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Antecedents and Consequences of Interviewer Pace: Assessing Interviewer Speaking Pace at the Question Level

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Interviewer Pace

- Definition: The speed at which an interviewer reads survey questions
- Typically measured in linguistics or education research as words/minute or syllables/minute
- In surveys, pace has been assessed:
 - During the introduction/survey invitation
 - During the questionnaire: often as total time for a survey or a block of questions within a survey
 - Question level pace less broadly examined

Interviewer Pace: Why important?

- Communicate to respondent:
 - Importance of survey/survey task (Fowler)
 - Reduce effort → greater error
- Potentially make cognitive task of question answering more difficult
 - More difficulty → greater error
- Communicate expected pace to respondents
 - Respondents also speed up responding → less thorough answering → greater error

Interviewer Pace: What do we know?

- There is substantial variance in interviewer pace
- Antecedents:
 - Respondent demographics (e.g., age and education)
 - More experienced interviewers → faster pace
 - Some question characteristics (e.g., length)
 - Paying interviewers piecemeal
- Introductions:
 - Mixed evidence → moderate introduction pace may be best
- Survey interview:
 - Lower data quality: straightlining and more don't know responses
- Limitations:
 - Little evidence regarding pace at the question level across a broad range of question types
 - Often doesn't take into account the effect of events or behaviors that may increase survey or section time (e.g., interviewer errors or respondent questions)

Research Questions

- Can interviewer pace be measured at the question level using screen timers as part of a method typically used to assess response latencies (e.g., Bassilli)?
- What are the question-level antecedents of interviewer pace?
- What are the question-level consequences of interviewer pace for the response process?

Hypotheses about Antecedents of Interviewer Pace

- H1: Interviewers will read faster as the field period progresses. (experience)
- H2: Interviewers will read faster as the interview progresses. (comfort, want to finish)
- H3: Interviewers will read longer questions faster than shorter questions. (discomfort with taking a long conversational turn)
- H4: Interviewers will read sensitive questions faster than nonsensitive questions. (minimize discomfort)

Hypotheses about the Consequences of Interviewer Pace

- H5: Effect of interviewer pace on response latencies
 - Communicate norms: H5a: Faster interviewer pace will be associated with shorter (i.e., faster) response latencies.
 - Increase task difficulty: H5b: Faster reading speed will be associated with longer (slower) response latencies.
- H6: Interviewer pace will be associated with greater comprehension difficulties.
- H7: Interviewer pace will be weakly associated or unassociated with mapping difficulties.
- Possibility of nonlinear effects on comprehension and mapping difficulties.
 - Fewest difficulties at moderate speeds.

Methods: Respondents

- 405 adults 18 or older living in the Chicago metropolitan area
- Race/ethnicity
 - 103 non-Hispanic whites
 - 100 non-Hispanic blacks
 - 102 Mexican-Americans (52 interviewed in English)
 - 100 Korean-Americans (41 interviewed in English)
- Current results only from English interviews – working on Spanish/Korean word counts for possible inclusion

Methods: Procedure

- Recruitment using RDD sampling procedures
 - Areas with high proportions of eligible respondents in one or more ethnic/racial groups were targeted
 - Areas close to the University of Illinois at Chicago were also targeted to increase participation
 - Some snowball sampling also used to recruit Korean-American respondents only
- Respondents were recruited via telephone and then came into the lab. They completed a PAPI, the CAPI interview, and then a second PAPI.
- CAPI interviews were video and audio recorded
- Interviewers were race-matched to respondents

Methods: Instrument

- 150 Questions for which response and question latencies were measured – social and political topics
- Question type was manipulated
- Question order was manipulated via random assignment
 - Half of respondents: Sections 1, 2, 3, 4, 5 (demographics)
 - Half of respondents: Sections 3, 4, 1, 2, 5 (demographics)

Questionnaire Items #1

- Core of 90 Questions designed to vary on the following dimensions
 - Type of judgment
 - Subjective (attitude)
 - Self-relevant knowledge (experience, behavior, or characteristic)
 - Objective knowledge
 - Time qualified or not (e.g., In the past 12 months...)
 - Response format
 - Yes/no
 - Categorical
 - Unipolar scale
 - Bipolar scale (with midpoint)
 - Bipolar scale (with midpoint)
 - Open-ended numerical

