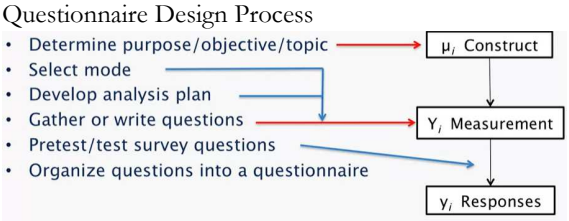
Questionnaire Design for Social Surveys

Week 1 Overview of Standardized Interviewing

1.1 Introduction

Questionnaire Design Process

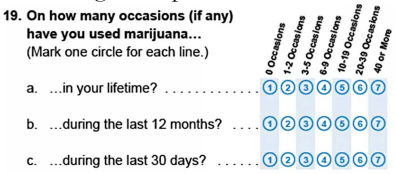


Different types of questions
Measurement error in questions: Bias and variance
Standardized and conversational interviewing
From specifying a concept to asking questions

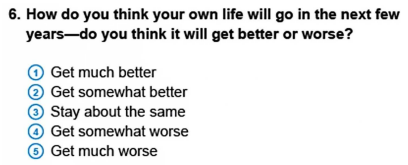
1.2 Questions and Error

Types of Questions

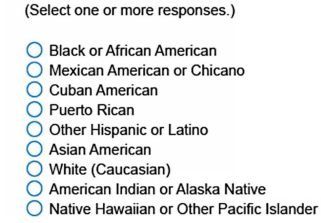
- Running Prompt



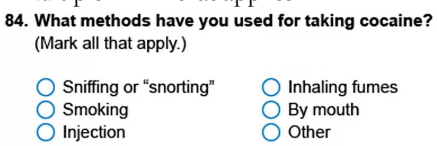
- Closed – one choice



- Closed – "mark all that applies"



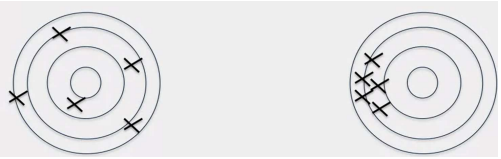
- Multiple – "All that applies"



- Filter Questions
- Open(-ended) Questions

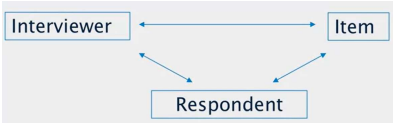
Measurement Error: Bias and Variance

• Variance and Bias in infographic



• Examples
- variance: "Last week, were you a victim of a crime?"
- bias: "The Brady Bill takes guns out of the hands of convicted killers. Are you in favor of the Brady Bill?"

• Source of bias and interviewer
- we can't really control the respondent but we can at least try to minimize bias and variance in interviewer and item



1.3 Standardized v.s. Conversational Interviewing

Standardized Interviewing

• In survey research, the goal of standardization is that each respondent be exposed to the same question experience, and that the recording of the answer be the same too so that any differences in the answers can be correctly interpreted as reflecting differences between respondents rather than differences in the process that produced the answer

• Assumption
- The interviewers will adequately fulfill their role (this requires that interviewers have been fully and carefully trained)
- the wording of each question constitutes a complete and adequate script … such that when respondents hear or read the question, they will be fully prepared to answer it

• Guidelines
- questions should be read exactly as worded
- probing should only be done in non-directive ways… don't influence the respondent
- recorded answers should reflect what respondent says
- No feedback to the respondent

• Example question "Is there any area around here – that is, within a mile – where you would be afraid to walk around at night?" or Are you sometimes afraid to be a victim in your neighborhood?

In cluster studies, it is particularly difficult to disentangle the effects of the interviewer and the sampling point (e.g. same neighborhood)

Sampling Point
- Neighborhoods
  Ethnicity, Infrastructure, Economic status

Interviewer
- Question type, active interviewer involvement
  Social desirability, sensitivity, question wording
- Salience, anchoring, crystallized attitudes

Separating these two effects:

$$\sigma^2 = \underbrace{\sigma^2_{\text{Point}} + \sigma^2_{\text{Interviewer}}}_{\sigma^2_{\text{Cluster}}} + \sigma^2_{\text{Respondent}} \qquad (4)$$

Deff can be seen as a function of the homogeneity ρ within each cluster and the cluster size w

