



# NatCen

National Centre *for* Social Research

## Mixed Modes and Measurement Error: Study design and literature review

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Britain's leading independent social research institute

# Research Team

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# Main Objective

- Practical advice on how to improve portability of questions across modes
  - ▶ Which mode combinations are likely to produce comparable responses?
  - ▶ Which types of questions are more susceptible to mode effects?

## Mode classification

- **interviewer presence (face-to-face, telephone, none)**
- **delivery of question (visual, aural)**
- **response list (visual, aural)**
- **recording of responses (oral, written)**

# Research Design

- A literature review & framework of mixed modes
  - ▶ classify modes and question types
  - ▶ develop a theoretical framework
  - ▶ identify gaps in evidence base and formulate hypotheses to address gaps
- Quantitative data analysis
  - ▶ test hypotheses using existing datasets and new experimental data
- Cognitive interviewing
  - ▶ explore how respondents process questions in different modes



# Literature Review

# Aims of literature review

- A review of the evidence of differences in measurement due to mode for:
  - ▶ Different types of questions
  - ▶ Different combinations of modes
- Identify gaps (mode pairs and question types) in the evidence base
- Formulate hypotheses to address these gaps

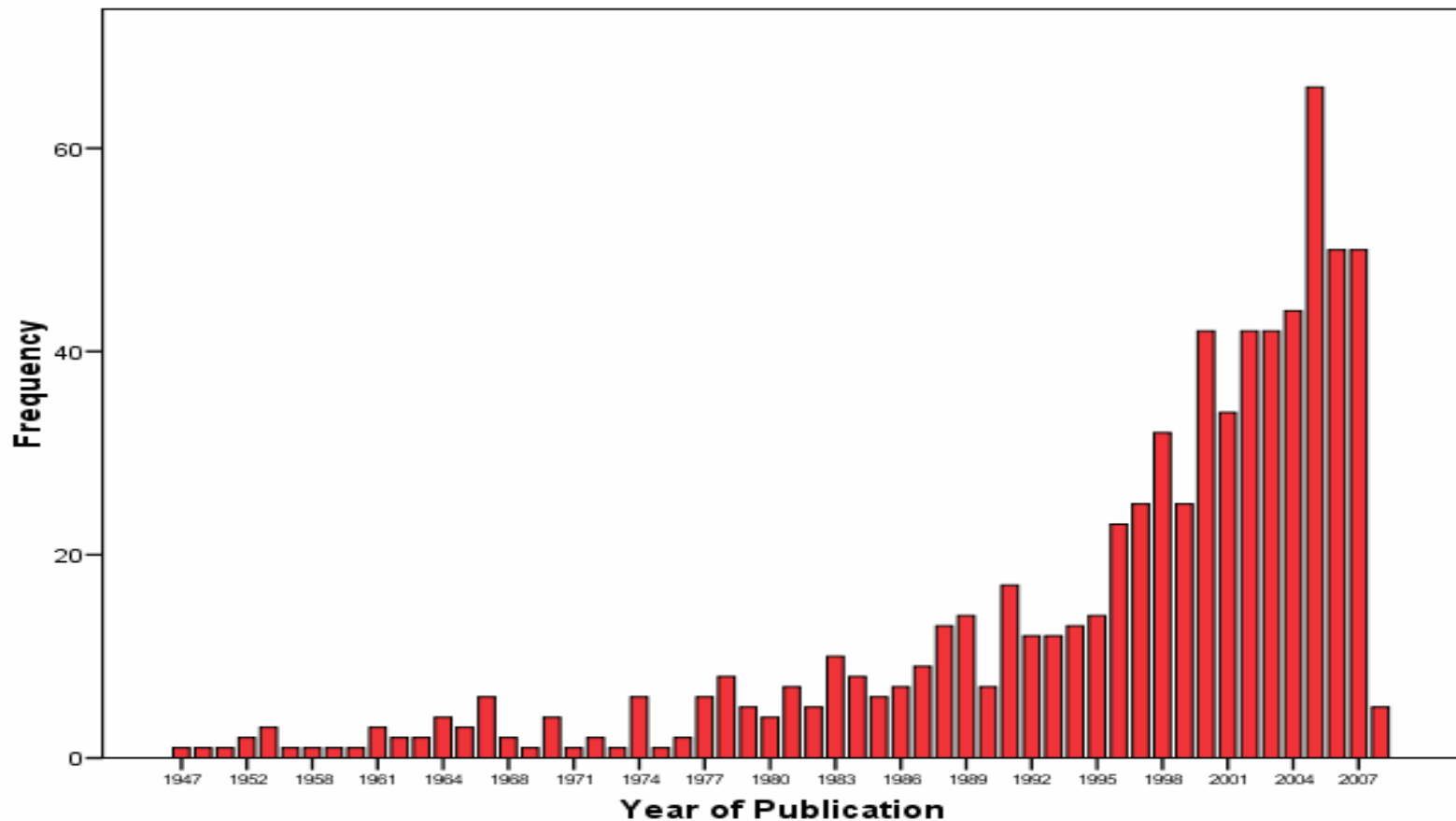
## Background to the literature review

- Initial literature search carried out using citation and journal databases, research websites, etc.
- A series of predefined mode / measurement search terms – could appear in title, keywords or abstracts
- English language only
- No date restrictions
- Included journal articles, conference papers and reports

## Literature review – so far

- 700+ papers from literature searches and new citations identified during review process

# Papers identified by year



## Literature review – so far

- Currently screening papers for relevance and summarising relevant papers
