An Investigation of the Impact of Departures from Standardized Interviewing on Response Errors in Self-Reports about Child Support and Other Family-Related Variables

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February 1, 2005

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ABSTRACT

Over the past 25 years, the study of error in self-reports has largely been the domain of cognitive psychology with a focus on invariant cognitive factors and processes in controlled laboratory settings. Unfortunately, this line of research has all but removed the interviewer and the interaction between the interviewer, respondent, and the question from discussion. In this paper I explore what effect the interaction between the interviewer and the respondent has on accuracy as they go about the task of participating in a survey interview. I examine whether departures from standardization, as measured with interviewer-respondent interaction codes, predict response accuracy in a standardized survey interview. The importance of this research is underscored by the growing sentiment that standardization can undermine validity and that in order to benefit from the conversational nature of the survey interview, interviewers should be allowed flexibility in their role. I find that when questions ask for information that is less cognitively demanding to recall, changes interviewers make to the wording of the questions have either no effect or lower response accuracy. In contrast, when questions ask for information that is more cognitively complex, interviewers' departures from the exact reading of the question may be done in such a way as to facilitate recall. For almost all of the questions considered, interviewers' followup behaviors are associated with less accurate reports as are several behaviors enacted by respondents.

This paper makes use of a unique collection of data sets. Survey reports primarily come from the Parent Survey 3 (PS3), a survey of child support and other issues related to living in a separated family that was developed in order to examine factors that might influence the accuracy of respondents' reports and to improve the accuracy with which information was reported. Potential respondents for the PS3 were identified using a reverse record-check design in which parents were selected for participation from a sample of court records. Survey reports are compared to the court records in order to evaluate the accuracy of the reports. The survey interviews were also tape-recorded and the behaviors of the interviewers and respondents coded using an elaborate interactional coding scheme. By comparing the results of the interviewer-respondent interaction to the accuracy of responses to various questions in the interview, I examine the impact of these behaviors on reporting errors.

INTRODUCTION

Standardization, the hallmark of the survey interview, has as its goal controlling and reducing interviewers' contributions to random error and systematic influences of interviewers on measurement error (see Fowler and Mangione 1990; Groves 1989; Schaeffer 1991; Schaeffer and Maynard 2002). When achieved, standardization provides a basis for comparing answers among respondents in an interview and generalizing from the interview to the larger population. Because of the theoretical and empirical importance of standardization and measurement error, there is long-standing interest in the association between deviations from standardization and data quality. The importance of understanding more about how interviewers and respondents behave in the survey interview is underscored by the fact that much of the data analyzed by social scientists is the product of such interactions and by findings that show interviewers consistently make major departures from standardized interviewing even when they are systematically monitored (e.g., Oksenberg, Cannell and Blixt 1996). However, while research demonstrates that variation among interviewers in administering questions increases error variation (Collins 1980; Mangione, Fowler and Louis 1992), little evidence exists linking interviewer or respondent behaviors to <u>accuracy</u> in survey reports. In this paper I examine how departures from standardization, as measured with interviewer-respondent interaction codes, influence response accuracy in a standardized interview about issues related to living in a separated family.

The Rules of Standardization

To understand how survey interactants should behave, it is necessary to understand how they are taught to behave. The following description presents basic elements of standardized interviewing as would be encompassed by a strict implementation of standardization (Fowler and Mangione 1990; General Interviewing Techniques, University of Michigan 1992). It is useful for

several reasons. First, it is based on a theoretical model and empirical research that demonstrates variability among interviewers is positively associated with error in survey interviews (Fowler and Mangione 1990). Second, it serves as the basis for many interviewer-respondent interaction coding schemes. Third, it is probably the most rigid version of standardization and consequently can be viewed as a standard against which other versions can be compared.

However, it is important to acknowledge considerable variation across survey organizations in how they realize standardization (Schaeffer and Maynard 1996, 2002). For example, Viterna and Maynard (2002) analyzed training manuals from twelve academically-based survey centers and found inconsistencies in how interviewers were trained to implement components of standardized interviewing including probing neutrally, administering feedback, and maintaining professional objectivity. The authors found that the implementation of standardization lies on a continuum: at one end, strict standardization is expressed by the adherence to proscribed rules and little flexibility by the interviewer, regardless of the characteristics of the situation versus the other extreme in which interviewer autonomy is evidenced by flexibility in applying a more limited set of rules.

Interviewers' Behaviors: **Question asking**. Under strict standardization, interviewers are taught to read questions in the interview *exactly* as they are worded. They cannot skip questions they feel are irrelevant or were answered during a previous response sequence. They must read questions in their entirety, even if the respondent interrupts with an answer that meets the objectives of the question. In delivering questions, they must stress (verbally emphasize terms) terms highlighted by the question writer (e.g., underlined or bolded).

The rationale for these rules are both theoretical and empirical. In the survey, questions are the tools of measurement. To aggregate responses across respondents and make

generalizations to a larger population, the measurement (response) must be assessed in exactly the same manner so that differences in responses can be attributed to differences in the construct being measured, not to variation in the measurement device (question) (Fowler and Mangione 1990; Schaeffer 1991). In addition, research demonstrates that sometimes even small changes in the wording of a question can influence the distribution of responses (e.g., Schuman and Presser 1981). However, while Fowler and Mangione (1990) contend that almost all organizations reviewed required interviewers to read questions exactly as worded, there probably is variability in practice. As an example, Schaeffer and Maynard (1996) describe "verifications" in which interviewers at the Census Bureau change the wording of survey questions to verify or take into account information previously provided by the respondent.

Interviewers' Behaviors: Probing behaviors. Probing describes interaction that occurs after the initial presentation of the question and in response to behavior by the respondent. If respondents require clarification of the meaning of a question or provide answers that are inadequate vis-a-vis the goals of the question (e.g., providing an answer that does not match the response categories for a closed-ended question), interviewers are taught to probe nondirectively in a manner that does not produce a biased answer. Using a strict interpretation, neutral probing is accomplished by rereading the question, using a set of standard probes (e.g., "What do you mean?"), and having interviewers refrain from interpreting the question. While they can use definitions provided by the question writer, if a definition is not furnished, they should probe with "whatever it means to you."[1]

Evidence indicates that the frequency of directive and irrelevant probing behaviors is high

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[1] Requiring respondents to self-define concepts for subjective phenomena like attitudes or opinions may be appropriate but is not ideal for objective or fact-based phenomena like events ("paying child support") and behaviors ("doctor's visits") (Fowler 1992; Schaeffer and Maynard 2002).

(e.g., Brenner 1982) and that the presence of these behaviors is usually associated with data that is of inferior quality (Belli and Lepkowski 1995; Mangione et al. 1992; Smit, Dijkstra, and van der Zouwen 1997). Unlike question-asking, some variability among interviewers in their probing behaviors is expected (Fowler and Mangione 1990). Yet, Viterna and Maynard (2002) discovered that while almost all of the survey centers emphasized the importance of nondirective probing and even recommended using the same probes, there were large differences among the organizations with regard to the amount and kind of probes interviewers could use.

Interviewers' Behaviors: Feedback administration. Interviewers are taught to use feedback to reward respondents for acceptable performance and to motivate reluctant respondents. Using a strict definition, feedback should not be evaluative (i.e., it should not convey approval or disapproval of the content of the respondent's answer). Examples include "I see" and "that's useful information." Some organizations advise interviewers to avoid using "okay" as it may be seen as rewarding the content of the answer. In terms of the frequency of use, the University of Michigan's training manual instructs interviewers to provide feedback for "approximately 30 to 50% of a respondent's acceptable performance."

In an early study, Marquis and Cannell (1969) documented that interviewers were nearly as likely to administer feedback to inadequate answers including refusals as adequate answers. Researchers tested the effects of contingent feedback in which interviewers administered feedback as function of the adequacy of the respondents' answers (Cannell et al. 1981) and found respondents in the feedback condition reported more information for several health-related measures but these results were not replicated (Miller and Cannell 1982) and Belli and Lepkowski (1996) found feedback was associated with greater inaccuracy in reports of health events.

Even using a strict definition of standardization, more variability is expected for feedback behaviors than for question-asking or probing. In their review of training manuals, Viterna and Maynard (2002) uncovered large variability in the reasons cited for using feedback, the wording of acceptable feedback phrases, and how often feedback was supposed to be used.

Interviewers' Behaviors: Neutrality. Interviewers are also taught to be interpersonally neutral while maintaining a cooperative relationship with the respondent (Schaeffer and Maynard 1996). Neutral interviewing behaviors include (1) refraining from offering opinions, personal information or indicating stances on topics in the survey, (2) only using feedback to reward appropriate behaviors (e.g., adequate responses), not the content the responses, and (3) not providing cues to respondents about how they should respond (Fowler 1993).

Results of research on the effects of interviewers' objectivity, which often contrasts a rapport-based or personal interviewing style with a task-center or impersonal style, has been hampered by methodological shortcomings (Dijkstra 1987) including the lack of a criterion to use to evaluate whether the interviewers' style affected not just response distributions but also validity. In some studies personal interviewers outperformed formal interviewers (Dijkstra 1987; Dijkstra and van der Zouwen 1987). In one study personal interviewers obtained a higher percentage of socially undesirable responses and fewer "don't know"s (van der Zouwen, Dijkstra and Smit 1991). However, in another test of personal versus impersonal interviewing orientations, researchers found few effects of style on response quailty (Henson, Cannell, and Lawson 1976, 1979; see too Belli, Lepkowski and Kabeto 2001) and on the most important measure of data quality, response accuracy, impersonal interviewers outperformed personal ones. Further, personal interviewers use more leading probes (van der Zouwen et al. 1991), more often supply a final answer for respondents who do not pick a response (van der Zouwen et al. 1991),

and provide more irrelevant statements (Dijkstra 1987).

While Fowler and Mangione (1990, p. 48) note that "All interviewer manuals encourage interviewers to be interpersonally neutral as part of the standardization process," Viterna and Maynard (2002) found that over half of the survey organizations either did not mention neutrality or advocated a more conversational demeanor in order to maintain rapport with the respondent.

Respondents' Behaviors. For respondents there are no written rules and, unlike interviewers, respondents rarely complete formal training for their role (Brenner 1982), which is to provide complete, honest, accurate, reliable, and codable answers without digression (see Cannell et al. 1981; Dijkstra and van der Zouwen 1987). Unlike interviewers' formal training, respondents primarily receive "on-the-job training" that occurs as the result of breakdowns in standardization (Fowler and Mangione 1990). For example, a respondent who repeatedly interrupts the interviewer should receive notice from the interviewer that she must finish reading the question even if she is interrupted. In addition to relying on interviewers to train respondents, researchers also may use instructions and commitment statements to help respondents understand their role (Cannell et al. 1981). Given the conversational setting of the interview, respondents can break the question-and-answer sequence in any number of ways -- e.g., by requesting clarification, providing inadequate answers, digressing on unrelated topics, giving "don't know" responses, refusing to answer questions -- and it is the responsibility of the interviewer to address these behaviors in a standardized manner using appropriate instructions, probes, and feedback.

Threats to Standardization

In the 1960s, Cannell and colleagues began applying various observational techniques to the survey interview in order to measure deviations from standardization (Cannell, Fowler, and Marquis 1968; Cannell, Lawson, and Hausser 1975) and developed the methodology known as

behavior or interaction coding, which relies on direct systematic observation of the question and answer process. One of the first uses of interaction coding was to monitor interviewers' performance but latter studies have sought to evaluate respondents' behaviors, the performance of questions, and interviewer-respondent interaction more generally (Ongena 2002).

Using interaction coding, researchers discovered interviewers and respondents frequently departed from a paradigmatic sequence in which interviewers ask questions exactly as worded and respondents provide immediately codable responses (Schaeffer and Maynard 1996). Interviewers often did not ask the questions as worded and frequently administered probes and feedback in ways that were at odds with standardization (Brenner, 1982; Cannell et al. 1975; Collins 1980; Fowler and Cannell 1996; Mangione et al. 1992; Morton-Williams 1979). Respondents were found to frequently display behaviors such as qualifying their responses and providing answers that did not meet the objectives of the question. At present, researchers attribute interviewers' and respondents' "deviant" behaviors to several causes including "unstandardized" respondents who are unwilling to enact their role or unclear about the rules, poorly worded and cognitively difficult survey questions (Fowler 1992; Fowler and Cannell 1996; Oksenberg et al. 1991), and the pull of conversational practices (Ongena 2002; Schaeffer 1991; Suchman and Jordan 1990).[2] Most importantly, responses that result from or are correlated with breakdowns in standardization are believed to be of poorer quality.

Interviewer-Respondent Interaction and the Accuracy of Responses

While studies demonstrate that departures from standardized interviewing decrease data

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[2] I distinguish between questions that are poorly or inadequately worded and questions that are cognitively difficult (van der Zouwen 2002; Oksenberg et al. 1991). The former can be rewritten to lower behaviors by interviewers and respondents that indicate problems (i.e., requesting clarification of a term). In contrast, cognitively difficult questions – e.g., those that require the respondent to perform complicated computations or contain hard-to-define terms – are relatively invulnerable to improvements through question wording (Oksenberg et al. 1991).

quality by increasing error variation (Mangione et al. 1992) and that a large proportion of unstandardized behaviors at a given question may indicate that answers to the question will be of lower quality (Fowler 1992; Oksenberg et al. 1991), few studies exist that link interviewers' or respondents' behaviors to <u>accuracy</u> in reports from surveys. In an analysis of survey reports about health care utilization, researchers coded aspects of interviewers' behaviors such as reading questions exactly as worded and respondents' behaviors such as providing qualified answers (Dykema, Lepkowski and Blixt 1997). For nine of the ten items analyzed, there was not a significant relationship between interviewers making "substantive changes" in question-asking and response accuracy. For one question, results were significant but not in the predicted direction: Substantive changes in reading were related to more accurate answers. In contrast to the findings for interviewers' behaviors, some respondents' behaviors were related to inaccuracy for some items. A subset of these data was also analyzed by Belli and Lepkowski (1996) who found that while there was not a consistent pattern for probing behaviors and the administration of feedback, where significant, both were associated with greater inaccuracy. Dijkstra and Ongena (2002) examined whether the propensity to provide a correct or incorrect response varied by whether the interactional sequence for the survey question contained problematic deviations by the interviewer or the respondent. Overall, questions with problematic sequences were twice as likely to result in an incorrect response as questions without problematic sequences.