Questionnaire Items #2

- Questionnaire also included items to assess satisficing behavior
 - Agree-disagree items
 - Items that explicitly included or omitted a don't know option
 - Batteries of items to measure nondifferentiation
 - Items where response options were rotated to assess response order effects
- Questionnaire also included purposefully bad questions to assess effect on respondent behavior
 - Questions about nonexistent policies or places
 - Questions where response options and question stem did not match
 - Questions where response options were deliberately not mutually exclusive or exhaustive

Coded Survey Question Variables

- Abstraction level
 - Not at all abstract
 - Somewhat abstract
 - Very abstract
- Sensitivity
 - Not at all sensitive
 - Somewhat sensitive
 - Very sensitive
- Length (number of words)
- Position in the questionnaire (varied as a result of order experiment)

Question and Response Latencies

- The instrument was set up with three screens for each item:
 1. The 'Q screen' (question screen).
 - Everything the interviewer was to read.
 - Interviewers did not enter a respondent's answer on this screen. After they read the question, pressing 'Enter' took them to the response screen.
 2. The 'R screen' (response screen)
 - Contained the text of the question in parenthesis and the response options with their values next to them.
 - Interviewers only read the question again if the respondent asked them to repeat the question. Otherwise, when the respondent provided an answer, the interviewer selected the proper response option value and was automatically taken to the third screen. The only valid key strokes were the response option values.
 3. The 'L screen' (response latency screen).
 - The same for every item in the questionnaire and it contained an option for a Valid Latency, as well as a number of options for issues that might have affected the response latency.
 - This screen was not to be read aloud.

Latency Validity Options

Latency Option	Description
Valid response latency	Question was asked and the respondent answered with no difficulties or other issues.
Reread the question before I got to the response screen	Respondent asks the interviewer to reread the question and the interviewer did so before proceeding to the response screen and starting the timer.
Reread the question on the response screen	Respondent asks the interviewer to reread the question and the interviewer did so after proceeding to the response screen.
Reread the response options only	Respondent asks the interviewer to reread the response options only.
A probe or clarification was required	A probe is required as per SRL guidelines, or if a respondent asks for a clarification.
Skipped back to a previous question	Respondent requests to change an answer or asks for a question to be reread after the interviewer has already entered an answer for them.
Respondent answered before I finished reading the question	Respondent did not wait for the list of responses to be fully read during the question screen. The interviewer should immediately hit 'Enter' to move to the R screen and select the respondent's answer.
I struck the wrong key or waited too long to start/stop the timer	Interviewer strikes the wrong key or does not hit 'Enter' when needed to move through the screens.
Something else went wrong (Other specify)	None of the above options adequately reflect an issue that came up during a question. The interviewer should explain briefly.

Behavior Coding:

- Coded from recordings (not transcripts)
- Interviewer errors that affect measurement of pace
- Respondent comprehension difficulties
- Respondent mapping difficulties
- More details available

Results: Response Latency Validity

Interviewer Report about Response Latency	Number	% of Measured Response Latencies	Avg. Latency (in seconds)
Valid response latency	36,054	79.9%	4.6
Reread question before response screen	109	0.2%	9.6
Reread question on response screen	1,555	3.4%	20.4
Reread response options only	718	1.6%	16.7
Probe or clarification required	4,810	10.7%	18.7
Skipped back to a previous question	120	0.3%	8.6
Respondent answered before question was completely read	1,183	2.6%	2.1
I struck the wrong key	449	1.0%	7.7
Something else went wrong	140	0.3%	15.9
Total response latencies measured	45,138	100.0%	

Results: Question Latency Validity

Interviewer Behavior Code	Number	% of Measured Q Latencies	Avg. Words per Minute
No problems indicated	31,996	68.7%	183.7
Interviewer did not read question completely	989	2.1%	196.4
Interviewer did not read question verbatim	6,105	13.5%	193.1
Poor quality of reading	58	0.1%	264.3
Interviewer self-corrects	6,499	14.4%	175.2
Other question reading problem	3	0.0001%	136.3
Interviewer adds instructions or probe before respondent answers	103	0.2%	218.4
Interviewer omits show card instructions	54	0.1%	177.1
Interviewer laughs during exchange	1,984	4.4%	168.8
Other non-interviewer associated interruption	27	0.0006%	162.3
Recording could not be heard	1	0.00002%	537.6
Total question latencies measured	45,138		