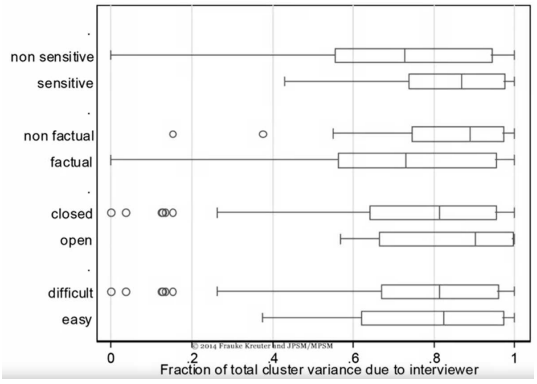
$$\text{deft} \approx \sqrt{1 + \rho(w-1)} \qquad (2)$$

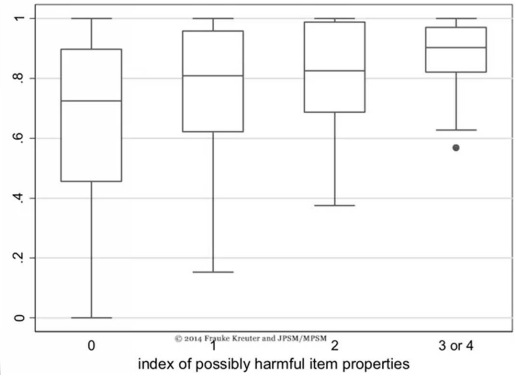
ρ is usually referred to the intra class correlation coefficient which can be seen as

$$\rho = \frac{\sigma^2_{\text{Cluster}}}{\sigma^2_{\text{Cluster}} + \sigma^2_{\text{Res.}}} \qquad (3)$$

rho (sometimes thought of as rho=rate of homogeneity) represents the intra-class correlation coefficient, and b the number of interviews conducted within the cluster. In face-to-face surveys, respondents are often clustered to save travel costs. If a variable is distributed completely at random between the clusters, then we expect a rho of zero. Rho is equal to 1.0 if all elements within a cluster have the same value for a given variable. In our example this would mean: everyone in a cluster has the same amount of fear, and all clusters have different amounts of fear.

• Interview Portion in Variance





➔ Interviewer variance tends to be higher in sensitive than in non-sensitive questions and higher in open than in closed questions

➔ More harmful item properties associated with higher interviewer variance

• Increase Likelihood for Interviewer Effect
- Hidden screening question
- unclear terms in question
- unclear response expectation
- field coded answer

Conversational Interviewing

Standardized Interviewing - Philosophy
• Like standardized testing, want responses to be comparable across Rs
- by holding constant as many attributes of interview administration as possible
- especially the wording of items
• Intended to reduce interviewer-related error (variance) by reducing variation in behavior across interviewers
• should reduce cost by focusing interaction

Standardized Interviewing - Technique
• Read questions exactly as worded
- even small changes in wording can affect answers
• Provide neutral or non-directive probes if response not among options offered
- let me repeat the question
- we need a number
- is that yes or no
- whatever it means to you
- can you be more specific

Pros and Cons of Standardized Wording
• What's good
- leads to fast interviews and cheaper interviewer costs
- Should, in principle, eliminate interviewer effects
- Can be sure all Rs receive same materials
• What's bad
- prevents "grounding" – back and forth process that helps interlocutors understand each other
- this may lead to misunderstanding, which may lead to inaccurate answers

Proposal for Conversational Interviewing
• Suchman & Jordan (1990) proposed that strict standardization can undermine response validity
- though not reliability
- conversation analysis study – analyzed small set of GSS* interactions
• Argued that interviewers should be "empowered" to use conversational resources to promote validity

Conversational Interviewing – Philosophy and Procedure

• Allow interviewer to say whatever it takes to be sure R understands question as intended
  - Ground understanding
• Interviewer must initially read question as worded but then can
  - paraphrase the question or relevant definition
    - either when R specifically asks for clarification or Interviewer deems it necessary

Conversational Interviewing – Pros and Cons

• What's good
  - should promote the intended understanding of questions and thus high response accuracy
• what's bad
  - clarification may take extra time

Views of meaning

• Rationale for standardized wording is that meaning resides in words
  - If Rs get same words, get same meaning
  - message model (Akmajian 1990): the word uttered by interviewer goes through language and brain of respondent and hence often times the word/concept interview thought about isn't accurately conveyed to respondent's brain
  - pretesting can remove most comprehension errors
• Alternative: meaning rests on collaboration
  - participants must talk about meaning to be sure listener interprets as speaker intends i.e. utterance must be grounded
  - collaborative theory (Clark 1996)
  - pretesting cannot anticipate mapping ambiguities for the many Rs in a diverse sample; clarification needed in interview