- Criteria for inclusion:
  - ▶ comparison of 2 or more modes
  - ▶ modes of survey data collection
  - ▶ measurement error

# Classify existing evidence:

- **The mode comparison**
  - ▶ interviewer presence (face-to-face, telephone, none)
  - ▶ delivery of question (visual, aural)
  - ▶ response list (visual, aural)
  - ▶ recording of responses (oral, written)
- **The question**
  - ▶ question type (e.g. attitude, behaviour, other factual)
  - ▶ question format (e.g. closed/open, scale, # categories)
  - ▶ task difficulty
  - ▶ sensitivity of question

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# Classify existing evidence:

- **The results**
  - ▶ **Hypotheses tested**
  - ▶ **Indicators and statistical methods**
  - ▶ **Results**

# Synthesis of literature

- Causes of differential measurement error
  - ▶ e.g. interviewer presence, cognitive task
- Nature of differential measurement error
  - ▶ e.g. social desirability bias, survey satisficing
- Magnitude of differential measurement error

## Initial observations from review (1)

- Most common mode comparisons in papers reviewed so far:
  - ▶ Paper self-completion vs Online self-completion
  - ▶ Face-to-face (no visual stimuli) vs Telephone
  - ▶ Telephone vs Paper self-completion

## Initial observations from review (2)

- **Samples:**
  - ▶ **North America (72%)**
  - ▶ **General population (45%)**
- **Question type:**
  - ▶ **Factual (behaviour) (52%)**

## Initial observations from review (3)

- Many experiments are not theory-driven
  - ▶ Focus is on descriptive comparisons of response distributions across modes
  - ▶ Lack of generalisable inferences about causal mechanisms

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## Initial observations from review (3)

- Many papers provide insufficient information about the questions and modes being tested
  - ▶ question type & format, sensitivity of question, task difficulty
  - ▶ interviewer presence, delivery of question and response options, recording of responses



