What Does 'Usual' Usually Mean?

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The Consumer Expenditure Quarterly Interview survey asks respondents to report their expenses for a three month period. The survey asks about a wide range of expenses, asking specific questions about expenses the household has had in the past three months (e.g., "Since the first of June, how much have you spent on pants?"). These questions require respondents to recall specific purchases and report the details of each. This paper explores the strategies 76 participants used when answering questions about usual spending patterns. Additionally, participant responses were reviewed for evidence that they followed interview instructions, including accounting for the purchases of other household members and using the correct reference period.

There are four questions in the interview that are an exception to this pattern of questioning. These questions ask respondents about usual expenditure patterns (e.g., "Since the first of June, what has been your usual weekly expense for groceries?") instead of specific purchases. Respondents are asked to estimate typical spending over a three month period for four expenditures: food at home, food away from home, alcohol at home and alcohol away from home.

Previous research has found respondents use a variety of strategies to answer these types of questions, including recalling each specific episode (Bradburn, Rips, and Shevall 1987), recalling some events and using that information to generalize (Conrad, Brown, and Cashman 1998), using time periods between episodes to estimate (Lessler, Salter, and Tourangeau 1989), or retrieving relevant stored information and making some calculations to adjust it.

BACKGROUND

CONSUMER EXPENDITURE QUARTERLY INTERVIEW SURVEY

The Consumer Expenditure Quarterly Interview (CEQ) survey asks respondents to report their expenses for a three month period. The survey covers a wide range of expenditures, and asks very specific questions about each reported expense: e.g., "Since the first of [month, three months ago] have you had any expenses for clothing; ... for vehicle repairs; ... for home maintenance?". Also in the survey there are four questions that ask about expense patterns: "Since the first of [month, three months ago], what has been your household's:

- Usual weekly expense for groceries?
- Usual weekly expense for food and drinks away from home?
- Usual monthly expense for alcohol to be served at home?
- Usual monthly expense for alcohol away from home?"

ESTIMATION STRATEGIES

For most respondents, it seems safe to assume that answers to the CEQ 'usual' questions are not already stored in memory. Therefore, respondents must first retrieve from memory information about the frequency of an event and the range of spending, and then manipulate the retrieved information to produce an estimate of the usual expense (Sudman, Bradburn, and Schwarz 1996). This study assumes that respondents first estimate how often they perform the behavior (e.g., going out to dinner) then estimate how much they spend (e.g., \$25 for each meal). Researchers have identified a variety of strategies that respondents can use to answer survey questions. The strategies used in this paper are shown in Table 1.

Table 1 Estimation Strategies.

Strategy	Description
Rate retrieval	Participants retrieve the typical rate of the event
Rate and adjustment	Participants retrieve the typical rate of the event and adjust the number
Single event	Participants use information from a single event
Budget	Participants use their planned budget number as a response
Guess	Participants indicate they guessed
General impression	Participants retrieve a general impression of the event

There are two rate-based strategies, rate retrieval and rate and adjustment. The first is when respondents recall the event frequency (e.g., "I always go do my shopping once a week") and then the general cost associated with the events (Conrad, Brown, and Cashman 1998).

The second rate-related strategy, rate and adjustment, is when respondents recall the event frequency but then adjust that estimation based on other information (Conrad, Brown, and Cashman 1998). For example, a respondent recalls he had been to happy hour every Thursday and Friday for the past three weeks and spent about \$30 each night, but believes that he usually goes less often, and adjusts his twice per week estimate down to once a week and reports \$30 weekly as a response.

A strategy similar to rate and adjustment, termed single event in this paper, involves respondents recalling one single episode. In this strategy, respondents use the information from that specific episode to respond. When asked how much they usually spend on groceries a week, respondents using this strategy may give an answer something like "I spent \$100 last time."

Finally, there are three strategies that rely less on recall of actual events and more on other information. One strategy, specific to expenditure questions, is retrieving a budget from memory. Rather than thinking of previous expenditures, respondents instead use how much they budget for these expenditure categories (e.g., "I have a weekly eating out budget of \$50).