While the results of these inquiries are provocative, they stand in need of replication. Questions from other studies for which survey and validation data are available must be analyzed in order to discern consistent interactional patterns and here I explore how departures from standardization, as measured with interviewer-respondent interaction codes, predict response accuracy in a standardized survey interview about issues related to living in a separated family.

STUDY DESIGN AND METHODS

Data come from three sources: court records, survey reports, and audiotape recordings of the survey interviews (Dykema 2004).

Validation Data: The Court Record Database (CRD). Validation data are provided by the CRD (Garfinkel et al. 1988), which also serves as the sampling frame for the survey. Based on abstracts from the court records, the CRD contains: (1) demographic information about parents at the time of their petition (e.g., number of children, and dates of marriage and divorce); (2) data on returns to court (court actions), including dates and descriptions of awards ordered by the court such as for child support, and modifications to the original order; and (3) records of child support payments recorded by the courts. The CRD provides valid measures of variables that are not contaminated by memory errors or potentially opposing interests of parents.

Survey Data: The Parent Survey 3 (PS3). Within two counties in Wisconsin, a cross-sectional sample of court records were drawn from the CRD for cases with minor children that petitioned for divorce or paternity between 1989 and 1992. Parents from 797 court cases were selected to be interviewed from May to December 1997. The PS3 is adapted from the 1994 Child Support Supplement to the Current Population Survey and focuses on issues related to living in a separated family, such as custody and child support (Schaeffer and Dykema 2004). Computer-assisted telephone interviews were conducted with 344 mothers and 222 fathers by the Letters and Science Survey Center at the University of Wisconsin yielding a response rate of 39 percent for the entire sample. The response rate was 47 percent for mothers versus 31 percent for fathers and 51 percent for divorced parents versus 27 percent for parents from paternity cases.[3] It

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[3] The level of response in this study is characteristic of that typically achieved with this population, especially among fathers (see Braver and Bay 1992). The response rate is of less concern for the type of analyses reported here in which interest is not in estimating population characteristics but examining relationships among variables (Lin, Schaeffer and Seltzer, 1999).

had been some time since many of the cases had been to court and the predominant reason for nonresponse was difficulty locating or contacting parents (approximately 49 percent of the sampled parents); approximately 12 percent of the sampled parents refused.

To ensure that respondents and children asked about in the PS3 were the parents and children from the CRD a two-step procedure was followed in which (1) interviewers verified that respondent's name matched the parent's name in the CRD and (2) research staff verified that the names of the children reported in the PS3 matched the names of the children listed in the court order. PS3 names were consistent with the CRD records for 552 of the 566 respondents. Because we verified the names of the parent and children, mismatches between the PS3 and CRD are probably rare (Miller and Groves 1985).

Dependent Variables: Validated Constructs. A total of twelve constructs for which validation information is available are included in the analysis. The procedures for categorizing responses as accurate versus inaccurate are summarized in Appendix A. For the constructs respondents are considered accurate and the dependent variable in the analysis is coded 1 if the respondent's report in the PS3 matches the information contained in the court record. Seven dependent variables come from yes/no questions concerning "Characteristics of the Court Order" including whether there was ever a support order, a child aged out from being eligible to receive support, support was set as a percentage of the payer's income in the original order, and support was owed in 1996; and whether visitation privileges, primary physical custody, or joint legal custody were legalized. Four questions assess the "Years of Events" including the year of the first order for support, the year of paternity establishment, and the years of marriage and divorce among previously married couples. Finally, child support exchanged indicates accuracy in reports about the "Amount" of support exchanged.

I group the constructs under the three headings of characteristics, years, and amounts based on the presumed level of difficulty of the reporting task for each of the headings. Characteristics of the court order are likely to be the least cognitively demanding events to report. Information about these events is measured using yes-no filter questions, which require that the respondent remember whether the event did or did not occur at any point in time. Unlike the questions asking about years or amounts, the respondent is not faced with the dual challenge of remembering the occurrence of the event and then locating the event in the specified time period. Questions that ask for the year an event occurred are likely to be more cognitively demanding and possibly reported inaccurately for two reasons. First, over time, respondents may forget when an event occurred and date it incorrectly. Second, events like the year of the first order for support and paternity establishment are likely to be comprised of many smaller events, such as multiple visits to the court, which unfold over a period of time, and there may be disagreement between the respondent's recollection of when the event happened and the court record's recording of the event. Finally, reports about amounts exchanged during the reference year are likely to be the most difficult events to report. Many respondents will have to summarize their experiences over the course of 12 months in order to provide a single estimate, a task more difficult than recalling the year of an event (Sudman et al. 1996, p. 164).

Interviewer-Respondent Interaction Coding Data. Of the 566 PS3 interviews, 529 were recorded on audiotape. Twenty interviews were not taped because the respondent refused to be recorded; 17 were lost due to recording errors. Ten persons, most of whom had interviewing experience, were trained to do the coding. To assess intercoder reliability, a sample of 57 cases, selected from a randomly generated list, was independently coded by two coders and measures of interrater agreement were produced. These cases included a total of 6,791

administrations of the questions, which serve as the unit of analysis for the reliability analysis.

Interrater agreement was assessed with kappa statistics which provide the ratio of the difference

between the observed and expected levels of agreement to the proportion of agreement that is

unexplained (see Fleiss, 1981):

$$\kappa = (P_{obs} - P_{exp}) / (1 - P_{exp})$$

Values of kappa greater than .75 indicate excellent agreement beyond chance; values between .40

and .75 indicate fair to good agreement; and values below .40 indicate poor agreement (Fleiss,

1981, p. 218, citing Landis and Koch, 1977). All of the reliability scores for the behaviors

included here fell within the fair to excellent range.

For this study we coded behaviors that had been examined in a number of investigations

(Cannell and Robison 1971; Mathiowetz and Cannell 1980; Morton-Williams 1979; Oksenberg

et al. 1991) as well as codes that had been used in an interaction coding analysis of child support

for the CPS (Miller and Schaeffer 1994) and some novel codes designed exclusively for this

project. For each question-answer exchange coders coded multiple exchange levels. A question-

answer sequence began with the interviewer's reading of the survey question and ended with the

last utterance spoken by the interviewer or respondent before the interviewer read the next

question (see too Dijkstra and Ongena 2002). Within a question-answer sequence, a new

exchange level was defined as beginning each time the interviewer spoke. Coders were

instructed to code up to three exchange levels and were given detailed instructions for applying

the codes. In addition to assigning codes, coders systematically wrote notes about the nature of

many of the behaviors.

Description of Interviewers' Behaviors and Predicted Effect on Accuracy. Figure 1

presents the codes and definitions used to evaluate the interviewers' behaviors (see Dykema and

Schaeffer 2004). Coders assigned the codes listed under "Question-Asking Behaviors" during

the initial reading of the question. For interviewers' question-asking behaviors I distinguish

between readings made with *major changes* or *not asked* versus readings that are *exact* (including

readings that are made with corrections) or include *slight changes*. The effect of interviewers'

question-asking behaviors on response accuracy may be in any one of three directions (or have

different effects for different questions). First, based on a strict interpretation of standardization,

departures from exact readings, especially major changes, should be associated with less accurate

answers. This relationship could result if interviewers altered questions in a way that made them

more difficult to comprehend or process. A second possibility is that changes in question-

wording may be associated with more accurate answers. Interviewers who make changes to the

wording of questions may be more motivated to get high quality data and may do so in a way that

more clearly conveys the objectives of the question to the respondent. A third possibility is that

there may be no relationship between departures from the exact reading of a question and

response accuracy. It is possible that when interviewers makes change, especially minor changes

(van der Zouwen 2002), they do not significantly affect a respondent's final answer because: (a)

the majority of survey questions are written so that they are standardized at the conceptual level

and question wording changes may not affect the gist of question, especially for questions that

ask for factual information; (b) interviewers may be adept at making small changes to questions;

and (c) survey interviewers, in contrast to interviewers working with an unstandardized

instrument or script, are highly constrained in their behaviors and the variability in behaviors

across interviewers may not be large enough to impact validity.

 While the question-asking codes are mutually exclusive, they could be used in

combination with the remaining codes. An *elaboration* is a phrase interviewers append to

questions, usually to clarify part or all of the question for the respondent (see Schaeffer and Maynard 2002). Interviewers engage in *verification* when they alter the current question to take into account information provided at an earlier question. *Stress problem*, a code designed for this study, was coded if the interviewer did not verbally emphasize words that the question writer indicated should be emphasized (e.g., by underlining the term).

Although our coding scheme did not differentiate between adequate and inadequate elaborations and verifications, we predict that these behaviors will have a positive effect on response accuracy. Interviewers include elaborations in order to make questions more understandable and there is some evidence that their inclusions may be effective (e.g., Dykema et al. 1997). Verifications are conversational techniques used by interviewers to convey that are listening to the respondent (Schaeffer and Maynard 1996); by ignoring this information, interviewers could compromise their relationships, thus negatively affecting respondents' level of motivation and possibly response accuracy. The effects of stress problems are likely to be small but are predicted to be associated with inaccurate reporting because by failing to emphasize highlighted terms, interviewers will not make these terms salient to respondents and they may not be considered in the process of answering the survey question.

"Followup" describes most interviewer behavior that occurred after the initial administration of the question. Followup behavior includes asking probes, providing answers to respondents' questions, delivering feedback, and so on. Although there are many types of followup behavior, we dichotomized these behaviors in terms of their adequacy in order to make statements about the relationship between the behaviors and standardization. For our purposes, an *adequate followup* had to conform to a list of standardized interviewing conventions, which included providing neutral probes, repeating all or part of the respondent's answer without

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distortion, providing a correct answer to requests for clarification for questions in which definitions were available, and providing feedback in response to an adequate answer from the respondent. An *inadequate followup* was any followup behavior that deviated from standardized interviewer conventions such as providing an inadequate, unbalanced, or leading probe, or inappropriate feedback (e.g., an "okay" delivered in response to a refusal to answer the question).

It is difficult to predict what effect adequate or inadequate followup behaviors will have on response accuracy and predictions are contingent on what types of behaviors are being compared (e.g., some followup behaviors versus none or adequate followup behaviors versus inadequate followup behaviors). While not causal in the sense that the interviewer's followup behavior produces an inaccurate response, almost all followup behavior by the interviewer occurs in response to the respondent's behaviors and usually in response to the respondent exhibiting some sort of problem (e.g., providing an inadequate response or interrupting) (Dijkstra and Ongena 2002; Oksenberg et al. 1991). Thus, poorly designed or cognitively difficult questions cause respondents to answer inadequately, which forces the interviewer to behave and regardless of the adequacy of the interviewer's response, ultimately results in an inaccurate response. In comparison to questions without any followup behaviors, we expect that questions with some followup behaviors will be negatively related to accuracy.

There is also speculation and evidence to suggest that interviewers' inadequate followup behaviors will be associated with more accurate responding. For example, some directive probing, such as offering candidate answers and ranges to respondents, may help to reduce the cognitive difficulty of the respondents' task (Belli et al. 2001; Hak 2002). Also, evidence indicates that increased activity on the part of the interviewer, such as would occur with feedback behavior regardless of whether it is adequate or inadequate, motivates respondents and positively

influences the quality of their responses (Dijkstra 1987; van der Zouwen et al. 1991). Finally, when interviewers engage in directive probing it may be a sign of a "communicative agreement" with the respondent and not an indicator of a problematic question (Houtkoop-Steenstra 1996).

The two remaining codes could be assigned at any exchange level. *Responds with feeling* describes any interviewer behavior that conveys the interviewer's feelings about the survey, survey instrument, or about the respondent or his/her situation. *Laughter* was coded if the interviewer laughed. Fowler and Mangione (1990) do not discuss laughter per se, but these expressions and most of those described by responds with feeling are not standardized and by compromising standardization are predicted to be associated with more inaccurate reporting (Lavin and Maynard 2002). Further, anecdotal impressions of these behaviors are that they occur in response to a problematic question and indicate both the interviewer and respondent are in collusion against the survey. Thus, we would expect to find these behaviors associated with inaccurate reports. However, these expressions are very similar to rapport and often included in operational definitions of rapport (see Belli et al. 2001). On these grounds we would predict that the presence of these behaviors indicates the interviewer and respondent have developed a closer relationship, which in turn could motivate the respondent to answer more accurately (Cannell et al. 1968; Dijkstra 1987).

Description of Respondents' Behaviors and Predicted Effect on Accuracy. Figure 1 presents descriptions of the interaction codes for respondents' behaviors. Three, mutually exclusive codes assess the codability of the respondent's initial answer. There is strong evidence to support the prediction that *uncodable* answers will be associated with inaccurate responses, especially when the frequency of the behavior is high (Fowler 1992; Oksenberg et al. 1991). *Implicitly codable answers* do not explicitly match the answer categories, but appear to answer

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the question (e.g., interviewers code "right" as equivalent to "yes"). I predict that implicitly

codable responses will behave in a manner similar to codable responses (Hak 2002).

The remaining codes could be used on any exchange level. A *qualification* was coded if

the respondent used a phrase like "probably" or "about" in answering the question. *Don't know*

responses were included in interactions where a final answer was eventually provided by the

respondent or in interactions where "don't know" or a refusal was the final answer. We coded

pauses if the respondent paused or hesitated two seconds or more before answering. Note that

this amount of time is greater than the 1-second maximum that which has been recorded in other

conversational settings (Jefferson 1989). A code for *seeks clarification* was assigned at requests

for a repeat of the question or clarification of a term. The code for *elaboration* was used to

capture situations in which the respondent provided information in addition to what the question

asked for. An *interruption* was assigned if the respondent interrupted with an answer during the

initial reading of the question.