Speaking Pace More Generally

- We eliminated questions where the reading pace was less than 60 words per minute (very slow) or greater than 300 words per minute (very fast)
- **Words/Minute>300** N=315
- **Words/Minute<60** N=641
- Result: 31,040 of 45,138 or 68.8% were included

Antecedents of Interviewer Pace (Words/Minute)

Predictor	Model 3: Focal IVs, Question Characteristics, and Stratum		
	b	se	p
Intercept	166.260	2.345	<0.001
Day of field period	0.081	0.007	<0.001
Number of previous questions	0.058	0.007	<0.001
Number of words in question	0.668	0.053	<0.001
Sensitivity (ref: Not at all sensitive)			
Somewhat sensitive	2.333	1.178	0.048
Very sensitive	0.375	2.377	0.875

Antecedents of Interviewer Pace (Words/Minute)

Predictor	Model 3: Focal IVs, Question Characteristics, and Stratum		
	b	se	p
Time Qualified Judgment	-0.236	1.147	0.837
Includes an Explicit “Don’t Know” Option	-2.859	4.509	0.526
Preceded by a don’t know filter	-11.828	6.346	0.062
Used a showcard	-20.278	6.664	0.002
Intentionally difficult question	-3.215	0.603	<0.001
Type of judgment (ref: Self-knowledge)			
Subjective (e.g., attitude)	2.942	1.384	0.033
Factual knowledge	-20.783	1.760	<0.001
Abstraction (ref: Not at all abstract)			
Somewhat abstract	-9.648	1.490	<0.001
Very abstract	-10.145	1.903	<0.001

Antecedents of Interviewer Pace (Words/Minute)

Predictor	Model 3: Focal IVs, Question Characteristics, and Stratum		
	b	se	p
Format (ref: Open-ended numeric)			
Agree-disagree	-11.690	3.241	<0.001
Yes-no	-8.484	2.263	<0.001
Feeling thermometer	7.120	7.318	0.331
Categorical	-13.230	2.274	<0.001
Unipolar scale	-0.492	2.141	0.818
Bipolar scale with a midpoint	-3.864	2.222	0.082
Bipolar scale without a midpoint	-0.179	2.124	0.933
Semantic differential	-14.383	8.525	0.092
Stratum (ref: non-Hispanic White)			
Korean-American (Asian Ints)	-58.777	3.282	<0.001
Mexican-American (Latino/a Ints)	-15.894	1.681	<0.001
Non-Hispanic African-American	-20.127	1.308	<0.001

Consequences of Interviewer Pace

Predictor	Model 1: Response Latencies			Model 2: Comprehension Difficulties			Model 3: Mapping Difficulties		
	b	se	p	b	se	p	b	se	p
Intercept	26.965	0.512	<0.001	-2.416	0.319	<0.001	-1.530	0.317	<0.001
Words per minute	-0.022	0.002	<0.001	-0.004	0.001	<0.001	-0.003	0.001	0.004

- Controlling for question characteristics and respondent demographics
- No evidence of nonlinearity

Summary:

- Approach to measuring question level reading speed shows promise (discarded data)
- Interesting, theoretically sensible findings regarding antecedents of interviewer pace
 - Interviewer experience (date as proxy)
 - Length of question
 - Position of question in the questionnaire
 - Question sensitivity
- Findings regarding consequences less clear
 - Response latencies: respondents answer faster when interviewers speak faster – consistent with past research
 - Behavior coding: less clear results
 - Difficulty of examining association between latency and behavior coding data
 - No evidence of nonlinearity

Limitations/Future Directions:

- Need to assess q and r screen latencies for each question
 - Time consuming
 - Interviewer training
- Interviewer pace data valid for the majority of questions, but a significant amount of data discarded
- Difficulty of examining behavior coding and interviewer pace simultaneously
 - BC behaviors often render pace measure invalid
 - Other indicators of data quality? Satisficing, item nonresponse, objective gold standards?
- Interviewers race/ethnicity matched
- Analysis – nesting within interviewers, respondents, and questions
- Limited to English interviews
 - Word counts for Spanish and Korean interviews – comparable?



Thank You!!

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