed version of events may be the desired report, but rarely is this explicitly acknowledged in the research effort.)

This paper lays out a brief critique of the use of verbal reports in the recall of information, situations and experiences. In doing so, it will become apparent how easily manipulated respondents may be in the interview or questionnaire process. Strategies exist for improving the accuracy of verbal reports, thereby circumventing some of the biases of memory and recall. However, the best solution is to avoid reliance on the memory process, and the Experience Sampling Method is suggested as a research methodology that minimizes the delay between the event and its recall and report.

VALIDITY

CAUSAL REPORTS

The validity of self-reports was seriously and influentially questioned by Nisbett and Wilson (1977). They questioned whether respondents have access to their own cognitive processes. Their review of the literature and their own experimental results led to the conclusion that subjects are no better at reporting the causes of their own behavior than external observers. Nisbett and Wilson suggested that subjects gain little assistance from their introspective access to cognitive processes, and rely on the same learned causal relationships as do external observers. Thus, these observers of the situation and the subject's behavior are just as capable at hypothesizing or recalling culturally-based theories of behavior. Subsequent work has validated the finding that actors are no better at causal reports than observers (Sprangers et al., 1987; Wilson and Stone, 1985). Furthermore, it has been pointed out that respondents have an imperfect memory of memory, and that the process of remembering alters the

recollection of events (Koriat, 1983). We must therefore differentiate verbal reports of subject's introspection from their post-hoc rationalizations (Adair and Spinner, 1981).

ASKING AND INTERPRETING QUESTIONS

The validity of verbal reports lies in large measure in what we ask, and the manner in which we ask it. As Adair and Spinner (1981) suggest : "to elicit accurate verbal reports of cognitions requires that subjects have been given an appropriate set to truly introspect" (p. 35). What we are asking subjects to report must be relevant and available in their memory. Sometimes people just don't know or are unable to explain. However subjects will still answer questions. People don't want to admit their ignorance, and would rather appear socially aware and competent. In the absence of specific memories, or of adequate interest in accurately describing events or experiences, informants can turn to cultural norms for what is perceived to have occurred (Bernard et al., 1984).

Subjects may have idiosyncratic theories or limited observations of covariation that can both enhance or impair their reports (Wilson and Stone, 1985). Implicit theories of behavior are constructed from their past at the time of questioning. Subjects are prone to the illusory correlation phenomenon of over-estimating and over-generalizing their own history of unique events, contexts and subsequent behavior (Wallendorf and Brucks, 1993). For example, respondents know their own state at the time of answering, and often construct an implicit theory to reach their supposed state for the point of time they are being asked to recall. Bias in recall could be expected if, as is likely, respondents are unaware or inaccurate in their estimate of the degree or nature of change of the attribute across time (Pearson et al., 1992).

In particular, novel experiences quickly get generalized. They form the basis for both interpreting new experiences and for determining how the event is remembered. Frequent, yet similar, events also foster constructed memories and expectations (an assimilation effect). Indeed, it has been found that generic memories are formed that tend to blur together the specific time, location and context features (Jobe and Mingay, 1991; Jobe et al., 1993; Strube, 1987). Unless specifically probed for, respondents will find it easier to gloss over the specifics of an experience and instead rely upon the generic memory. This is worrisome since the researcher has no control over the boundaries of what is merged into the memory or judgment.

Furthermore, recalling or otherwise cognitively processing an experience in the company of others, such as answering a post-trip questionnaire at home, will give rise to secondary event representations (Strube, 1987). Recall and reporting of the event will then reflect more of the memory of the event than as actually experienced. The social context, in particular, in which the questionnaire is answered may be very

different than the situation and event being investigated. Researchers can try to avoid these tendencies by breaking the experience down as specifically as possible by using timelines, landmark events, specific probes and other decomposition tactics (Jobe and Mingay, 1991).

The validity of verbal reports also depends on the perception by the respondent of what the researcher is asking and his or her perception of what it is the researcher wants in the way of a response. Willis et al. (1991) make the point that the retrieval of information from memory for a survey response is not an automatic process. Instead it entails a number of stages of a cognitive process itself. The stages go from understanding the question, making the decision to respond, and how to respond through to the method of, and actual retrieval of memory, and finally the presentation of the response. For example, the questions represent the intentions of the researcher. The task the respondent faces is the interpretation and understanding of the idea that the researcher is trying to communicate (Clark and Schober, 1992).