Qualifications, don't know responses, pauses, and requests for clarification all indicate

difficulty on the part of the respondent in answering the question (see Cannell and Fowler 1996;

Dykema et al. 1997; Fowler 1992; Schaeffer and Maynard 2002). The problem or problems

could have arisen at any point in the question-answering process from comprehending the

meaning of the question or the terms to retrieving the necessary information to evaluating the

candidate answer, and finally to mapping the candidate answer on to the categories provided or

implied by the wording of the question. When the frequency of these behaviors is high for a

given question, I predict that the associated responses are more likely going to inaccurate than

responses that are given in the absence of these behaviors. However, the relationship between

requests for clarification and response accuracy is likely to be more complicated than for the

other behaviors. When respondents request clarification, they are likely to receive assistance from the interviewer, which in some cases will aid the respondent in producing a better response than if help had not been solicited (see, for example, Schaeffer and Maynard 2002). In so far as interviewers' responses to requests for clarification are adequate, we do not expect to see a negative relationship between this behavior and response accuracy.

It is difficult to predict what effect elaborations and interruptions will have on response accuracy as there are competing explanations about the nature of each of these behaviors. Elaborations are conceptually similar to but operationally different from other behaviors described in the literature such as digressions (Belli and Chardoul 1997) and considerations (reasons respondents offer in order to explain why they responded as they) (Dijkstra and Ongena 2002). With regard to elaborating, respondents who offer information in addition to a codable response are probably indicating some uncertainty in their response but they may also be harder working, more attentive, and more accurate than respondents who do not exhibit these behaviors. These behaviors could be associated with more accurate responses if, in the process of offering additional information, interviewers glean a possible misunderstanding by the respondent that are corrected. Respondents interrupt when they feel they have heard enough of the question to provide a response. Questions written so that examples or definitions are provided after the body of the question (e.g., following "did you have any lab tests" with "that required blood, urine, or other fluids") are likely to foster interruptions and are more likely to be associated with inaccurate reports (Dykema et al. 1997). However, when respondents interrupt because the information asked for is highly salient or inapplicable, interruptions are not predicted to be associated with inaccuracy.

The respondent code for *responds with feeling* was designed to capture any respondent

behavior that conveyed the respondent's feelings about the survey instrument. *Laughter* was coded if the respondent laughed. In an early study, Cannell et al. (1968) found that an index of interpersonal respondent behaviors, which included providing personal comments, laughing, and other behaviors, was positively related to higher data quality. However, it may be the case that respondents exhibit these behaviors when they have difficulty answering a question or find the question "silly" (e.g., strangely worded) (Lavin and Maynard 2002; Schaeffer and Maynard 1996). In such cases, these behaviors may be associated with answers that are of poorer quality.

Examining Interaction At-The-Question Versus Cumulatively (Across Questions). Two major assessments of the effect of interaction on accuracy are undertaken. First, I adopt the most common approach found in the literature and examine the effect interaction *at-the-question* has on the accuracy of the construct by creating question-by-question predictors based on the various interaction codes. The interaction variables are coded 1 if the behavior was coded and 0 otherwise. For many of the dependent variables included in the analysis, a respondent's value on the construct is determined by combining responses given to the current question with responses given to previously administered yes/no filter questions. In conducting the *at-the-question* analyses the interaction coding analysis uses records from the appropriate filter question for those not asked the current question (summarized under "Interaction Coding" for each construct in Appendix A). Thus, the analysis examines interaction for the "concept" or construct, not the question per se and provides a test of the design of the instrument versus just the wording of the current question.[4]

Rather than focusing on each code assigned *at-the-question*, the second assessment

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[4]In analyses not shown here I obtained results for each construct with all respondents versus just those asked the current question. In very few cases did the results differ and in almost all cases the difference was a function of the significance of a coefficient, not its direction or relative size.

examines the cumulative effect that the interaction between the interviewer and the respondent has on reporting. To do this I create a *cumulative* measure for each of the interviewer-respondent interaction codes. For interviewers' behaviors the cumulative measure is a proportion that represents the total number of questions in which the interviewer performed a particular behavior divided by the total number of questions asked up to, but not including the current question. Similarly, the cumulative code for any respondent behavior is the total number of questions in which the respondent exhibited the behavior divided by the total number of questions asked up to the current question. For example, the construct Ever a Support Order appears as the seventh question in the interview for custodial mothers with one child. If the interviewer read three of the preceding six questions with major changes, the value of the cumulative code for that behavior would be .50. In contrast to the interaction codes used in the *at-the-question* analyses, the cumulative measures are continuous.

RESULTS

    Descriptive Statistics: Dependent Variables. Descriptive statistics for the dependent variables are shown in Panel A in Table 1.[5] There is wide variation in the accuracy with which information in the PS3 is reported relative to the criterion. Among the most accurately reported constructs, approximately 92 percent of the respondents classify themselves correctly with regard to whether there was Ever a Support Order, and 90 percent match the court record for Child Support Owed. In contrast, in what are arguably more cognitively difficult questions, only 28 percent of respondents report accurately about the amount of Child Support Exchanged and just

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[5] Sample sizes differ slightly between the *at-the-question* and *cumulative* assessments varies. A few cases are dropped from the *at-the-question* analyses because the current question was not recorded or behavior coded. These cases are included with the *cumulative* analyses when at least half of the administered questions are recorded or behavior coding records exist for the majority of questions asked up to the current question.

45 percent correctly report the year of their First Support Order. Among the remaining constructs, the majority of respondents – between approximately 60 and 80 percent – report accurately. The proportion responding accurately is overall higher for characteristics of the court order, followed by years, and then amounts.

        Descriptive Statistics: Interaction Codes. Descriptive statistics for the *at-the-question* interaction codes (Panel B, Table 1) show a large range in the proportion of questions read exactly or with slight changes versus read with major changes or not asked. There is little guidance on what value to use to determine when a problem indicator is large enough to warrant concern but some researchers use a cut-off of 15 percent to "flag" potentially problematic questions (Fowler and Cannell 1996). Using this value, the frequency of reading errors is high for Ever a Support Order, Child Support Owed, Visitation Legal(ized), Primary Physical Custody, Joint Legal Custody, and Child Support Exchanged.

        With the exceptions of the questions asking if there was Ever a Support Order and the year of the First Support Order, interviewer followup behaviors are more stable across the constructs examined with between 40 to 60 percent of the interactions showing no followup behaviors. In general, when interviewers interact outside of reading the question, it is most likely to be according to the rules of standardization (i.e., by following up adequately). Using the 15-percent cut-off, the only items flagged as being potentially problematic are Ever a Support Order and Primary Physical Custody. While most of the other interviewer behaviors, such as elaborations, verifications, laughter, and responses with feeling, occur infrequently for all questions considered, stress problems vary question-by-question and are high (i.e., the proportion of questions with a stress problem is greater than or equal to .15) for all of the questions that included terms to be stressed indicating substantial interviewer variability.

Respondent question-answering is somewhat stable across questions with at least two-thirds or more of the respondents (ranges from 60 to 90 percent) providing a codable answer on the first exchange level in response to the survey question. Most of the other respondent behaviors occur infrequently (in less than 10 percent of the interactions) or hardly at all but there are exceptions such as nearly 40 percent of the respondents qualifying their report of the year of their First Support Order.[6] In fact, based on the distribution of the respondents' behaviors, very few of the questions would be flagged as problematic with the following exceptions: uncodable answers occur in 15 percent of the interactions for Primary Physical Custody; each of the codes for uncodable answers, qualifications, and pauses have levels greater than the 15-percent cut-off for First Support Order; requests for clarification and pausing are high for Marriage and qualifications and pausing are high for Divorce; and finally, respondents interrupt in 15 percent of the readings of Child Support Exchanged. The pattern for the number of exchange levels coded at each question mirrors the pattern for interviewer followup behaviors.

Analyses: Models. For most of the interaction codes, I assess the effect of the interviewer's or respondent's behavior in a bivariate logistic regression in which I regress the accuracy of the survey response (coded 1 for a match between the survey report and the criterion) on the individual interaction code. Exceptions are noted here. With regard to interviewers' question-asking behaviors, I contrast whether the question was read with a major change or not asked versus exact or with a slight change. For interviewers' followup behaviors I examine a model that includes variables for an adequate followup (only), any inadequate followup and no followup behaviors as the reference category. In the question-answering model terms for a

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[6] The survey questions had undergone extensive development and testing (Schaeffer and Dykema 2004) and the low frequency of the respondent behaviors reflects these improvements (see too Dykema et al. 1997).

codable versus implicitly codable versus an uncodable (or other) answer are included with an

uncodable (or other) response as the omitted category. Finally, to explore the effects of multiple

exchange levels on response accuracy, I examine a model that includes a continuous measure of

the number of exchange levels.

At-The-Question Results. Table 2 presents the results from logistic regressions of

accuracy in reports for each of the dependent variables on the individual interaction codes

evaluated *at-the-question*.[7] The cell entries show the exponentiation of the coefficients or the

odds of obtaining an accurate response relative to an inaccurate response when a particular code

is assigned. For example, we can interpret the value of .70 for interviewer question-asking for

Ever Support Order as follows: Relative to respondents who are read the question exactly or with

slight changes, respondents who hear the question read with major changes or not asked are 30

percent less likely to provide an accurate response. Conversely, the value of 1.17 for Child Aged

Out that respondents are 17 percent more likely to provide an accurate response when the

question is read with major changes or not asked than when it is read exactly or with slight

changes.

Based on the results for interviewer question-asking models, it appears that making major

changes in question-asking has only a modest effect on accuracy. For Visitation Legalized and

Joint Legal Custody making a major change or not asking the question lowers the odds of

responding accurately. In contrast, making changes in question-asking has the opposite effect for

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[7] The variables Visitation Legalized, Primary Physical Custody, and Joint Legal Custody were
included as part of a experiment on question ordering. In Table 2, I show results that pool across
experimental conditions. Before pooling, I examined, separately for each dependent variable, whether
the behaviors interacted with form in their effect on accuracy. None of the codes interacted
significantly with form for Visitation Legalized and Primary Physical Custody. For Joint Legal
Custody, interviewer question-asking and the respondent giving a codable answer interacted
significantly with form; however, the effect of the behavior in those models differed from those
shown only in the size of the effects, not their direction or significance.

Child Support Exchanged where the presence of a major change or not asking the question more than doubles the odds of reporting accurately.

For almost all questions, followup behaviors -- regardless of whether they are adequate or inadequate -- are associated with lowered odds of reporting accurately and this is significant for most of the dependent variables. The exception is for the effects of any adequate or inadequate followups which increase the odds of reporting accurately for the amount of Child Support Exchanged, although the effect is only significant for inadequate followups. In general, the effects of the other behaviors performed by interviewers are inconsistent and have little effect overall on the accuracy of respondents' reports.

With regard to respondents' question-answering behaviors, not surprisingly, interactions in which respondents immediately (i.e., on the first exchange level) provide a codable answer in response to the survey question are associated with increased odds of reporting accurately for all of the questions, except questions about payments and amounts; these relationships are significant (or borderline significant) for seven of the ten behaviors where the relationship is positive. The results of the other respondent behaviors parallel Dykema et al. (1997), as respondents who are unsure or struggle over their answers -- by qualifying responses, saying don't know, and pausing -- are more likely to provide answers that are inaccurate. These indicators are consistent and powerful predictors of inaccuracy that are associated with lowered odds of reporting accurately for all of the behaviors considered: for qualifications the relationships are significant for eight constructs; for pauses the relationships are significant for seven constructs; and for "don't know"'s the relationships are significant for nine constructs.

The relationship of requests for clarification (thought to be an important predictor of inaccuracy; Fowler and Cannell 1996) with response accuracy is inconsistent across items and

only significant or borderline significant for Joint Legal Custody and Child Support Exchanged: in the former case the behavior lowers the odds of reporting accurately and in the latter case increases the odds. The behaviors laughter and responding with feeling show some predictive power with these expressions being associated with inaccurate reports where they are significant.

Finally the pattern of results for the number of exchange levels is consistent and mirrors the results for followup behaviors discussed previously: For almost all of the questions, the presence of multiple exchange levels is associated with responses that that are more likely to be inaccurate with two exceptions: For Joint Physical Custody there appears not to be an effect for the number of exchange levels; for Child Support Exchanged I find that the interviewer and respondent appear to engage in negotiations that result in accurate answers.

Cumulative Analyses. Next, I examine the cumulative effect that the interaction between the interviewer and respondent has on the accuracy of reporting for the constructs described. I do this by examining *cumulative* measures for the interviewer and respondent behavior codes. Panel B in Table 3 provides the means and standard deviations of the cumulative measures for the interviewer and respondent behaviors. The dependent variables do not appear in the same order that they appear in the questionnaire, and the list of variables draws from the beginning and concluding sections of the instrument. The results are quite surprising. With regard to question-asking behaviors, interviewers appear to be fairly consistent in the manner with which they read the questions across time, on average reading questions exactly a little over 50 percent of the time. Followup behaviors by the interviewer include the administration of feedback, probes, and providing definitions. I dichotomize these into any followup behaviors versus none. The question asking about Ever a Support Order appears in Section A of the questionnaire while the questions on Marriage and Divorce appear in Section H,

the last section of the questionnaire. Interestingly, the average proportion of followup behaviors appears to drop from .58 to .45. The frequency of elaborating drops dramatically after Section A. Although we cannot rule out the possibility that something about the questions in Section A engenders a higher level of elaborating, the data suggest that interviewers' willingness to expend the effort to clarify questions quickly diminishes after the first section of the interview. In contrast, the average proportions for the various respondent behaviors are remarkably consistent.

Table 4 shows the odds ratios from logistic regression models of accuracy in reports of the twelve constructs on the cumulative interviewer and respondent indicators. Looking at the results for the row comparing the major changes and not asked to the other question-asking codes, we find cumulative errors in question-asking up to the current question for 7 of the 12 constructs examined (Ever a Support Order, Support Set as a Percentage, Visitation Legalized, Primary Physical Custody, Joint Legal Custody, First Support Order, and Paternity) are significantly related to accuracy such that interviewers who habitually make major errors or fail to the read the preceding questions have a lowered odds of obtaining accurate responses at the current question. In contrast, interviewers who consistently perform these behaviors are nearly 4 times more likely to obtain an accurate response for Child Support Owed. Similar to the findings for the *at-the-question* analyses, any followup behaviors lower the odds of reporting accurately when measured across questions. The effects of the other interviewer behaviors are inconsistent.