When respondents are unable, or unwilling, to recall specific information, they may instead provide an answer using a general impression. The response then is not based on any recalled event information, but instead on some other general information. For example, a respondent may say: "That's just generally what our grocery bill is" rather than thinking of specific receipts. Finally, respondents may simply guess, though they may not always admit it. Sudman et al. (1996) found that guessing most often occurs when a respondent is asked a question that is so general or difficult he or she cannot use any recalled information or knowledge to answer it, and instead provides an answer based on a guess.

METHOD

PROCEDURE

Seventy-six participants were asked to answer each of the four CEQ 'usual' expense questions. Testing occurred in four cities, with participants being approximately evenly distributed across the testing sites: Washington, DC; Richland, Washington; Appleton, Wisconsin; and Albuquerque, New Mexico.

Following their answers to all four expense pattern questions, participants were asked to explain how they arrived at their answer. General probes (e.g., "Could you tell me more about that?" and "How did you then use that information?") were used to collect details about the estimation strategies.

CODING

Each response to the four 'usual' expense questions and the answers given to the follow-up probes were coded by the lead researcher, using the strategies shown in Table 1. When a respondent did not provide enough information to determine the estimation strategy, the response was coded as such.

In addition to response strategy, each response was coded if the respondent provided any information to indicate that they used the correct reference period, included the expenses of other household members, and conducted calculations accurately.

ANALYSIS

Estimation strategies were compared across the four 'usual' expense questions, using Chi Square tests, to determine if there were any differences in strategies based on the content of the question or other respondent characteristics. Frequencies of the use of reference period, inclusion of other household members' expenses, and calculation errors were also calculated.

RESULTS

ESTIMATION STRATEGIES

A wide variety of estimation strategies were used across all four questions (Blair and Burton 1987), with each of the identified strategies used by at least one participant (Table 2). Rate and adjustment was the most commonly used strategy for three of the four questions; food away question (53.8 percent), alcohol away (47.5 percent) and alcohol at home (41.7 percent). It was the second most commonly used strategy in the grocery question (19.7 percent).

Table 2 Estimation Strategies.

Primary Estimation Strategy	Percent Used for Grocery Expenses	Percent Used for Alcohol Away	Percent Used for Alcohol at Home	Percent Used for Food Away	Across all Questions
Rate and Adjustment	19.7	51.4	41.7	60.0	43.2
Rate Retrieval	27.6	13.5	22.2	15.4	19.7
Single Event	6.6	0.0	5.6	0.0	3.0
Budget	15.8	2.7	2.8	6.2	6.9
Guess	5.3	10.8	8.3	1.5	6.5
General Impression	9.2	0.0	2.8	0.0	3.0
Not Enough Information	15.8	21.6	16.7	16.9	17.3

Rate retrieval was also a frequently used strategy, most often used in the grocery question (27.6 percent) and second most used in the alcohol at home question (22.2 percent) and food away (21.5 percent) questions. It was also frequently used in the alcohol away question (20.0 percent).

When looking at the three strategies least based on actual behaviors, we see that participants were most likely to use the budget strategy (15.8 percent) for the grocery question, and one in ten participants (10.8 percent) admitted to guessing for the answer to the alcohol away question, almost as many guessing for the alcohol at home (8.3 percent) question. Finally, the general impression strategy was used more often with the grocery question (9.2 percent) than with the other questions; in fact, it was not used at all in either the alcohol away or food away questions. Despite the trends, there was no statistical relationship between the estimation strategies used on one question and those used on another ($p > 0.05$).

Although every participant provided a response for the grocery question, about half (47% for alcohol away and 53% for alcohol at home) of participants reported no alcohol expenses, and 16% said they did not spend money on food away from home. This resulted in no expenditure estimate, and therefore no estimation strategies.

ESTIMATION STRATEGY BY HOUSEHOLD SIZE

In the CEQ interview, respondents are asked to report expenses for not only themselves, but everyone in their household. Therefore, it seemed possible that people with larger households use different strategies as they attempt to consolidate information and generate estimates than do people from smaller households. However, this was not found to be the case, as there was not a statistically significant relationship between household size and estimation strategy across any of the questions ($p > 0.05$). We did find that single-person households were less likely to use a budget strategy or rate and adjustment than those from larger households for the grocery question.