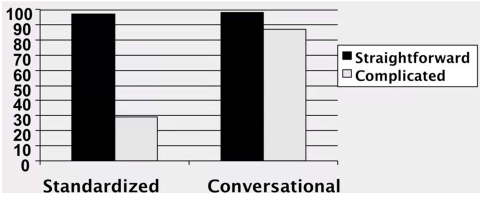
Conversational Interviewing

• I and R work together to assure R understands question as intended
  - interviewer reads question as worded, then
  - says whatever is necessary to assure R interprets question as intended i.e. to ground meaning
• Goal is to standardize meaning, even if wording varies

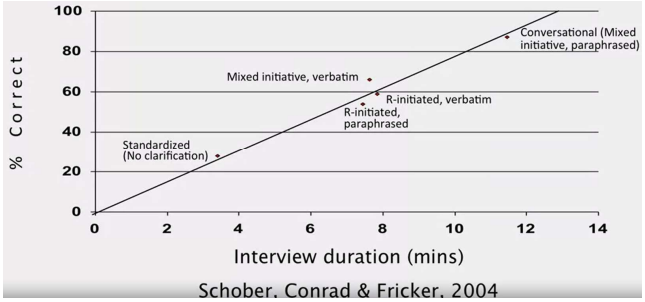
Empirical Comparisons of the 2 Techniques

• Schober and Conrad (1997)
  - two groups of interviewers both trained on survey concepts
    - one group trained in strictly standardized techniques (read as worded, neutral probes etc)
    - other group trained to use conversational (flexible) technique
  - 12 questions borrowed from on-going federal surveys
  - Rs answer on basis fictional scenarios so response accuracy could be determined

➔ Response Accuracy

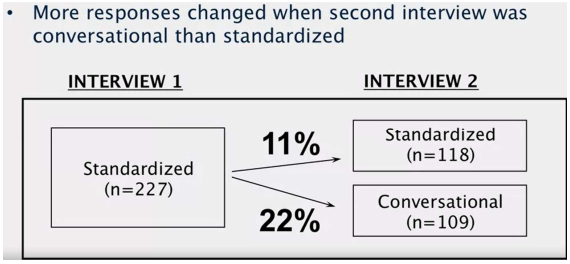


➔ accuracy and duration trade-off



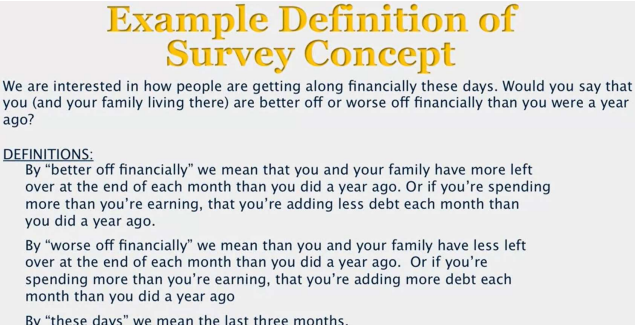
Frequency of complicated situations in field
• Comparison of understanding and response accuracy in standardized and conversational interviews
• Hard to measure understanding in real survey settings
- without access to respondents' circumstances, can't tell if responses fit official definitions
- can't directly measure response accuracy
- record checks and diaries are expensive
- may not be accurate themselves

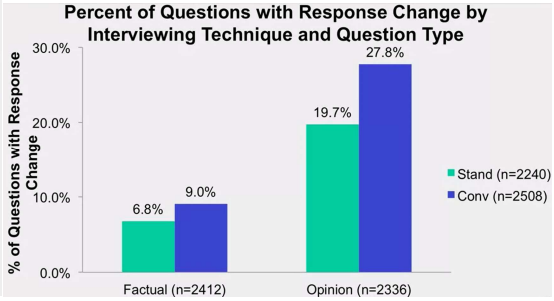
Meaning Comprehension
• We can determine if conversational interviewing changes Rs' understanding
• Logic
- if conversational interviewing improves comprehension
- Then Rs in standardized interviews should change their responses in a subsequent conversational interview
- more than then they would in a subsequent standardized interview
• Conrad & Schober (2000) conducted re-interview study to examine effects clarification and collaboration in a field settings