Consistently providing a codable or implicitly codable answer is associated with increased odds of reporting accurately at the current question and this relationship is significant for about half of the constructs. The pattern for the other respondent behaviors is not consistent.

To explore the cumulative effect of the number of exchange levels, I use a dummy variable coded 1 if there are three or more exchange levels for the question and for each

respondent I obtain the total number of questions with three or more levels divided by the total number of questions asked up to the current question. I find that for almost all of the behaviors considered, the cumulative effect of multiple exchange levels is to lower the odds of responding accurately at the current question, with Child Support Exchanged showing the opposite effect.

CONCLUSIONS

Interviewers' Behaviors. The findings from this study with regard to the interviewers' question-asking behavior *at-the-question* are striking and to some extent at odds with predictions from a strict interpretation of standardized interviewing. For nine of the twelve constructs considered there is not a significant relationship between making major changes in the reading of the questions and the accuracy of responses. This finding is compatible with research that has found that errors in question-asking are not significantly related to other components of measurement error (see Groves and Magilavy, 1986; Mangione et al., 1992) and with other studies examining the effects of changes in the administration of survey questions on response accuracy (see Dykema et al. 1997). However, two questions – Visitation Legalized and Joint Legal Custody – show the predicted effect of lowering the odds of reporting accurately, for one question – Child Support Exchanged -- the odds of reporting accurately are higher when the questions are read with major changes or not asked. The cumulative effect of errors made in administering questions on the accuracy of responses at a particular question reinforces the findings for the *at-the-question* analyses. For five of the seven questions that assess characteristics of the court order and two of the four questions about years of events, there is a significant (or borderline significant) relationship between response accuracy and the combined codes for major change and not asked. For these questions, the cumulative effect of interviewers departing from standardization is to lower the odds of reporting accurately but the reverse pattern

is shown for Child Support Exchanged.

I interpret these findings as suggesting a possible relationship between the cognitive complexity of a question and the behavior of the interviewer. When questions ask for information that is less cognitively demanding to recall, such as whether or not an event ever occurred (e.g., the questions about legalizing visitation and joint legal custody), or for the year of what is likely to be a relatively salient event (e.g., the year of the respondent's first order for support), changes in the wording of the question are likely to have no effect on response accuracy or to lower response accuracy. In contrast, when questions ask for information that is more cognitively complex, such as for the frequency of an event category that requires summing individual events across time, interviewers' departures from the exact reading of the question may be done in such a way as to facilitate recall.

Support for this conclusion is offered by Dykema et al.'s (1997) study of the impact of question-asking on accuracy in reports about health-related events. In their analysis of ten questions, one question was open-ended and asked about the reason for the most recent health care visit, five questions were yes/no questions asking whether respondents had been hospitalized overnight during the past year or had other procedures or tests performed during their last visit to a medical doctor or assistant, and four questions asked about the number of health visits the respondent made during specific reference periods. The only item for which there was a significant effect of question-asking was a question about doctors' visits in the past 6 months, a cognitively complex question requiring respondents to count relevant events and locate them within the specific time frame. As with child support exchanged, respondents were more likely to report accurately when interviewers made substantive changes in reading the survey question.

The findings are also consistent with the experimental research of Schober and Conrad

(1997) on conversational versus standardized interviewing. In that study both conversational and standardized interviewers were required to read questions exactly as worded but conversational interviewers were allowed to engage in a variety of other unstandardized behaviors such as offering unsolicited definitions in order to assist the respondent in answering the question. The authors found that when the mapping of the information asked for in the survey and the respondent's situation was straightforward, the accuracy of responses was equivalent regardless of the interviewer's style. However, when the respondent's situation resulted in a complicated mapping to the survey question, interviewers using flexible interviewing techniques were three times as likely to obtain an accurate response as interviewers using standardized interviewing techniques. We hypothesize that our interviewers may have exhibited behaviors akin to those described by Schober and Conrad, such as paraphrasing and offering definitions.

Followup behaviors. For almost all of the constructs included in the *at-the-question* analyses, interviewers' followup behaviors are significantly associated with lower odds of reporting accurately regardless of whether the behaviors are judged adequate and conform to the rules of standardization (nine of the twelve constructs) or are judged inadequate and deviate from the rules of standardization (ten of the twelve constructs). A similar pattern is evidenced in the *cumulative* analyses but for these, we combine the codes for adequate and inadequate followup behaviors based on the findings from the *at-the-question* analyses.

It is unlikely that these relationships are causal in the sense that the interviewers' probes or feedback statements encourage respondents to report inaccurately. Instead, it is likely that the information asked about in the question or some aspect of the question causes difficultly for the respondent. After hearing the initial presentation of the question, which may or may not have been read exactly as worded, the respondent breaks the question-answer sequence on the first

exchange level by providing an uncodable response, asking for clarification, saying don't know, or refusing to the answer the question. The presence of these behaviors requires followup behavior on the part of the interviewer on the subsequent exchange level. Based on the negative association between accuracy and followup behaviors, it appears that the work interviewers in this study do in response to problematic respondents' behaviors is ineffective at solving the respondents' difficulties regardless of whether the effort is standardized or not.

Five implications are drawn from these findings. First, answers from questions requiring intervention on the part of the interviewer probably will be of poorer quality than answers from questions that do not require assistance. Second, potential difficulties with questions (e.g., with comprehension or retrieval) must be identified prior to the survey; neither standardized nor interviewers impromptu definitions or explanations appear effective in resolving difficulties respondents in this survey (Fowler and Cannell 1996). Third, in order to address potential problems with comprehension and retrieval for individual questions, interviewers should receive (more) study-specific training on concepts in the questions and the goals of measurement (Hak 2002), such as identifying problems before the interview and having interviewers practice and be familiar with how to address respondents' difficulties. Fourth, some questions, particularly those that are cognitively complex, may not be amenable to being fixed (Oksenberg et al. 1991). Similarly, if the requested information was not encoded, no amount of invention by the question-writer or interviewer will result in an accurate response (e.g., Lee et al. 1999).

Respondents' Behaviors. With regard to respondents' question-answering behavior, providing a response that is immediately uncodable (i.e., uncodable on the first exchange level before any interventions by the interviewer) is associated with a significantly lower odds of reporting accurately for seven of the questions. Except in cases where an initially uncodable

response is coded as a "don't know" or refusal in the questionnaire, almost all of these uncodable answers are eventually recorded as a codable answer. Thus, the fact that the respondent had difficulty answering the question and ultimately responded inaccurately for most of the constructs examined here, would be invisible to the analyst without the results from the interaction coding. These findings support Fowler (1992) and Fowler and Cannell (1996), who emphasize the importance of measuring the codability of respondents' answers.

Respondents who qualify their answers with terms like "about," "around," and so on or report that they "don't know" at some point in the interaction or noticeably pause before answering, indicate that they have doubts about whether their final answer is correct. Our results suggest these doubts are frequently well-founded. While these respondent behaviors are not the actual cause of inaccuracy, they are an indication of problems in answering the question and when they occur, should warn the analyst to view the resulting data with caution. The only construct for which interruptions are significantly related to accuracy is exchanging child support: In contrast to respondents who do not interrupt the interviewer's reading of the question, respondents who do interrupt are over two times as likely to provide an accurate response. These are probably respondents for whom the questions are either highly salient or else inapplicable (e.g., the respondent knows she did not receive any child support). These results parallel Dykema et al. (1997) who found that for nine of the ten questions examined, interruptions lowered the odds of reporting inaccurately.

Perhaps more interesting than the respondent codes that predict inaccuracy is one code that does not. The code for respondents' requests for clarification about the meaning of the question shows little predictive power in this analysis even though behavior coding practitioners consider these expressions to be highly indicative of a problematic question (Fowler, 1992). One

explanation for this may be that by expressing uncertainty these respondents actively seek the information they require in order to answer adequately.

Additional Comments on Behaviors. As far as we know, this is the first study to evaluate the association between interviewers' and respondents' expressions of laughter and response accuracy. Expressions of laughter, particularly those in that are initiated by the respondent and reciprocated by the interviewer are important as these interactions are examples of rapport (Lavin and Maynard 2001). Thus, expressions of laughter for a given question may be associated with more accurate responses because the interviewer and respondent may have a higher level of rapport, which in turn may motivate the respondent to work harder in answering the question (Dijkstra and van der Zouwen 1987). However, the various contexts in which respondent-initiated laughter have been documented (e.g., as a result of a candidate response that did not map easily onto the response categories see Lavin and Maynard 2001) indicate that this behavior may occur more often in response to a problem with a question. However, for two of the constructs examined -- First Support Order and Marriage -- these expressions are associated with reports that are of marginally significant lower quality, indicating that the interviewers' attempts at maintaining rapport are associated with compromised results. The relationship between respondents' laughter and response accuracy is more pronounced: laughter is associated with a lower odds of reporting accurately for all but one of the constructs (Child Support Owed) and the relationship is significant (at $p < .10$ or less) for five of the constructs. Thus, among respondents these expressions appear to function like other problem indicators.

Implications for Current Practice and Future Research

Question-asking and standardization. Findings suggest both strengths and weaknesses of standardized interviewing and interaction coding and point toward possible improvements in

these methods. Evidence is contradictory with the assumption that all questions must be read exactly as written in order to obtain accurate information. On the contrary, findings suggest that at some questions, particularly those that are cognitively complex, interviewers' adaptations lead to improved reporting by respondents. However, a number of qualifications are in order. First, it is entirely possible that characteristics of these questions -- their topic and structure -- may allow them to work equally well whether they are read exactly as written or tailored for a particular respondent. Substantive changes made to questions on different topics or poorly constructed items may have different outcomes.   Related to this point, it is important to emphasize that interviewers in this study were still highly standardized. With the exceptions of the questions asking for payments and amounts during the reference years, all questions were read exactly, with repairs, or with only slight changes in the vast majority of the interviews. The important point to stress is that changes in the wording of the questions made in this study were still implemented under a relatively strict interpretation of standardization and we would be very cautious in extrapolating the results to a lesser form of standardization, such as having interviewers ask questions from an agenda. Second, our questions ask for relatively objective kinds of information. For questions that seek subjective information such as attitudinal items, minor changes in wording may be more likely to alter the meaning of the question (Collins, 1980; Collins and Butcher, 1983; O'Muircheartaigh, 1976; van der Zouwen 2002). Finally, and perhaps most important, while it appears that *some* interviewers are able to adapt questions to obtain more accurate information, deviations by interviewers increases interviewer variability and therefore, the variable component of measurement error.

 Coding scheme. Based on the analysis we make some recommendations regarding the utility of our coding scheme. To evaluate interviewers' question-asking behavior, we coded

three types of question readings: exact, slight change, and major change. These can be viewed along a continuum with regard to how strongly the behavior deviates from standardized interviewing practice. Ideally our coding scheme also should have included "major change: interviewer changes the wording of the question in a manner that alters meaning of the question."

Regarding the respondent behavior codes, findings provide support for the use and relative importance of most of the codes in this study, and for the importance of assessing respondents' behaviors to evaluate data quality in general. Codes for uncodable answers, qualifications, "don't know"s, and pauses emerge as the strongest predictors of inaccuracy. While these associations might seem obvious, the frequency with which these highly predictive behaviors occur is usually unavailable to the data analyst, except in the relatively infrequent event "don't know" is provided as the final response. Information on the frequency of problem indicators could be (1) incorporated into analytic models in order to control for measurement error and (2) used as covariates to improve models of imputation (Mathiowetz 1998).

Other methods of analysis. Part of the reason we do not find any relationship between accuracy and certain predictors probably lies in our method of analysis. Our approach in analyzing the accuracy of reports on various health topics was to simplify the process by dichotomizing the interaction variables and dependent variables and testing whether any basic associations were present. Other approaches could be used to analyze these data and while we have not done so here we think it is important for future researchers to explore other models (see, for example, Dijkstra and Ongena 2002; van der Zouwen and Dijkstra 1995). For example, Lepkowski et al. (2000) recently used event history methods to demonstrate that the time it takes a respondent to interrupt is a function of the characteristics of the questions to which the respondent is exposed. Although not presented here, it would be useful to compare models that

control for variables that are potentially confounding, including characteristics of the respondent (e.g., education) and characteristics of the interviewer (e.g., whether or not the interviewer had prior interviewing experience) (Lepkowski et al. 2000; van der Zouwen and Smit 2004). The current set of analyses examined the effects of interaction *at-the-question* versus *cumulatively* (over time) and although crude, the cumulative measures were incorporated to see whether or not interviewers and respondents had characteristic ways of behaving that might be associated with accuracy. A recommendation for future research would include exploring other methods of characterizing behavioral patterns over time (Dijkstra 1999; Lepkowski, Sui, and Fisher (2000).

Future research. A growing body of research suggests that the comparison of interviews' and respondents' behaviors with validation data should improve the interpretation of pretest and interaction coding results, and provide more empirical evidence on which to base recommendations regarding instrument design and interviewer training (Fowler and Cannell 1996; Presser and Blair 1994). Questions from other studies for which survey and validation data are available must be analyzed in order to discern consistent interactional patterns. Are the patterns we observe here limited to our data or are they generalizable to other surveys that assess the frequencies of certain behaviors? Additional research is also necessary to explore the efficacy of various interactional coding schemes, including those that differentiate between other kinds of interviewer behaviors such as probing and administering feedback. Recent developments in technology, including the ability to record and store interaction from live interviews as digitized sound files on CD-ROM are promising (Dijkstra and Ongena 2002) and coupled with advances in computerized coding methods, interactional analyses may become more efficient methods of evaluation (Dijkstra 1999).

A final question is, what will coders evaluate; what will be the ultimate future of

standardized interviewing? Van der Zouwen (2002) describes two "radical" proposals that can

be seen as polar opposites along a continuum. The first is to completely eliminate the

interviewer. The second, is to eliminate standardization. Without question more evidence is

needed before radical measures are adopted.