ERRORS

Six and a half percent of participant responses included a calculation error (Table 3). For example, one participant reported that she generally spends \$45 per week on food away from home, and then said the following in explanation "it's usually 18 or 20 for the meal and we do it 4 or 5 times a week."

Table 3 Calculation Errors.

Question	Percent of participants making calculation error
Grocery	7.9
Alcohol Away	2.5
Alcohol at Home	2.8
Food Away	9.4
Total	6.5

Calculation errors were most common in the food away question, where almost ten percent of participants made such an error. Rate and adjustment, the strategy requiring participants to do the most mental 'math' when formulating their answer, was used most often in this question. Therefore, the relationship between the frequency of that estimation strategy and calculation errors found seems logical. It's not clear however, why the alcohol away question, for which participants also often used the rate and estimation strategy, did not have this high rate of calculation errors.

INCLUSION OF OTHER HOUSEHOLD MEMBERS

Participants were asked about household (rather than individual) expenditures. To explore the extent to which they did this, responses of participants with 2 or more people in their household were coded if there was any reference to another household member. Although it is possible that participants may have been considering other household members without explicitly mentioning them in their explanation of their response process, given how thorough most participants were in their explanations, we feel confident that this indicator gives a reasonable estimate of the error. Overall, there was little evidence that participants considered other household members when arriving at their answer; only 27.1 percent of participants referred to anyone else in their household while explaining how they got to their answer.

USE OF REFERENCE PERIOD

For each question, participants are asked to base their answers on their usual spending during the past three months. To determine the extent to which participants correctly did this, responses were reviewed to see if participants mentioned the past three months when explaining how they arrived at their answer. As with other household members, error may be over-estimated if participants thought of the reference period without mentioning it in their explanation, but given the completeness of participant's explanations, this method should provide a reasonable estimate of the error.

Participants mentioned the three month reference period about half the time (53.9 percent), with some variation across the questions. Participants were least likely to mention the reference period when explaining their alcohol away (42.5%) and grocery answers (44.7 %), and most likely to do so for the alcohol at home (58.3%) and food away questions (69.2%).

CONCLUSIONS

Overall, we can conclude there is no usual way that respondents arrive at answers to these 'usual' questions. Across the four questions, respondents used a wide variety of estimation strategies to answer the questions, though rate and adjustment and rate retrieval were the most common. To the extent that some strategies provide more accurate responses than others, the failure to use consistent strategies will affect the quality of the data obtained (e.g., one respondent overestimates the number of times he or she went to the grocery store when using the rate and adjustment method, while another is not able to remember all the grocery store visits and underestimates his or her spending using the rate retrieval method).

For a variety of reasons, the four 'usual' questions in the CEQ appear to be problematic. A non-trivial percent of participants admitted to guessing, while a significant percentage made errors in calculation, inclusion of household members or reference period. These results support a redesign of these questions, in addition to providing more insights into the processes respondents use when answering such questions.

REFERENCES

- Blair, E.A., and S. Burton. 1987. "Cognitive Processes Used by Survey Respondents to Answer Behavior Frequency Questions." *Journal of Consumer Research* 14: 280–88.
- Bradburn, N.M., L.J. Rips, and S.K. Shevall. 1987. "Answering Autobiographical Questions: The Impact of Memory and Inference on Surveys." *Science* 236 (4798): 157–61.
- Burton, S., and E.A. Blair. 1991. "Task Conditions, Response Formulation Processes, and Response Accuracy for Behavior Frequency Questions in Surveys." *Public Opinion Quarterly* 55 (1): 50–79.
- Conrad, F.G., N.R. Brown, and E.R. Cashman. 1998. "Strategies for Estimating Behavioral Frequency in Survey Interviews." *Memory* 6: 339–66.
- Lessler, J.R., W. Salter, and R. Tourangeau. 1989. "Questionnaire Design in the Cognitive Research Laboratory." Vital and Health Statistics, Series 6, No. 1 (DHHS Publication No. PHS 89-1076). Washington, DC: U.S. Government Printing Office.
- Sudman, S., N. Bradburn, and N. Schwarz. 1996. *Thinking about Answers: The Application of Cognitive Processes to Survey Methodology*. San Francisco: Jossey-Bass Publishers.