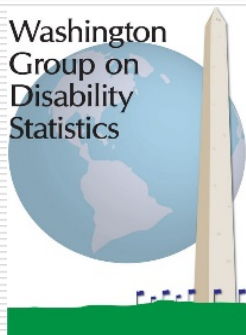# Development of a comparable testing methodology

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Goals for Question Evaluation:

- How do the respondents understand the survey question?

- Do respondents understand the survey question differently?

- Does the question mean the same in all the languages that it is asked?

- Does the question mean the same in all culture and socio-economic groups that it is asked?

- In processing a question, do all respondents recall information and form an answer the same way?

Goals for Question Evaluation:

- To what extent are the data elicited from the question a true representation of the phenomena being studied?

- In what ways is our picture distorted because the questions do not accurately capture the intended construct?

- What important discovery are we not making because we are unaware that our picture is distorted?
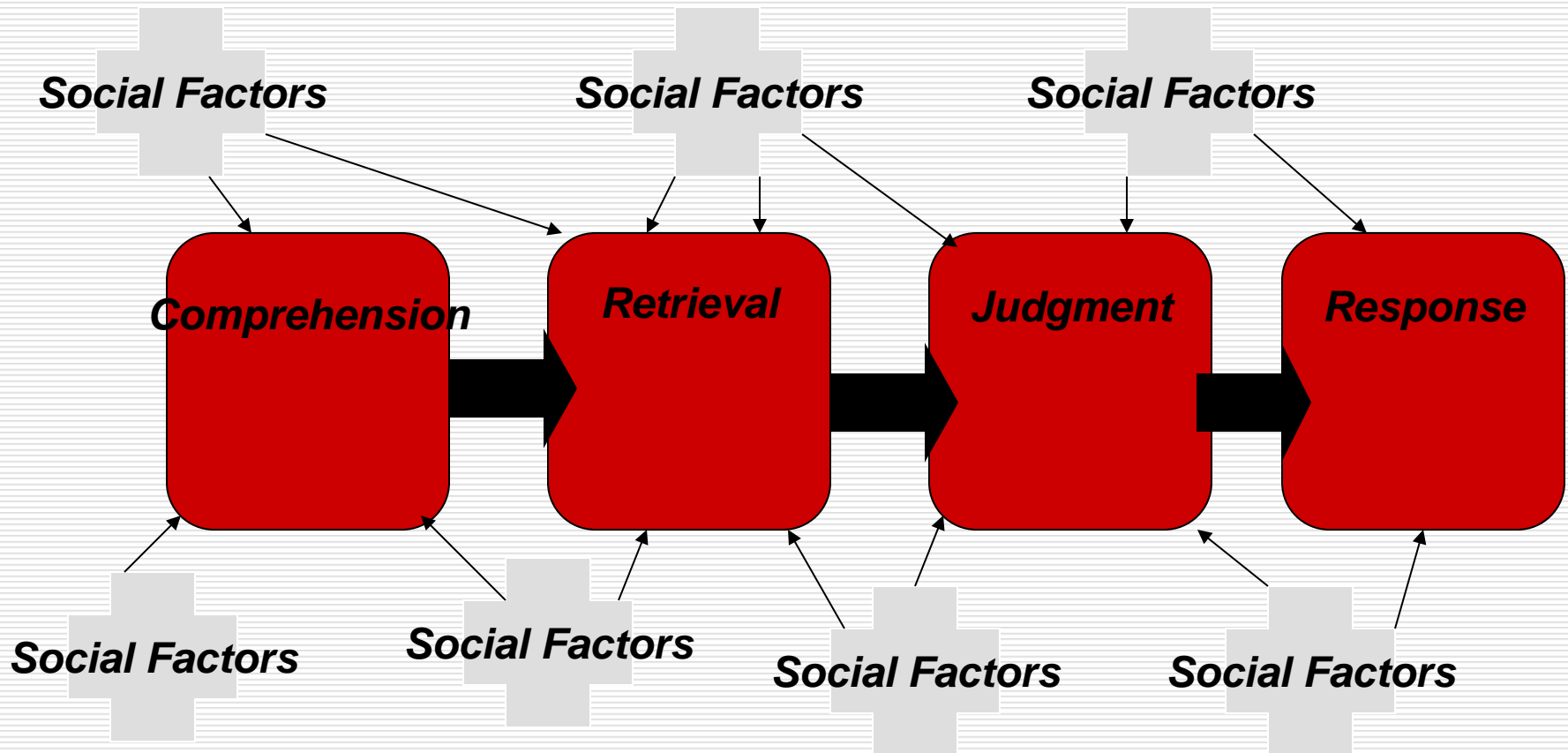
Why Question Evaluation?