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Appendix A
Constructing the PS3-CRD Dependent Variables (Validated Constructs)[8]

       In this appendix I provide detailed information on the construction of the dependent variables used in the analysis. In the descriptions below I indicate the following information from the PS3: approximately where the question appears in the questionnaire, who is asked the question, and, where applicable, any other questions that are used in the construction of the dependent variable. For the CRD I briefly indicate how the validation information appears in the court record. For almost all of the following dependent variables, if the respondent provided a "don't know" or refusal response to the survey question but there is a legitimate value in the CRD, I code the respondent as having provided an inaccurate (non-matching) response.

Ever a Support Order
       Overview of information available in the PS3. With regard to their reported status of ever having an order for support, respondents in the PS3 fall into one of three groups. Those who have ever had a legal arrangement for support versus only an informal arrangement versus never having an arrangement for support. Whether or not the respondent reported ever having a legal arrangement for support is determined by responses provided during the administration of the Child Support Roster in which respondents are asked a series of questions about the child support arrangement: Q150, Q152, and Q154. These questions are asked separately for each child, beginning with the youngest child eligible for support.
       A respondent is coded as having a legal arrangement for support if she responds affirmatively to Q150 and Q154. A respondent is classified as having an informal arrangement for support if she reports not having a legal arrangement at Q150 but responds affirmatively to having an other kind of arrangement at Q152 that included payments from Q154. A respondent is coded as not having an arrangement for support if she reports not having a legal arrangement or an informal arrangement for support or if she reports having either a legal or informal arrangement but says that payments were not supposed to be made at question Q154.
       Note that in terms of classifying respondents by arrangement type for the main questionnaire, respondents with informal arrangements are asked an additional question, Q251, to assess whether or not they had a legal arrangement. At Q251, 5 of the 9 respondents with an informal arrangement from the rosters, answer affirmatively and are reclassified as having a legal arrangement during the reference year. Additionally, 7 respondents classified as having a legal arrangement from the rosters, report that the year of their first legal arrangement (from Q259) was not until 1997 and so are reclassified as not having an arrangement for support during 1996. Thus, 493 respondents (87 percent) are classified as having a legal arrangement, 4 (1 percent) have an informal arrangement, and 69 (12 percent) do not have an arrangement for child support payments based on responses to questions in Section B of the questionnaire.
       Overview of available information from the CRD. A variable in the CRD records, for every visit to the court, whether or not support was awarded. For the majority of cases support is awarded during the respondent's initial contact with the system. Approximately nine percent of the respondents are coded as never having a legal arrangement. There are two situations in which a respondent could legitimately not have an arrangement for support either by having a split custody arrangement or if the child/ren live equally with both parents and the majority of respondents not having a legal arrangement are coded as having joint custody in the CRD. None of the respondents without legal arrangements have payments recorded before 1/1/1998.
       Assessing Accuracy. A dichotomous variable is coded 1 if the PS3 and CRD indicate a support

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[8] See Appendix B for the exact wordings of the questions referred to in this section.

order was in effect before 1997; coded 0 otherwise. If the respondent is classified as having a legal arrangement in the PS3 but no award in the CRD (or vice-versa), the respondent is coded as a non-match. If both the PS3 and CRD indicate no award for support, the respondent is coded as a match. If the respondent is classified as having an informal arrangement from the rosters but later reports that the arrangement was made legal, the respondent is treated as having a legal arrangement for the purposes of this question.

Interaction Coding.   Uses coding records from the last question used to determine the legality of the arrangement, which for most respondents, is Q154.

Child Aged Out

Overview of information available in the PS3.   The question about whether a child aged out appears first in a series of inquiries about possible legal changes to the legal arrangement in Section B of the instrument. See "Year of First Support Order" for a description of issues to consider in classifying respondents in terms of their response accuracy. A respondent is coded as having a child age out, if s/he responds affirmatively to the question.

Overview of available information from the CRD.   The CRD does not include a single measure to determine whether a child aged out, which I define as turning 18 and thus not being eligible for support. I compare the number of children referred to in subsequent actions (returns to court) and if the following are true, code the respondent as having a child who aged out: the number of children in the current action is less than the previous action; at least one child is 18 or older in the current action; either the amount of support from the previous action or the percentage changes from the previous action; and there is a valid date for the action and the date occurs before the date of the PS3 interview.

Assessing Accuracy.   A dichotomous variable is coded 1 if respondents reported having a legal arrangement for support and their report of having a child age out in the PS3 matches their value in the CRD; coded 0 otherwise. If the respondent is classified as having a legal arrangement in the PS3 but no award in the CRD (or vice-versa), the respondent is coded as a non-match. If both the PS3 and CRD indicate no award for support, the respondent is coded as a match. If the respondent is classified as having an informal arrangement from the rosters but later reports that the arrangement was made legal, the respondent is treated as having a legal arrangement for the purposes of this question.

Interaction Coding.   Uses coding records from the current question for respondents with legal arrangements in the PS3 and CRD. For respondents reporting inaccurately about the legality of their arrangement, uses records (mainly) from the Child Support Roster.

Support Set as a Percentage

Overview of information available in the PS3.   The question about whether the amount of child support was set as a percentage of the other parent's income appears second in a series of inquiries about possible legal changes to the legal arrangement. See "Year of First Support Order" for a description of issues to consider in classifying respondents in terms of their response accuracy. A respondent is coded as having support set as a percentage, if s/he responds affirmatively to the question.

Overview of information available in the CRD.   Each court action or return to court is examined to see whether the original order and then any modifications to the amount of support in the original order are expressed as a percentage of the payer's income.

Assessing accuracy.   A dichotomous variable is coded 1 if the respondent reported having a legal arrangement for support and her report of having support expressed as a percentage in the PS3 matches her value in the CRD; coded 0 otherwise. If the respondent is classified as having a legal arrangement in the PS3 but no award in the CRD (or vice-versa), the respondent is coded as a non-match. If both the PS3 and CRD indicate no award for support, the respondent is coded as a match. If the respondent is classified as having an informal arrangement from the rosters but later reports that the arrangement was made legal, the respondent is treated as having a legal arrangement for the purposes of this question.

Interaction Coding.   Uses coding records from the current question for respondents with legal

arrangements in the PS3 and CRD. For respondents reporting inaccurately about the legality of their arrangement, uses records (mainly) from the Child Support Roster.

Child Support Owed
Overview of information available in the PS3. The question about whether child support was owed in 1996 appears in the section on terms of the support order and was included in an experiment on question wording. Respondents reporting never having a support order (from the roster), having an informal arrangement, or not having an order until 1997 are coded as having zero dollars owed in 1996.
Overview of available information from the CRD. Whether or not any support was owed in 1996 is determined by there was an order for support in 1996 (see details under Ever a Support Order).
Assessing accuracy. A dichotomous variable is coded 1 if the respondent reported having a legal arrangement for support in 1996 and her report of having a support order matches her standing in the CRD; coded 0 otherwise. If the respondent is classified as having an order in 1996 in the PS3 but no award in the CRD (or vice-versa), the respondent is coded as a non-match. If both the PS3 and CRD indicate no award for support in 1996, the respondent is coded as a match. If the respondent is classified as having an informal arrangement from the roster but later reports that the arrangement was made legal, the respondent is treated as having a legal arrangement for the purposes of this question.
Interaction Coding. Uses coding records from the current question or last question used to determine the legality of the arrangement.

Visitation Legalized
Overview of information available in the PS3. The questions about legalizing visitation are included as a part of a split-ballot experiment on question ordering (see Schaeffer and Dykema 2004) and appear in Section F on custody arrangements. These questions are asked of all respondents.

The experiment varied the placement of the question on joint legal custody in order to improve reporting about this construct. Half of the respondents were randomly assigned to the Final Form condition in which legal custody was asked about last and questions were administered in the following order: Visitation Legalized, Primary Physical Custody, and Joint Legal Custody.

Values for the construct visitation legalized are determined by responses given to Q504a/Q505f and Q504b/Q505g. Only respondents answering yes to the initial question (Q504a/Q505f) about whether the noncustodial parent had the right to see the child were asked the followup question (Q504b/Q505g) about whether the visitation privileges were made legal. I combined responses from the two questions into five categories: "yes" responses to both questions; "yes" to the initial question followed by "no"; "yes" followed by a "don't know" response; "no" to the initial question (and inapplicable to the followup question); and "don't know" to the initial question (and inapplicable to the followup question).
Overview of available information from the CRD. For each contact with the courts, a variable in the CRD documents whether and how much visitation was awarded. This variable is coded as: "early 'reasonable'," "early 'restricted'," "reasonable," "restricted," "generous," "no visitation ordered or no visitation allowed," "no custodial or non-custodial parent," and "scheduled visitation." In addition, some cases never take on a value for visitation and are assigned to a missing data code. To create a measure from the CRD, a counter is initialized to a missing value and subsequently evaluates the following for each action in the dataset: If the date of the court action is before the date of the PS3 interview and if the action indicates the case was assigned to a valid code for visitation (e.g., "early 'reasonable'," "early 'restricted'," "reasonable," "restricted," "generous," and "scheduled visitation"), the counter achieves a value of one. If the case is not assigned to one of these categories but is coded as either "no visitation ordered or no visitation allowed" or "no custodial or non-custodial parent," the case is assigned to zero. Approximately 86 percent of the cases are coded as having visitation privileges; 3 percent are assigned to zero or no visitation privileges category; and 12 percent are coded as missing (i.e., the case never assumes a value for visitation).
Assessing Accuracy. If the respondent answered yes to both survey questions and the court

record indicated that visitation privileges were granted at some point before the PS3 interview (or both sources indicated they were not), the respondent is coded as accurate; if the sources are in disagreement, the respondent is coded as inaccurate. All respondents providing a don't know response are coded as mismatches between the PS3 and CRD for this construction of the variable.

Interaction Coding. I use behavior coding records from the initial question for respondents answering "no" or "don't know" to the initial question; for respondents answering "yes" to the initial question and receiving the followup question, I use behavior coding records from the followup question.

Primary Physical Custody

Overview of information available in the PS3. The question about primary physical custody is included as a part of a split-ballot experiment on question ordering (see Schaeffer and Dykema 2004) and appears in Section F on custody arrangements. This question is asked of all respondents. See Visitation Legalized for more details about the experiment.

In addition to standard categories to code don't know and refusal responses, the response categories included two "if volunteered" categories: "if volunteered: respondent has primary placement but doesn't know if legal (e.g., "Child just lives with me")" and "if volunteered: other parent has primary placement but respondent doesn't know if legal (e.g., "Child just lives with other parent")." These categories were selected by 16 respondents and are treated in the same manner as the standard don't know category (described below).

Overview of available information from the CRD. For each relevant contact with the courts, a variable in the CRD documents whether physical custody was coded as: "mother custody," "father custody," "equal time share," "other," "split custody," or "some combination with 2 or more children." To create a measure from the CRD, a counter is initialized to zero and subsequently evaluates the following for each contact: If the date of the contact is before the date of the PS3 interview and if the records indicate the case was assigned to "mother" or "father" custody, the counter achieves a value of one. If the case does not indicate that "mother" or "father" custody was ever given, the counter remains at zero. The counter also flags cases that never achieve the value of "mother/father" custody but are coded as "some combination with 2 or more children." For the one case flagged, I code the respondent as having primary physical custody. Of the remaining respondents, approximately 87 percent are coded as ever having primary physical custody (i.e., mother/father custody).

Assessing Accuracy. If the respondent answered yes to the survey question and the court record indicates that primary custody was granted at some point before the PS3 interview (or both sources indicate primary custody was never granted), the respondent is coded as accurate; if the sources are in disagreement, the respondent is coded as inaccurate.

Interaction Coding. Uses coding records from the current question only.

Joint Legal Custody

Overview of information available in the PS3. The question about joint legal custody is included as a part of a split-ballot experiment on question ordering (see Schaeffer and Dykema 2004) and appears in Section F on custody arrangements. This question is asked of all respondents. See Visitation Legalized for more details about the experiment.

Overview of available information from the CRD. A case is coded as having joint legal custody if the CRD indicated it was awarded. A variable indicates who had legal custody in the initial court order. Then this value is compared to the value of legal custody (if it changed) in each subsequent return to court. If there was a change, then the value of legal custody is changed to the new value and a separate variable records that there was a change. A categorical variable is produced that indicates whether joint custody was granted to: the mother (only), the father (only), joint to both parents, someone else, split between the parents, or that there were multiple children with different legal custody situations. From this continuous variable a dummy variable was created to indicate whether joint legal custody was assigned before the date of the PS3 interview.

Assessing Accuracy. A dichotomous variable is coded 1 if the respondent reported having joint legal custody in the PS3 and her report of having matches her value in the CRD; coded 0 otherwise.

Interaction Coding. Uses coding records from the current question only.

Year of First Support Order

Overview of information available in the PS3. This question appears in the first section in the body of the questionnaire. As with all questions about terms of or changes to the legal arrangement, this item is only asked of respondents who report having a legal arrangement. Classifying respondents in terms of response accuracy involves taking into account: (1) the respondent's report of their arrangement type (legal versus informal versus none) as determined by questions in the roster; (2) specific modifications to the respondent's arrangement type based on questions in the body of the questionnaire such as (a) four respondents who report having an informal arrangement in the rosters report that they made the arrangement legal in the main questionnaire and are treated as having a legal arrangement for the remainder of the questionnaire and (b) a few respondents who report a legal arrangement in the rosters but later report that the arrangement did not start until 1997 and are reclassified as not having an arrangement in 1996; and whether support was awarded in the CRD.

Overview of available information from the CRD. To obtain the year of the first legal arrangement I use the date of the judgement for the first action in which support is awarded and a commencement date appears.

Assessing Accuracy. A dichotomous variable is coded 1 if the respondent reported having a legal arrangement for support and the year of the first support order in the PS3 matches the value in the CRD; coded 0 otherwise. If the respondent is classified as having a legal arrangement in the PS3 but no award in the CRD (or vice-versa), the respondent is coded as a non-match. If both the PS3 and CRD indicate no award for support, the respondent is coded as a match. If the respondent is classified as having an informal arrangement from the rosters but later reports that the arrangement was made legal, the respondent is treated as having a legal arrangement for the purposes of this question.