Interview 1 (Standardized)	Interview 2	
5 mins	5 mins	Standardized
	9 mins	Conversational

Clarifying Meaning of Opinion Quesitons
• Hubbard, Antoun & Conrad (2012) compared accuracy (response change) for 3 factual and 7 opinion Qs about the economy and drowsy driving
• Production interviews from Survey of Consumers followed by re-administration of 10 Qs
- first administration standardized
- Re-administration conversational for 1/2 Rs i.e. interviewers could provide definitions; other 1/2 standardized
- some response change in conversational re-interview reflects improved understanding i.e. response aligned with definition, so more change in conversational than standardized re-interview reflects more accurate interpretation in former
• For opinion questions, definitions of question concepts and response scale labels



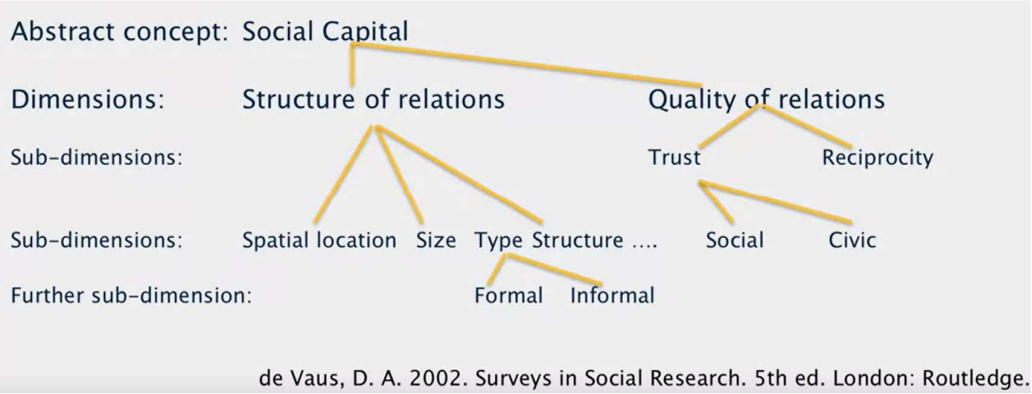


Summary
• Standardized interviewing, in principle, reduces impact of interviewers
- same wording for all Rs
- the only non-standard wording is in neutral probes
- interviewers cannot engage in grounding, as in everyday conversation, so despite adequate answers may be inaccurate
• Conversational interviewing improves accuracy across a range of studies using a range of measures
- but increases interview duration cuz clarification takes time
- approach seesm to improve interpretation and increases duration to same extent whether questions concern behaviors or opinions

• Practitioners need to weight tradeoff between longer and maybe more costly interviews against higher certainty that Rs understand questions as intended

Concept Specification

• First step in planning a survey should be "determining your research question"



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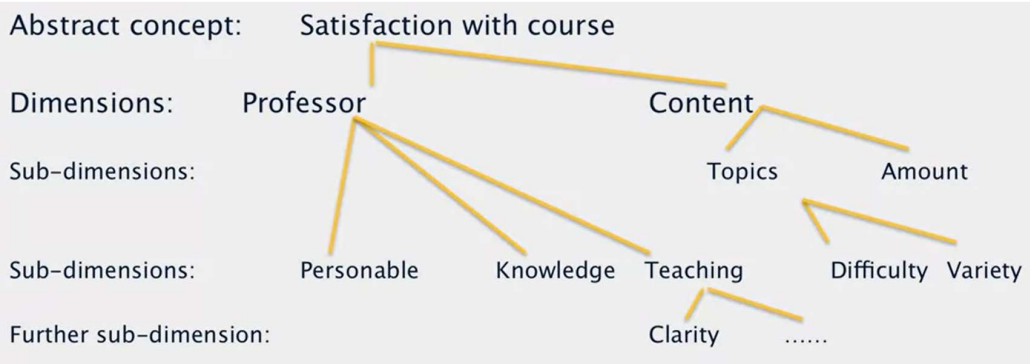

• Planning your survey
- what is your research question? How do you envision the results?
- translate concepts into questions!
- check the fit!
- appraise questions for common pitfalls!

• Ask yourself
- which variables do you want to combine as measure of satisfaction? Statistical requirements?
- what subgroups do you want to report for?
- Will you want to explain difference? What variables will you use to do so?
- Remove everything you don't need!!!