Next steps

## Next steps:

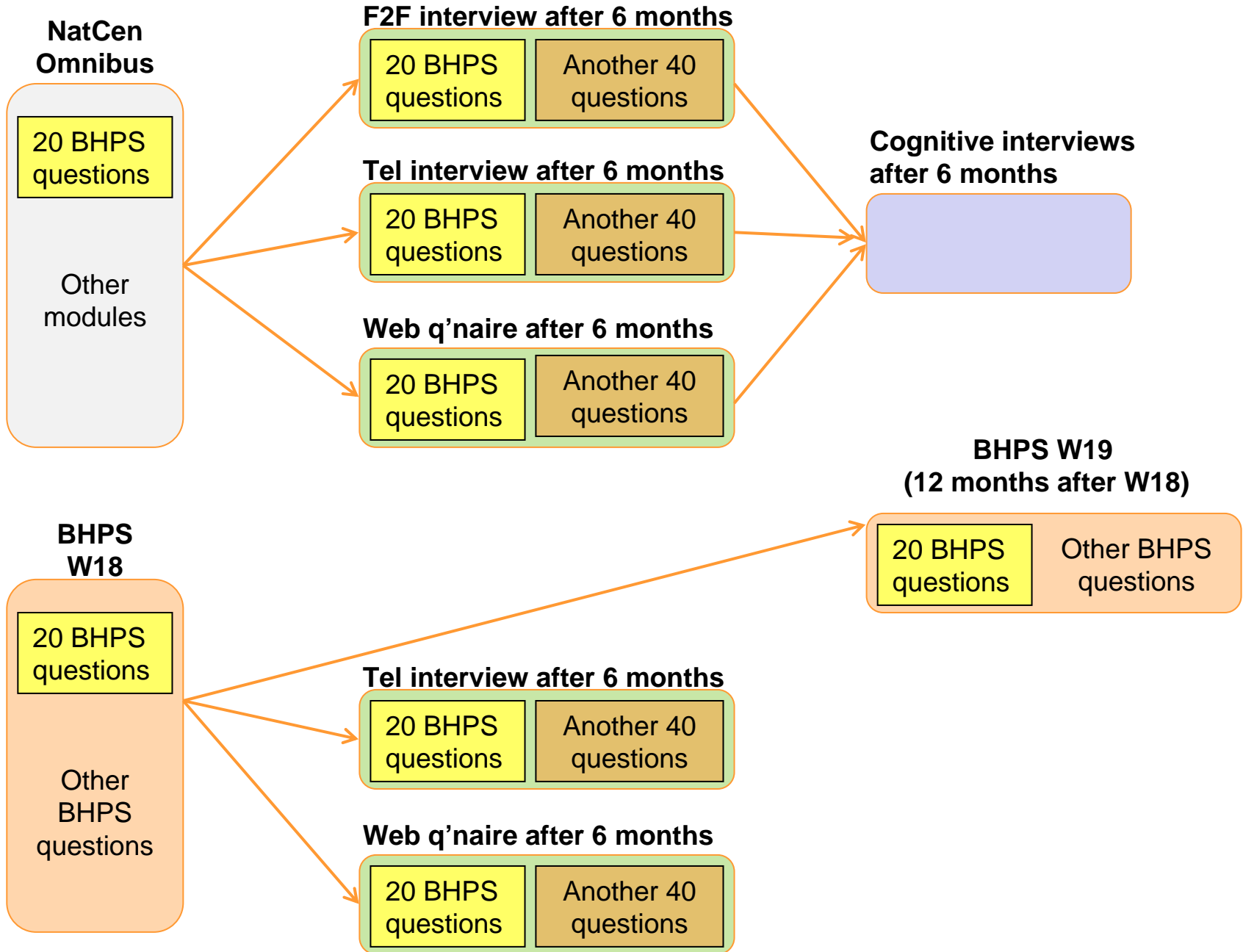
- Complete the literature review
- Identify gaps in the evidence base
- Test some of the hypotheses suggested by the literature review using existing datasets
- Use the evidence from the literature review to inform the design of questions for a new mixed modes experiment

# The Quantitative Data

- Existing datasets, e.g.
  - ▶ 1999 Welsh Assembly Election Study
  - ▶ 2005 Social Capital Survey
  - ▶ European Social Survey mode experiments
  - ▶ 2006 Health Survey for England London boost

# Mixed Modes experiment

- Follow-up surveys to BHPS & NatCen Omnibus
  - ▶ focus on f2f, tel and web comparisons
- Key features of design
  - ▶ Repeated measures (enables estimation of mode effects in measures of change)
  - ▶ Experimental design with random allocation
  - ▶ Comparison of “fresh” sample versus “seasoned” panel sample
  - ▶ Investigation of cognitive processes





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