Interaction Coding. Uses coding records from the current question for respondents with legal arrangements in the PS3 and CRD. For respondents reporting inaccurately about the legality of their arrangement, uses coding (mainly) from the Child Support Roster.

Year of Paternity Establishment

Overview of information available in the PS3. In order to construct a measure for the year of paternity establishment from the PS3, it is necessary to define the eligible sample. Questions about paternity appear in the section on "help getting support" and are only asked of custodial parents. Noncustodial parents (n = 214) are assigned to system missing. (Custodianship is determined by the respondent's answers to questions in the Child Roster.) Although paternity can only be established for cases that enter the courts as paternities, I retain custodial cases from divorces (n = 212). Three custodial respondents from paternity cases are missing because they are from partially completed interviews.

After removing noncustodial parents, I categorize the remaining respondents. The first question in the series (Q400) asks whether the respondent had ever contacted or been contacted by a government agency about something to do with support. Respondents answering no are skipped past the questions about paternity establishment. Respondents are coded as inaccurate if a year is available in the CRD or system missing if information is missing from the CRD. At the following question (Q402b) respondents are asked if they were ever in contact about establishing paternity. Respondents answering no or providing missing responses are skipped past the remaining questions about paternity establishment. Respondents are coded as inaccurate if a year is available in the CRD or system missing if information is missing from the CRD. Next, (Q403a) interviewers asked whether paternity was ever legally established. Respondents answering no are skipped past the remaining questions about paternity establishment. Respondents are coded as inaccurate if a year is available in the CRD or system missing if information is missing from the CRD. Finally respondents are asked for the year of establishment (Q403b). All

respondents providing missing data have valid years in the CRD and are coded as inaccurate.

Overview of available information from the CRD. For cases originating as paternities, paternity is determined as the date of the first visit to the court.

Assessing accuracy. A dummy variable is coded 1 for accurate if the year provided in the PS3 is the same year recorded in the CRD; coded 0 otherwise. If the respondent answered "no" to a preceding yes-no filter question about contact with outside agencies and had a year of paternity establishment recorded in the CRD, she is coded as inaccurate; if she answered "no" and the CRD indicated paternity was not established or not relevant in the case of divorces, she is coded as accurate.

Interaction Coding. Uses coding records from the last relevant question asked in the series on contact with outside agencies.

Years of Marriage and Divorce

Overview of information available in the PS3. Questions appear in Section H of the questionnaire. Only respondents from cases classified as originating from divorces are included in the analysis. Because of the wording of the questions used to gather marital histories, there may be some error in matching responses from the survey to the court records. For example, if the respondent's current marital status is married and she reports being married previously Q706 asks "In what year did you get married that time?" Depending on how many times she was married – which was not assessed in the survey – the marriage the respondent equates with "that time" may or may not be the marriage referred to in the court record. However, in the context of the survey it is most likely that respondents opted to report about the marriage connected with the children asked about in the survey.

Overview of available information from the CRD. The year of marriage is provided in the CRD and the year of divorce is provided by the date of the final divorce judgment in the court records.

Assessing accuracy. For both marriage and divorce, a dichotomous variable is coded 1 if the year provided in the PS3 matches (exactly) the year in the CRD; coded 0 otherwise.

Interaction Coding. Uses coding records from the current question only.

Child Support Exchanged

Overview of information available in the PS3. Depending on other factors related to the respondent's situation, such as whether she was owed a regular amount of support for a fixed amount or whether the amounts and the payment intervals varied, the amount of support exchanged was obtained from several different questions in the instrument (see Appendix B for the wording of the questions). I impute a value of zero dollars for respondents who report not having a legal arrangement for support.

Overview of available information from the CRD. In the CRD support payments are recorded by the court and divided into three categories: child support, family support, and social services. Payments are recorded separately for each month in 1996. To create an aggregate measure I add child and family support payments for each month in 1996 for mothers; for fathers I also include payments to social services.

Assessing accuracy. A dichotomous variable is coded 1 if the amount of support the respondent reports receiving/paying in 1996 matches the value in the CRD; coded 0 otherwise. Don't know and refusal responses to the survey question are coded as system missing values.

Interaction Coding. Question varies depending on characteristics of the respondent's situation.

Question Wordings from the Custodial (Mothers') Version of the PS3 Instrument

Ever a Support Order (Section A)

Q150   (A <u>legal</u> arrangement about financial support for a child could be called many things, for example, a court order, a divorce or separation agreement, or a legal agreement.)   Has there <u>ever</u> been <u>any</u> kind of <u>legal arrangement</u> for (CHILD)'s father to provide <u>any kind</u> of financial support for (him/her)? (*Yes; No*)

Q152   [If "no," to Q150] Has there <u>ever</u> been any <u>other</u> kind of agreement or understanding for (CHILD)'s father to help support (him/her)? (*Yes; No*)

Q154   (Payments that are made for the support of a child are called child support.) (, even if there is no legal arrangement).) According to the court order was (CHILD)'s father <u>ever supposed to</u> make child support payments? (*Yes; No*)

Q156   Which of your other children were <u>ever</u> covered by the <u>same</u> court order? (*Yes; No*)

Year of First Support Order (Section B)

Q259   In what year did you <u>first</u> have any kind of court order, judgment or legal arrangement about child support payments for (CHILDREN)? *[YEAR]*

Child Aged Out (Section B)

Q266   The next questions are about reasons that the amount of child support the children's father was <u>supposed to</u> pay might have changed since you <u>first</u> had the court order about child support for (CHILDREN). Did the amount of child support <u>ever</u> change because a child covered by the court order was too old to be entitled to receive support? (*Yes; No*)

Support Set as a Percentage (Section B)

Q266a   Sometimes when child support is set as a percentage of the father's income, the amount of child support can change if the father's income changes. Was the amount of child support in the court order set as a percentage of the father's income? (*Yes; No*)

Child Support Owed (Section C)

Q300   Now, please think <u>just</u> about the <u>terms of the court order for</u> child support for (CHILDREN). The next questions ask about what was <u>supposed to</u> happen, even if the court order was not followed exactly. After I ask you questions about the child support you were <u>supposed to</u> receive, I am going to ask you questions about the child support you <u>actually</u> received, and then about other kinds of support the children's father provided. Between January 1st and December 31st, 1996, was the children's father <u>supposed to</u> make <u>any</u> child support payments, [even one,] for any of the children? (*Yes; No*)

Child Support Paid (Section D)

Asked of Custodial Respondents who Reported Receiving Support Through AFDC

Q326f   Sometimes a mother who receives child support payments as an A.F.D.C. disregard or pass-through also receives other child support payments. This could happen during months when she does not receive A.F.D.C. or for some other reason. Other than the child support payments you received in disregard or pass-through checks, did you receive <u>any</u> other payments, [even one,] for <u>regular</u> child support in 1996 for (CHILDREN)? (*Yes; No*)

Q329c2   Not counting the [TOTAL] dollars in child support payments you received in disregard or pass-through checks, how much <u>regular</u> child support did you <u>actually</u> receive <u>altogether</u> in 1996 for (CHILDREN)?

Asked of Respondents who Reported Not Receiving Support Through AFDC

Q327   Next, I would like to know whether you <u>actually</u> received any of the child support payments you were <u>supposed to</u> receive during 1996. These payments might have been for all or for part of the amount you were <u>supposed to</u> receive. You might have received these payments from the clerk of courts, from another agency, or directly from the other parent. Between January 1st and December 31st, 1996, did you <u>actually</u> receive <u>any</u> child support payments, [even one,] for (CHILDREN)? (*Yes; No*)

Asked if Payments Exchanged Were for a Fixed Amount over a Fixed Interval

Q329a   So you received [AMOUNT] dollars (every week/every other week/twice a month/every month/every quarter/for the year) in child support in 1996. That makes a total of [TOTAL] dollars in 1996. Is this correct? (*Yes; No*)

Q329e   What is the correct amount of child support you <u>actually</u> received <u>altogether</u> in 1996?

Asked if a Payments Exchanged Were for a Variable Amount and/or a Variable Interval

Q329b   I need your help figuring out how much child support you <u>actually</u> received <u>altogether</u> in 1996. This information may be difficult to remember so please take as much time as you need and try to be as accurate as possible. ((If you received all the payments you were <u>supposed to</u>, that would be (52 weekly payments./26 payments every other week./24 bimonthly payments./12 monthly payments./4 quarterly payments./1 annual payment.)) / Before you told me you <u>actually</u> received [TOTAL NUMBER OF PAYMENTS] payment(s).) I'd like to record the number of payments you received and the amount of those payments, so we can calculate the total. For example, you might have received 1 payment for 50 dollars and 5 payments for 30 dollars each. Could you tell me the number of payments you received in 1996 and their amounts? (# *Payments, Amount, Total*)

Q329d   So you received [TOTAL NUMBER OF PAYMENTS] payment(s) for a total of [TOTAL AMOUNT] dollars in 1996. Is this correct?

Filter Question Asked of Respondents with Complicated Payment Histories

Q329c1 Okay. I realize this is a difficult question, but it is very important to our research. <u>About</u> how much child support did you <u>actually</u> receive <u>altogether</u> in 1996 for (CHILDREN)?

<u>Year of Paternity Establishment (Section E)</u>

Q400   The next questions are about things that might have happened at any time, not just during 1996. Have you ever contacted or been contacted by a child support enforcement or 4D office, a department of social services, a welfare office, or a similar state or local government agency about something to do with child support? (*Yes; No*)

Q402b   Were you and an agency ever in contact about getting a legal ruling about who the father is, that is, about establishing paternity? (*Yes; No*)

Q403a   You said earlier that you and an agency were in contact about obtaining a legal ruling about who the father is, that is, legally establishing paternity. Was paternity ever legally established for (CHILDREN)? (*Yes; No*)

Q403b   In what year was paternity legally established for (him/her/them)? *[YEAR]*

<u>Visitation Legalized (Section F)</u>

Q504a/   (The next questions are about the relationship between (CHILD) and his father.)   A parent's
Q505f   right to see a child is sometimes called visitation privileges. Does (CHILD)'s father have the right to see (CHILD), whether or not he actually does? (*Yes; No*)

Q504b/ Were the visitation privileges or right to see the child ever made legal a court, judge, or in a
Q505g   divorce decree? (*Yes; No*)

Primary Physical Custody (Section F)

Q504d/ (I'm going to ask about physical custody and legal custody. It is easy to confuse them, so I'm
Q505c   going to read some definitions.) Sometimes children live with one parent for most of the
       time. This is called primary physical custody or primary placement. Did a court, judge, or
       divorce decree <u>ever</u> give you or (CHILD)'s father primary physical custody or primary
       placement of (CHILD)? (*Yes; No*)

Joint Legal Custody (Section F)

Q504g/ (The next questions are about the relationship between (CHILD) and his father.) I'm going
Q505a   to ask about legal custody and physical custody. It's easy to confuse them, so I'm going to
       read some definitions.) Joint <u>legal</u> custody of a child means that both parents have the legal
       right to help make decisions about the child, for example about medical care or education.
       Did a court, judge, or divorce decree <u>ever</u> give you and (CHILD)'s father joint <u>legal</u> custody?
       (*Yes; No*)

Years of Marriage and Divorce (Section H)

Q705   In what year did your (most recent) (divorce become final/separation take place)? *[YEAR]*

Q706   In what year did you get married (that time)? *[YEAR]*

Figure 1. Interaction Codes Used to Describe Interviewers' Behaviors

Code	Definition	Examples[a]
Question-Asking Behaviors: Assigned during the initial reading of the question		
Exact or Slight Change	Reads question exactly or with corrections OR Adds/deletes 1-3 words that do <u>not</u> alter the question's meaning.	**Q:** *Is Jason from the most recent divorce or separation?* **I:** Is Jason from the most recent divorce or separation? **I:** Is Jason from the most recent <u>separation I mean</u> divorce or separation? **Q:** *In what year did you first have any kind of court order, judgment or legal arrangement about child support payments for Joe?* **I:** In what year did you first have any kind of court order, judgment or legal arrangement about <u>your</u> child support payments for Joe?
Major Change or Not Asked	Adds/deletes 4 or more words OR add/deletes 1 or more words that alter the question's meaning OR skips relevant question.	**Q:** *At any time during 1996, did any children of your own under 21 live somewhere else, for example, with a relative or in a foster home?* **I:** And during 96 did any other children of your own under 21 that lived elsewhere for example with another relative. **Q:** *Were there also any changes in the amount of child support he was supposed to pay in 1996?* **I:** Were there also any changes **R:** [R interrupts] No **I:** Okay, and the next question is
Elaboration	Includes a clarifying phrase.	**Q:** *Does Fred's father have visitation privileges?* **I:** Does Fred's father have visitation privileges? <u>That means, does Fred's father have the right to see Fred</u>?
Verification	Includes a verification of previously offered information.	**I:** In what year did your divorce take place? **R:** We were married in 1985 and divorced in 1989. **Q:** *What was the year of that marriage?* **I:** And you said the year of that marriage was 1985?
Stress Problem	Fails to verbally emphasize underlined word or phrase.	No examples provided; behavior is verbal.

(Figure 1 is continued on the following page.)

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Figure 1 Continued.

Code	Definition	Examples
Followup Behaviors: Assigned after the initial reading of the question		
Adequate Followup	Followup behavior conforms to principles of standardization (e.g., neutral probe).	**Q:** *How satisfied are you with having had no child support arrangement with Amy's mother in 1996, are you somewhat satisfied, quite satisfied, very satisfied, or extremely satisfied?* **I:** How satisfied are you with having had no (interruption) **R:** Very. **I:** What I'm doing is typing off a computer screen, typing in ans. They give you specific answers so let me just read through them. (Interviewer repeats question.)
Inadequate Followup	Followup behavior does not conform to principles of standardization (e.g., leading probe).	**Q:** *How fair do you think it was that you did not have a child support arrangement in 1996, was it somewhat fair, quite fair, very fair, or extremely fair?* **I:** How fair do you think it was that you did not **R:** Extremely. **I:** Extremely fair, okay, we're ahead of the game.
Other Behaviors: Assigned on any exchange level		
Laughter	Interviewer laughs.	No examples provided; behavior is verbal.
Responds with Feeling	Conveys feelings about the survey instrument or procedures or conveys feelings about R or R's situation.	**I:** Did the amount you were <u>supposed to</u> pay <u>ever</u> change because you or the children's mother went back to court <u>and</u> changed the understanding in order to include support that was owed for previous years? **R:** Well it was just changed. Let me explain. It was 90 a month 'till November and then it changed to 45 a month. So you tell me how to answer that? **I:** I can't tell you how to answer that. I'm really sorry. We can just pass on this question. Other examples include interviewers distancing themselves from difficult questions, expressing empathy with Rs' situations, and making appeals to the computer or computer program.