1. To fix problems
2. Ensure comparability
3. Documentation
   - Development and evaluation process
   - "What the question captures"
   - How resulting data should be used
   - "Road map" for including question on other surveys, in other languages, in other socio-cultural contexts

Question Evaluation Principles

1. The best question design is based on question evaluation, not expert opinion

2. Question evaluation is science-based
   - Empirical Evidence
   - Transparent and Systematic analysis (Qnotes)

3. Evaluation studies must be well documented, replicable, and made accessible (Qbank)

Question Response Process

Social Factors

Social Factors

Social Factors

Comprehension

Retrieval

Judgment

Response

Social Factors

Social Factors

**Social Factors**

Social Factors

The Cognitive Test Approach

- Cognitive interviews are semi-structured.

- The approach adopted is a mix of think-aloud and verbal probing based on a common testing protocol.

- Probes are open-ended, not pre-scripted, and spontaneous - based on the information provided by the respondent.

Some suggested probes:

- How did you come up with this answer?
- Why did you answered in that way?
- What were you thinking?
- Can you tell me more about that?
- What do you mean by that?

Overall, during the past 4 weeks, how much difficulty did you have with thinking clearly and solving daily problems?
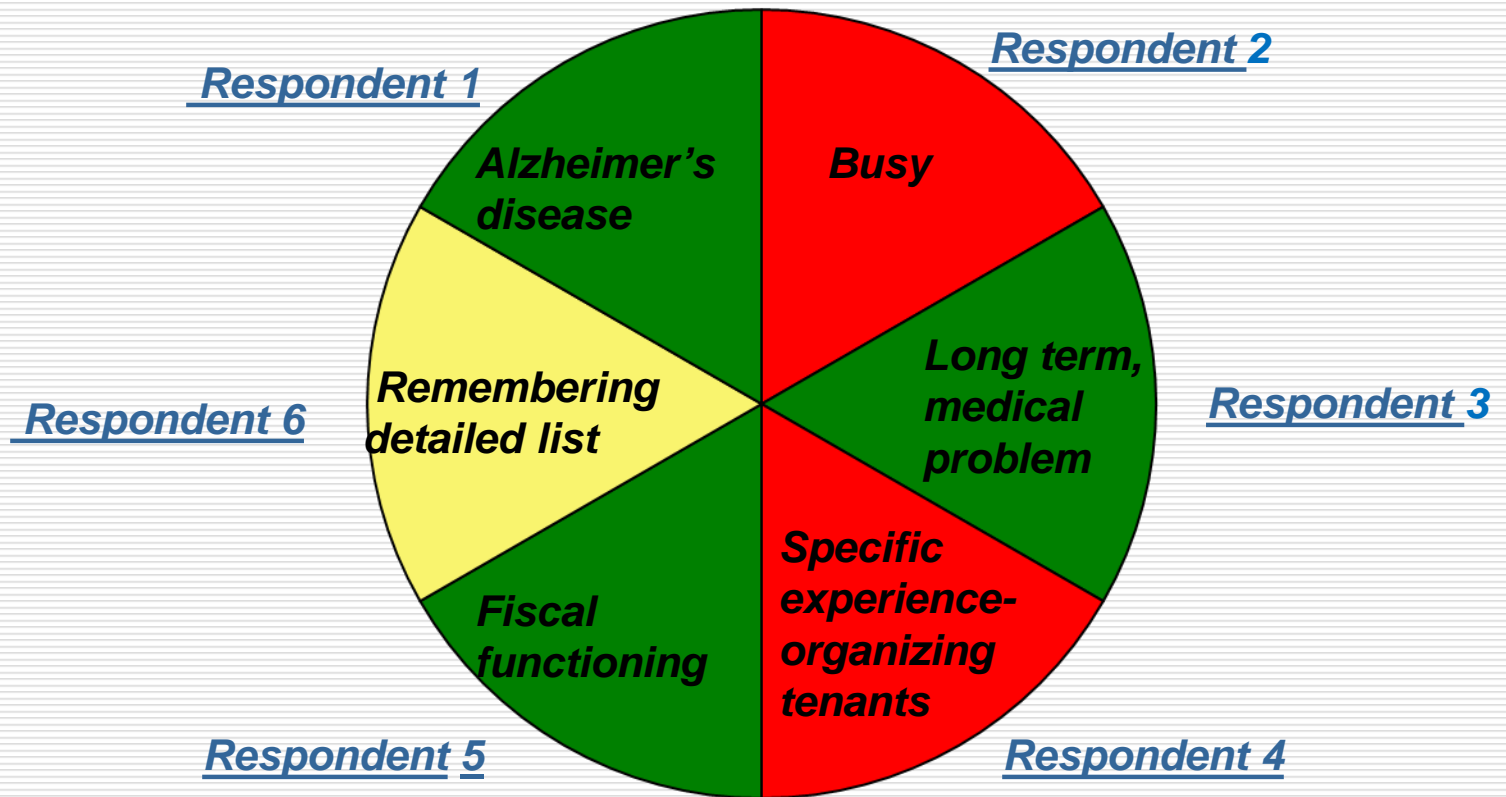
Cognitive Testing Findings

Child disability questions perform differently than adult disability questions due to:

- Parent proxy
- Parent's knowledge of "what is normal" for children of the same age
- Relationship between parent and child
- Parental frustration with child

Cognitive testing: An Example Hearing domain

Round #1

DOES [*NAME*] HAVE DIFFICULTY <u>HEARING</u>?