The comprehension phase of answering a survey question, for example, comprises two inter-related processes (Clark and Schober, 1992; Strack, 1992). The first is the literal meaning of the question. The respondent must recognize and comprehend the meaning of the particular words. Where words of ambiguous origin or multiple meanings occur, the respondent must infer or choose which meaning is intended. The more ambiguous the meaning, the more likely the effects of context will emerge. Respondents are likely to choose the meaning most accessible in their memories, which is most likely to be triggered by the context of previous questions, or the social context in which the survey is being answered (Sudman, Bradburn, and Schwarz, 1996).

Each of the questionnaire processes (comprehension, judgment formulation, answer formatting, and answer editing) is subject to manipulation by the researcher and by the respondent. Shrauger and Osberg (1981) report that although in some circumstances people can report their behavior fairly accurately, it is not certain that they will. For instance, in the final stage of editing their answer, respondents may feel pressure to respond in what they perceive to be a culturally appropriate manner. For example, visitors to national parks might feel it is inappropriate to be too critical of the management of the park for fear that this may be interpreted as being ungrateful for the opportunity to visit. There may be a strategic self-serving bias to their responses. In the knowledge that their answers may influence the management of the park, they respond in a manner which will preserve their interests.

We can expect the pressure of a social situation to also influence both how the questions are interpreted, and which of the response alternatives is chosen (Dijkstra and Zouwen, 1987). The possibility of such response effects will be higher if the topic

of the question is not salient to the respondent, if the topic leads to anxiety arousal for the respondent, or if the response alternatives offered differ in terms of social desirability (Dijkstra and Zouwen, 1987). "The use of alternative self-report procedures that may be less familiar to respondents and may obscure socially desirable responses" is suggested by Dovidio and Fazio (1992, p. 217) as a way to reduce bias in report and recall.

ANSWERING QUESTIONS

Subjects may also be concerned about how they appear to themselves. Their responses may be perceived to be statements about their own identity. Sudman (1987) reports data that "suggest that people prefer to interpret their own behavior in ways that reflect positively on themselves and that they actively seek alternative interpretations only when the more immediately obvious interpretation has negative implications for their self-image" (p. 15). There may be desires to be consistent. Or they may be hoping for a self-fulfilling prophecy, in that what they report is how they would like to be. However, as Shrauger and Osberg conclude, "The motivation to present oneself in a favorable light should invalidate self-assessments only when it is stronger than the desire to be accurate" (1981, p. 347).

Respondents feel the need to respond as a result of social pressures to do so. Few people wish to appear stubborn or stupid, and the very asking of a question suggests that the respondent should have an answer or opinion. Respondents are guided by the norms of a conversation, in that what is asked is assumed to be truthful, relevant, informative and clear (Grice, 1975). Similarly, a person's interest or motivation may affect what is remembered, as well as what is reported. His or her own goals will act as a filter to the information recalled, but also as a lens through which they consider the information in the first place. People tend to "remember past events so as to be consistent with their present attitudes" (Strube, 1987, p. 90). Therefore, the context in which recall is undertaken can be easily manipulated by effecting current attitudes.

Earlier questions and answers in the questionnaire may also bias the recall and report of events and experiences (Bishop, 1987; Schwarz and Sudman, 1992). There is social pressure for one to be logical and consistent. Respondents tend to use earlier answers as evidence for later judgments. Because of a quest for structure, many people interpret successive questions as related (Clark and Schober, 1992). Earlier items may prime or refresh ideas, prejudices, or contexts that will affect later questions. Earlier questions and answers might prime specific features not intended for interpretation, such as normative standards, previous behaviors, consequences, or moods (Strack and Martin, 1987). Even the order of response alternatives or the number or content of

response categories can affect response. Early options also set the tone for subsequent choices (Hippler and Schwarz, 1987).

The action of giving a seemingly satisfactory but less considered answer is called "satisficing". And as Krosnick (1991) describes, "Satisficing may lead respondents to employ a variety of response strategies, including choosing the first response alternative that seems to constitute a reasonable answer, agreeing with an assertion made by the question, endorsing the status quo instead of endorsing social changes, failing to differentiate among a set of diverse object in ratings, saying 'don't know' instead of reporting an opinion and randomly choosing among the response alternatives offered" (p. 213). The likelihood of satisficing is increased by the increasing difficulty of the recall task, the respondent's ability to recall and cognitively process, and by the motivation (personal, social or physiological) to recall and process information (Krosnick, 1991).