[a]Key to abbreviations: "Q" = wording of the question; "I" = interviewer's behavior (e.g., reading the question, following up on the respondent's answer); "R" = respondent's behavior (e.g., answering the question).

[b]These codes – exact/slight change versus major change/not asked – are mutually exclusive and coders were required to assign one of these to capture the interviewer's reading of the survey question.

Figure 2. Interaction Codes Used to Describe Respondents' Behaviors

Code	Definition	Examples[a]
Question-Answering Behaviors[b]		
Codable Answer	Response answers question and can be coded into response categories or response format.	**I:** Would you call it a court order or a legal agreement? **R:** It was a court order.
Uncodable Answer	Response either does not answer question OR it cannot be coded into response categories or response format.	**I:** Between January 1st and December 31st, 1996, on how many days did Lucas spend any time with you? [NUMBER OF DAYS] **R:** He sees me every other weekend. **I:** Are you currently married, divorced, separated, widowed, or never been married? **R:** I'm living with someone.
Implicitly Codable Answer	Response answers question but does not match response categories or response format.	**I:** Did you receive any A.F.D.C. or A.D.C. payments? **R:** I've never been on A.F.D.C. **I:** Did any children of your own under 21 years of age live with you? **R:** I've lived alone since the divorce.
Other Behaviors		
Qualification	Answer includes a qualifier such as "probably" or "about."	**I:** Between January 1st and December 31st, 1996, on how many days did Lucas spend any time with you? **R:** I'd say about 30 days.
Don't Know	Offers a don't know response.	**I:** In what year did you FIRST have an agreement about child support payments for Lucas and Max? **R:** I don't know -- either '94 or '95.
Pause[c]	Pauses/hesitates 2 seconds or more.	No examples provided; behavior is nonverbal.

Figure 2 Continued.

Code	Definition	Examples
Seeks Clarification	Requests repeat of the question or clarification of a term.	**I:** Between January 1st and December 31st, 1996, on how many days did Lucas spend any time with you? **R:** In total?
Elaboration	Provides information in addition to a codable answer.	**I:** Has there ever been any kind of legal arrangement for you to provide any kind of financial support for Max? **R:** Yes, a court order as part of our divorce agreement.
Refusal	Refuses to answer.	**I:** Did the children's mother receive A.F.D.C. or welfare at any time during 1996, or is that something you don't know? **R:** I'm not going to answer that.
Interruption[c]	Interrupts initial reading of the question.	**Q:** *Of the child support payments you actually received in 1996, how many of them were received on time. Would you say all of them were on time, most of them, some of them, or none of them?* **I:** Of the child support payments you actually received in 1996, how many of them were received on time **R:** A couple. **I:** OK, some of them.
Laughter	Respondent laughs.	No examples provided; behavior is verbal.
Responds with Feeling	Respondent conveys feelings about the survey.	**I:** During 1996, did you buy any clothes or shoes for Lucas and Max? **R:** What do you mean by clothes? That's kind of vague.

[a] Key to abbreviations: "Q" = wording of the question; "I" = interviewer's behavior (e.g., reading the question, following up on the respondent's answer); "R" = respondent's behavior (e.g., answering the question).

[b] These codes – codable answer, uncodable answer, and implicitly codable answer – are mutually exclusive on a given exchange level.

[c] Codes are only assigned on the first exchange level.

Table 1. All Dependent Variables: Descriptive Statistics for Accuracy in Survey Reports and Interviewer-Respondent Interaction Codes Evaluated At-the-Question

	Characteristics of the Court Order							Years of Events				Amounts
	Ever Support Order	Child Aged Out	Support Set as Percent	Child Support Owed	Visit Legal	Primary Physical Custody	Joint Legal Custody	First Support Order	Paternity	Marriage	Divorce	Child Support Exchanged
Panel A: Dependent Variable												
Proportion accurate	.92 (.27)	.85 (.35)	.65 (.48)	.90 (.30)	.69 (.46)	.76 (.43)	.81 (.39)	.45 (.50)	.62 (.49)	.80 (.40)	.60 (.49)	.28 (.45)
Panel B: Interaction Codes												
Interviewer Question-Asking												
Exact/Slight Change	.84	.86	.89	.62	.85	.78	.73	.92	.89	1.00	.95	.61
Major Change/ Not Asked	.16	.14	.11	.38	.15	.22	.27	.08	.11	LT .01	.05	.39
Interviewer Followup Behaviors												
None	.03	.58	.52	.54	.56	.45	.60	.26	.68	.45	.52	.37
Adequate Only	.34	.35	.41	.41	.35	.40	.33	.63	.27	.50	.42	.53
Any Inadequate	.63	.07	.07	.05	.08	.15	.07	.11	.05	.05	.06	.10
Other Interviewer Behaviors												
Elaboration	.01	.03	.03	.02	.01	.01	LT .01	.03	.01	.04	.02	.04
Verification	.02	.03	.02	.01	LT .01	.01	.01	.01	.01	LT .01	.01	.03
Stress Problem	.40	.54	b	.65	b	.41	.56	.36	b	b	b	.26
Laughter	.01	.02	.02	.01	LT .01	.03	.03	.04	.03	.06	.08	.07
Feeling	.04	.05	.03	.05	.03	.07	.06	.05	.01	.03	.06	.13

(Table 1 is continued on the following page.)

Table 1 Continued.

	Characteristics of the Court Order							Years of Events				Amounts
	Ever Support Order	Child Aged Out	Support Set as Percent	Child Support Owed	Visit Legal	Primary Physical Custody	Joint Legal Custody	First Support Order	Paternity	Marriage	Divorce	Child Support Exchanged
Respondent Question-Answering[a]												
Codable	.88	.82	.77	.80	.78	.60	.81	.67	.90	.78	.90	.77
Implicitly Codable	.03	.05	.08	.02	.08	.19	.06	.01	.02	LT .01	.01	.09
Uncodable	.04	.06	.10	.05	.07	.15	.08	.20	.04	.03	.06	.09
Other Respondent Behaviors												
Qualification	.01	.04	.07	.03	.08	.05	.05	.37	.06	.07	.17	.14
Don't Know	.01	.03	.05	.01	.05	.04	.03	.09	.02	.02	.04	.01
Pause	.05	.10	.10	.07	.14	.09	.08	.24	.06	.33	.24	.05
Elaboration	.09	.09	.13	.08	.09	.12	.07	.14	.05	.08	.11	.07
Seek Clarification	.05	.07	.04	.13	.06	.05	.03	.09	.03	.20	.01	.05
Interruption	.01	.03	.02	.03	.04	.08	.09	.02	.08	.00	.00	.15
Laughter	.02	.02	.03	.03	.03	.04	.04	.05	.05	.11	.09	.09
Feeling	.01	.02	.02	.02	.02	.03	.02	.09	.02	.06	.06	.03
Exchange Levels												
1-4 or more levels (Continuous)	1.52 (.79)	1.69 (.97)	1.78 (1.00)	1.73 (.95)	1.68 (.93)	1.89 (1.00)	1.60 (.88)	2.28 (1.05)	1.47 (.80)	1.83 (.94)	1.62 (.76)	2.00 (1.01)
Sample Size	511	510	509	509	506	507	505	512	301	339	342	483

[a] Proportions for codable, implicitly codable, and uncodable answers do not add to 1.00; differences reflect the fact that some respondents provided "other" responses. Variables contain imputations described earlier.

[b] This behavior was not coded for this survey question because none of the words in the question were stressed.

Table 2. Odds Ratios from Logistic Regression Equations of Accuracy (Match Versus Non-Match) in Reports about Various Constructs on Interviewer and Respondent Interaction Codes Evaluated At-the-Question

	Characteristics of the Court Order							Years of Events				Child Support Exchanged
	Ever Support Order	Child Aged Out	Support Set as Percent	Child Support Owed	Visit Legal	Primary Physical Custody	Joint Legal Custody	First Support Order	Paternity	Marriage	Divorce	
Interviewer Question-Asking												
Major change/not asked [vs. exact/ slight change]	.70 (.29)	1.17 (.45)	.70 (.20)	.83 (.25)	**.52*** **(.13)**	.91 (.22)	**.59*** **(.15)**	1.03 (.33)	.60 (.22)	b	.58 (.28)	**2.38**** **(.49)**
Interviewer Followup Behaviors												
[None]	—	—	—	—	—	—	—	—	—	—	—	—
Adequate Only	**.35**** **(.13)**	**.29**** **(.08)**	**.53**** **(.11)**	**.55+** **(.17)**	**.64*** **(.13)**	.94 (.22)	**.50**** **(.12)**	**.50*** **(.10)**	**.43**** **(.12)**	.77 (.22)	**.51**** **(.12)**	1.32 (.30)
Any Inadequate	**.12**** **(.07)**	**.14**** **(.06)**	**.18**** **(.07)**	**.30*** **(.16)**	**.14**** **(.05)**	**.37**** **(.11)**	**.20**** **(.08)**	**.23**** **(.08)**	**.20**** **(.11)**	**.23**** **(.12)**	.59 (.28)	**2.35*** **(.80)**
Other Interviewer Behaviors												
Elaboration [vs. None]	.49 (.53)	.93 (.73)	1.34 (.80)	1.00 (1.07)	.29 (.27)	.62 (.76)	.23 (.32)	.77 (.45)	b	1.42 (1.11)	2.04 (1.68)	**.15+** **(.16)**
Verification [vs. None]	.66 (.70)	1.19 (.92)	.66 (.45)	b	.44 (.63)	1.56 (1.71)	.91 (1.03)	.62 (.54)	.60 (.85)	b	.33 (.41)	.39 (.30)
Stress Problem [vs. None]	1.02 (.35)	1.07 (.27)	c	**1.77+** **(.53)**	c	.96 (.20)	.83 (.19)	1.02 (.19)	c	c	c	**3.67**** **(.81)**
Laughter [vs. None]	b	1.36 (1.46)	.53 (.34)	b	b	1.73 (1.34)	.73 (.43)	**.38+** **(.20)**	.59 (.38)	**.42+** **(.19)**	1.04 (.42)	.78 (.33)
Feeling [vs. None]	**.31*** **(.18)**	**.41+** **(.19)**	**.36*** **(.18)**	.62 (.35)	**.24*** **(.13)**	1.41 (.61)	.64 (.27)	.50 (.23)	.60 (.60)	1.02 (.82)	1.94 (1.03)	**1.68+** **(.48)**

Table 2 Continued.

	Characteristics of the Court Order							Years of Events				Child Support Exchanged
	Ever Support Order	Child Aged Out	Support Set as Percent	Child Support Owed	Visit Legal	Primary Physical Custody	Joint Legal Custody	First Support Order	Paternity	Marriage	Divorce	
Respondent Question-Answering												
[Uncodable/Other]	—	—	—	—	—	—	—	—	—	—	—	—
Codable	1.64	**2.25***	**2.91****	.74	**2.53****	1.04	**4.80****	**2.01****	**5.22****	1.12	**2.01+**	.96
	(.83)	**(.73)**	**(.74)**	(.31)	**(.67)**	(.26)	**(1.39)**	**(.40)**	**(2.59)**	(.36)	**(.79)**	(.27)
Implicitly Codable	.75	.85	1.20	.34	**2.35***	**3.63****	1.44	2.02	1.07	b	.31	**.05****
	(.67)	(.45)	(.46)	(.30)	**(.98)**	**(1.49)**	(.67)	(1.68)	(1.03)		(.36)	**(.05)**
Other Respondent Behaviors												
Qualification [vs. None]	.32	.67	**.50***	**.26****	**.52+**	.88	**.22****	**.42****	**.36***	**.30****	**.26****	**.06****
	(.37)	(.38)	**(.17)**	**(.16)**	**(.18)**	(.40)	**(.09)**	**(.08)**	**(.18)**	**(.13)**	**(.08)**	**(.05)**
Don't Know [vs. None]	.24	**.26***	**.30***	**.05****	**.14****	**.13****	**.04****	**.57+**	**.12+**	**.03****	.56	b
	(.28)	**(.15)**	**(.13)**	**(.05)**	**(.06)**	**(.07)**	**(.03)**	**(.19)**	**(.13)**	**(.04)**	(.32)	
Pause [vs. None]	**.30***	**.30****	**.50***	.56	**.57***	.73	**.21****	**.68+**	**.21****	.89	.73	.37
	(.16)	**(.10)**	**(.15)**	(.27)	**(.15)**	(.25)	**(.07)**	**(.14)**	**(.11)**	(.25)	(.19)	(.23)
Seek Clarification [vs. None]	2.04	1.09	.79	2.55	1.12	.88	**.35+**	.66	.35	1.44	.44	**4.36****
	(2.11)	(.54)	(.37)	(1.56)	(.48)	(.40)	**(.21)**	(.21)	(.26)	(.52)	(.40)	**(1.92)**
Elaboration [vs. None]	.81	.61	.65	.52	**.54***	1.10	.59	1.00	2.50	1.14	.76	1.51
	(.45)	(.23)	(.18)	(.23)	**(.17)**	(.35)	(.24)	(.25)	(1.64)	(.58)	(.27)	(.55)
Interruption [vs. None]	b	b	1.43	.47	.54	1.50	.91	.74	1.51	b	b	**2.54****
			(.98)	(.31)	(.26)	(.65)	.36	(.55)	(.70)			**(.61)**
Laughter [vs. None]	b	.50	**.29***	1.46	.43	.93	**.37***	**.25****	.76	**.35***	**.48+**	.68
		(.34)	**(.16)**	(1.53)	(.24)	(.49)	**(.18)**	**(.13)**	(.39)	**(.13)**	**(.18)**	(.27)
Feeling [vs. None]	**.12***	.50	.66	.78	.44	1.03	.60	.78	**.15+**	**.41+**	.48	.39
	(.11)	(.42)	(.45)	(.84)	(.31)	(.69)	(.41)	(.25)	**(.16)**	**(.20)**	(.22)	(.30)

(Table 2 is continued on the following page.)