THE IMPACT OF MOOD ON RECALL AND REPORT

Further complicating the matter of recall and report is the robust effects of mood on cognitions, particularly memory (Singer and Kolligan, 1987). Mood has, for example, been demonstrated to have strong effects on a respondent's evaluation of general life satisfaction (Schwartz et al., 1987; Sudman, 1987). Indeed, Laird (1989) has suggested that mood affects memory in much the same way as other cognitions. It has been shown that people recall material that fits their beliefs, attitudes, expectations and self-concept better than that which does not (Laird, 1989; Palfai and Salovey, 1992). If we are in a good mood at the time of recall, then we will have better recall of good mood episodes (Davies, 1986; Schwartz et al., 1987). In addition, the effect of mood can be manipulated by the use of questions that bring positive or negative material to mind, thereby changing the current mood.

This would tend to suggest a more general principle of recall and report : material is more likely to be remembered and reported if the context of recall is similar to the context in which it was first experienced and entered into memory. It is not necessary to physically reconstruct the location, rather to create in the remembrance sufficient details of the external environment that will also trigger remembrance of the affective or emotional response at the time of the event. Thus, the more specific the reconstruction, the greater the likelihood of eliciting specific memories and details (Sudman, 1987). For example, according to the Encoding Specificity Principle (Tulving, 1983) a cue will only activate information if the relationship between cue and information is the same at retrieval as it was at the time of acquisition.

BETTER SELF-REPORT

There are strategies available based on the insights discussed above for improving the accuracy of verbal reports. Overall, we need to view the verbal report from the eye of the respondent and the burden which we are placing upon him or her. The task of reporting should be straightforward and relevant, in such a manner that motivates and facilitates accuracy. Also, bear in mind that respondents often view the survey as a conversation, and will not, for instance, reiterate information they provided earlier, nor offer information that they feel the research would take for granted (Sudman, Bradburn and Schwarz, 1996).

Verbal reports are best when the information being sought is normally available in the respondent's memory. Thus, questions seeking report of states such as feelings, attitudes, and significant events will have more success than those about motives, causes or processes (McClure, 1983). Subjects may not normally think so much about how things happen as compared to what happens (Willis et al., 1991), therefore it is best to stick to descriptive recall rather than interpretations about what happened (Ericsson and Simon, 1972). Questions should be as specific and explicit as possible in time, place and context (Shrauger and Osberg, 1981). They should be of a nature that is significant and interesting to the respondent.

It should also be noted that, "respondents' answers depend on the information accessible to them at the time they answer the question and on the way in which they use the information to form a mental representation of the attitude object or behavior under question. For information to be used, it must be available in memory, that is, it has to have been encoded and stored. However, not all information potentially available in memory can be retrieved at a given point in time, that is, it may not be accessible" (Sudman, Bradburn and Schwarz, 1996, p. 213).

Verbal reports should be made as easy a task as possible. This ranges from making the questions as simple and straightforward as possible, to allowing the respondents to recall events in whichever order they find easiest (Jobe et al., 1990). Subjects should be motivated for accuracy and honesty, and led to the expectation that they are capable of accurate recall. Relatively short questionnaires lower the burden on the respondent and raise the validity and reliability of verbal reports (Singer and Kolligan, 1987).

While it is important to explain what is being sought by the experimenter, it is also important to lessen the desirability of responses that are strategic or self-presentational (Shrauger and Osberg, 1981). While recreation researchers have been concerned about the quantity of responses (response rate), equal attention should also be given to the quality of response. Similarly, a balance should be sought between stressing the importance of literal accuracy in responding to the questions and lessening the apprehension of evaluation of the task of remembering (White, 1987).

Perhaps most important of all to accuracy of verbal report is the delay between what is being reported and when it is reported. Memory appears to decay exponentially with time (Bernard et al., 1984). As Nisbett and Wilson (1977) summarize : "perhaps chief among the circumstances that should decrease accuracy in self-report is a separation in time between the report and the actual occurrence of the process." Smith et al. (1991) found that overall memory performance deteriorated as the memory retention interval increased from zero to six weeks.

Real-time methodologies such as the Experience Sampling Method (Csikszentmihalyi and Larson, 1987; Samdahl, 1992; Borrie, 1995) are particularly suited to the verbal report of states (feelings, opinions, and events). The Experience Sampling Method entails having the subject carry a number of copies of the survey questionnaire, as well as an alarm or signal to indicate when the questionnaire should be completed (anywhere up to twelve or more times per day). The gap between the actual situation and report is minimal. Indeed, it would seem that there are several reasons to adopt alternative approaches such as the Experience Sampling Method (ESM). First, the recall of states or experiences is much more prone to alteration and reliance on hypothesized behavior relationships than is the report of traits and more stable opinions. Second, the manipulation of recall is minimized, as is the tendency for strategic responding, in that with ESM the emphasis of the research task is on reporting the 'here and now'. Third, the context of reporting is as close as possible to the event itself. Finally, ESM allows for focused retrieval on specific aspects of the experience.

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