Table 2 Continued.

	Characteristics of the Court Order							Years of Events				Amounts
	Ever Support Order	Child Aged Out	Support Set as Percent	Child Support Owed	Visit Legal	Primary Physical Custody	Joint Legal Custody	First Support Order	Paternity	Marriage	Divorce	Child Support Exchanged
Exchange Levels												
1-4 or more levels	**.62****	**.64****	**.69****	**.66****	**.65****	.87	**.61****	**.67****	**.57****	**.75***	**.60****	**1.44***
(Continuous)	**(.11)**	**(.07)**	**(.06)**	**(.09)**	**(.07)**	(.09)	**(.07)**	**(.06)**	**(.07)**	**(.10)**	**(.09)**	**(.14)**

Note: Results are from logistic regression equations and cell entries show the odds ratios (exp^{b}). See Appendix A for a through description of how each dependent variable is constructed. Unless otherwise noted, see Table 6-1 for sample sizes.   ** $p < .01$; * $p < .05$; + $p < .10$.

[a] Omitted category is shown in brackets.
[b] Variable is dropped from the model because of no variation/too little variation and/or no cases/too few cases.
[c] This behavior was not coded for this survey question because none of the words in the question were stressed.

Table 3. Descriptive Statistics for Interviewer-Respondent Interaction Codes Evaluated Cumulatively (Lagged)

	Characteristics of the Court Order							Years of Events				Amounts
	Ever Support Order	Child Aged Out	Support Set as Percent	Child Support Owed	Visit Legal	Primary Physical Custody	Joint Legal Custody	First Support Order	Paternity	Marriage	Divorce	Child Support Exchanged
Interviewer Question-Asking												
Major change or not asked	.17 (.18)	.17 (.18)	.17 (.18)	.17 (.17)	.18 (.19)	.18 (.19)	.18 (.19)	.17 (.19)	.17 (.19)	.15 (.16)	.15 (.16)	.18 (.19)
Interviewer Followup Behaviors												
Any followup behaviors	.58 (.23)	.57 (.21)	.56 (.21)	.55 (.21)	.52 (.22)	.52 (.22)	.53 (.22)	.54 (.22)	.53 (.22)	.45 (.22)	.45 (.21)	.56 (.23)
Other Interviewer Behaviors												
Elaboration	.07 (.08)	.05 (.06)	.05 (.06)	.05 (.05)	.03 (.03)	.03 (.03)	.03 (.03)	.06 (.07)	.03 (.03)	.02 (.02)	.02 (.02)	.04 (.04)
Verification	.04 (.07)	.03 (.05)	.03 (.05)	.03 (.05)	.02 (.03)	.02 (.03)	.02 (.03)	.04 (.06)	.02 (.03)	.02 (.02)	.02 (.03)	.03 (.04)
Stress Problem	.15 (.12)	.15 (.11)	.17 (.12)	.25 (.16)	.26 (.16)	.26 (.16)	.25 (.16)	.13 (.11)	.26 (.17)	.20 (.12)	.21 (.13)	.29 (.18)
Laughter	.02 (.05)	.03 (.06)	.03 (.05)	.03 (.05)	.04 (.04)	.04 (.04)	.04 (.04)	.02 (.04)	.04 (.05)	.04 (.05)	.04 (.04)	.03 (.04)
Feeling	.03 (.06)	.03 (.06)	.04 (.06)	.04 (.05)	.05 (.05)	.05 (.05)	.05 (.05)	.03 (.06)	.04 (.05)	.04 (.04)	.04 (.04)	.05 (.05)

Table 3 Continued.

	Characteristics of the Court Order							Years of Events				Amounts
	Ever Support Order	Child Aged Out	Support Set as Percent	Child Support Owed	Visit Legal	Primary Physical Custody	Joint Legal Custody	First Support Order	Paternity	Marriage	Divorce	Child Support Exchanged
Respondent Question-Answering												
Codable answer	.80	.74	.74	.76	.74	.74	.74	.74	.74	.76	.76	.74
	(.16)	(.14)	(.14)	(.11)	(.12)	(.12)	(.12)	(.14)	(.11)	(.10)	(.10)	(.13)
Codable or implicitly codable	.86	.79	.80	.82	.81	.81	.81	.79	.82	.84	.84	.80
	(.14)	(.13)	(.13)	(.10)	(.11)	(.11)	(.11)	(.13)	(.10)	(.09)	(.09)	(.12)
Other Respondent Behaviors												
Qualification	.03	.06	.06	.06	.07	.07	.08	.03	.08	.07	.07	.07
	(.06)	(.07)	(.06)	(.06)	(.05)	(.05)	(.05)	(.05)	(.05)	(.04)	(.04)	(.06)
Don't Know	.01	.02	.02	.02	.04	.04	.04	.01	.04	.03	.03	.04
	(.04)	(.04)	(.04)	(.04)	(.04)	(.04)	(.04)	(.03)	(.04)	(.03)	(.03)	(.05)
Pause	.07	.09	.09	.09	.10	.10	.10	.07	.09	.10	.10	.10
	(.12)	(.13)	(.12)	(.12)	(.11)	(.11)	(.11)	(.11)	(.11)	(.11)	(.11)	(.12)
Seek Clarification	.06	.07	.07	.06	.06	.06	.06	.06	.06	.06	.06	.07
	(.08)	(.08)	(.07)	(.06)	(.05)	(.05)	(.05)	(.07)	(.05)	(.04)	(.04)	(.06)
Elaboration	.13	.11	.11	.11	.09	.09	.09	.12	.09	.08	.08	.10
	(.12)	(.10)	(.10)	(.09)	(.07)	(.07)	(.07)	(.11)	(.06)	(.06)	(.06)	(.08)
Interruption	.03	.03	.03	.04	.06	.06	.06	.03	.06	.05	.05	.05
	(.07)	(.06)	(.06)	(.06)	(.07)	(.07)	(.07)	(.06)	(.07)	(.06)	(.06)	(.07)
Laughter	.04	.06	.06	.06	.06	.06	.06	.04	.07	.06	.06	.06
	(.07)	(.07)	(.07)	(.07)	(.06)	(.06)	(.06)	(.06)	(.07)	(.06)	(.06)	(.06)
Feeling	.01	.02	.02	.02	.02	.02	.02	.01	.02	.03	.03	.02
	(.04)	(.04)	(.04)	(.04)	(.03)	(.03)	(.03)	(.03)	(.03)	(.03)	(.03)	(.04)
Exchange Levels												
3 or More Exchange Levels	.31	.29	.28	.26	.22	.22	.22	.29	.22	.18	.18	.25
	(.13)	(.13)	(.13)	(.12)	(.11)	(.11)	(.11)	(.13)	(.11)	(.09)	(.09)	(.12)
Sample Size	516	516	515	512	512	513	508	516	301	345	346	488

Table 4. Odds Ratios from Logistic Regression Equations of Accuracy (Match Versus Non-Match) in Reports on Interviewer and Respondent Interaction Codes Evaluated Cumulatively (Lagged)

How term is coded before lagging	Characteristics of the Court Order							Years of Events				Child Support Exchanged
	Ever Support Order	Child Aged Out	Support Set as Percent	Child Support Owed	Visit Legal	Primary Physical Custody	Joint Legal Custody	First Support Order	Paternity	Marriage	Divorce	
Interviewer Question-Asking												
Major change/not asked [vs. exact/ slight change]	**.25+** **(.20)**	.68 (.47)	**.28*** **(.14)**	.40 (.30)	**.21**** **(.10)**	**.41+** **(.21)**	**.25*** **(.14)**	**.33*** **(.16)**	**.06**** **(.04)**	.43 (.35)	.45 (.31)	**3.98**** **(1.99)**
Interviewer Followup Behaviors												
Any followup [vs. none]	**.09**** **(.07)**	**.14**** **(.08)**	**.41*** **(.18)**	**.29+** **(.20)**	**.22**** **(.10)**	**.38*** **(.18)**	**.27*** **(.14)**	**.42*** **(.17)**	**.14**** **(.08)**	.42 (.26)	.57 (.30)	**2.65*** **(1.19)**
Other Interviewer Behaviors												
Elaboration [vs. None]	.12 (.24)	**.04+** **(.07)**	**.01**** **(.01)**	**.00**** **(.00)**	**.00**** **(.00)**	**.00+** **(.01)**	.01 (.03)	1.64 (1.95)	**.00**** **(.00)**	.00 (.01)	.04 (.19)	b
Verification [vs. None]	.67 (1.67)	18.86 (49.59)	.47 (.81)	.64 (1.88)	.01 (.04)	.18 (.61)	**.00*** **(.00)**	.18 (.26)	.03 (.12)	**.00*** **(.00)**	.01 (.06)	b
Stress Problem [vs. None]	.16 (.23)	.66 (.73)	.36 (.27)	**8.80*** **(8.08)**	**4.15*** **(2.18)**	**3.52+** **(2.28)**	.47 (.34)	.44 (.36)	.98 (.70)	.98 (1.08)	.68 (.60)	**.04**** **(.02)**
Laughter [vs. None]	11.56 (44.79)	.86 (1.94)	9.14 (16.29)	b	10.52 (24.99)	b	.06 (.15)	23.75 (47.28)	b	24.33 (78.75)	4233 (10.60)	.03 (.08)
Feeling [vs. None]	1.56 (4.40)	.17 (.35)	1.14 (1.87)	.09 (.24)	.11 (.21)	b	.07 (.16)	9.75 (14.98)	.26 (.62)	.42 (1.31)	.14 (.32)	.29 (.54)
Respondent Question-Answering												
Codable [vs. implicitly codable, uncodable, other]	2.93 (2.88)	1.03 (.90)	**7.14**** **(4.75)**	6.12 (7.49)	**8.05*** **(6.08)**	**6.81*** **(5.74)**	**15.77**** **(14.36)**	.95 (.59)	**72.47**** **(82.57)**	2.48 (3.17)	2.34 (2.51)	.52 (.41)
Codable/ implicitly codable [vs. uncodable/other]	2.38 (2.57)	1.05 (.99)	**7.39**** **(5.37)**	2.15 (3.01)	**12.63**** **(11.03)**	**10.11**** **(9.00)**	**11.31*** **(10.68)**	1.15 (.79)	**374.45**** **(505.13)**	**11.26+** **(15.68)**	2.38 (2.91)	**.18*** **(.15)**

(Table 4 is continued on the following page.)

Table 4 Continued.

How term is coded before lagging	Characteristics of the Court Order							Years of Events				Amounts
	Ever Support Order	Child Aged Out	Support Set as Percent	Child Support Owed	Visit Legal	Primary Physical Custody	Joint Legal Custody	First Support Order	Paternity	Marriage	Divorce	Child Support Exchanged
Other Respondent Behaviors												
Qualification [vs. None]	2.87 (8.70)	1.38 (2.67)	7.19 (10.81)	2.57 (6.50)	**.05+ (.08)**	.13 (.25)	.27 (.56)	.19 (.33)	.58 (1.26)	1.05 (3.13)	**.01+ (.03)**	**.03* (.04)**
Don't Know [vs. None]	.91 (4.16)	1.89 (6.05)	**.00** (.00)**	.01 (.02)	**.00** (.00)**	**.00** (.00)**	.02 (.06)	1.52 (4.07)	**.00** (.00)**	.00 (.00)	.02 (.10)	b
Pause [vs. None]	.28 (.34)	**.20+ (.18)**	3.21 (2.52)	3.34 (4.61)	.28 (.23)	1.14 (1.05)	.40 (.37)	2.21 (1.78)	.40 (.41)	5.22 (6.94)	4.24 (4.38)	.35 (.32)
Seek Clarification [vs. None]	.06 (.12)	**.04* (.07)**	**.04* (.05)**	.08 (.16)	**.03+ (.06)**	.18 (.35)	.32 (.68)	.59 (.71)	**.00** (.00)**	.10 (.30)	2.67 (7.00)	3.28 (5.41)
Elaboration [vs. None]	1.25 (1.78)	.76 (.94)	2.12 (2.13)	.98 (1.63)	.34 (.48)	1.56 (2.44)	**.03* (.04)**	1.23 (.99)	2.26 (4.38)	**.01* (.01)**	.05 (.09)	8.16 (10.46)
Interruption [vs. None]	3.41 (9.41)	110.35 (315.73)	**.04* (.06)**	b	.22 (.30)	.36 (.54)	.10 (.15)	1.61 (2.26)	1.58 (2.80)	.04 (.08)	**.04+ (.07)**	.29 (.46)
Laughter [vs. None]	10.26 (78.74)	.77 (1.28)	1.00 (1.27)	b	4.15 (6.98)	14.47 (27.35)	.11 (.21)	**13.91+ (19.32)**	**102.91* (202.49)**	.97 (2.33)	3.91 (7.89)	.09 (.15)
Feeling [vs. None]	1.39 (6.27)	.14 (.40)	54.73 (133.34)	b	b	b	.01 (.04)	1.35 (3.48)	b	1.88 (8.67)	.05 (.20)	.02 (.06)
Exchange Levels												
Exchange level 3 exists [vs. less than 3 levels]	**.05* (.06)**	**.06** (.05)**	**.15** (.11)**	**.06* (.07)**	**.07** (.06)**	.31 (.29)	**.02** (.03)**	**.21* (.15)**	**.09* (.10)**	**.02** (.03)**	.32 (.39)	**17.12** (14.42)**

Note: Results are from logistic regression equations and cell entries show the odds ratios (exp^b). See Table 3 for sample sizes.
** $p < .01$; * $p < .05$; + $p < .10$.

[a]Omitted category is shown in brackets.
[b]Variable is dropped from the model because of no variation/too little variation and/or no cases/too few cases.