- This question is intended to focus on <u>auditory hearing</u>: that is, the physical capability of the child to hear.

- Many respondents, however, focused on <u>listening</u>: "my child doesn't listen to me when I'm speaking".

Cognitive testing: An Example Hearing domain
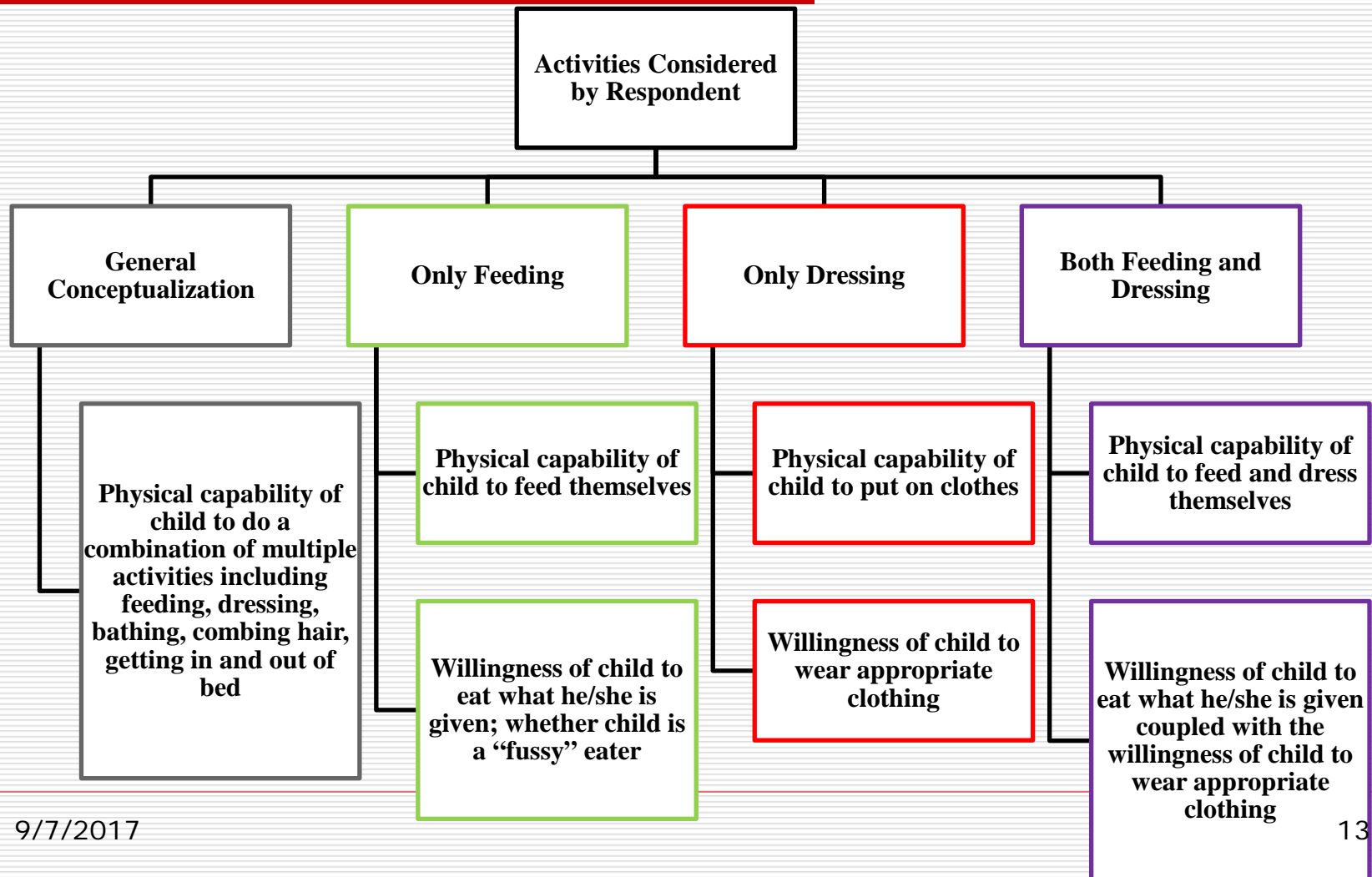
Round #2

DOES [*NAME*] HAVE DIFFICULTY <u>HEARING SOUNDS LIKE PEOPLES' VOICES OR MUSIC</u>?

Cognitive Testing

An example:

Visual representation of themes that emerged from cognitive interviewing on the self-care question.

Compared with children of the same age, does [name] have difficulty with self-care such as feeding or dressing him/herself?

Activities Considered by Respondent

General Conceptualization

Only Feeding

Only Dressing

Both Feeding and Dressing

Physical capability of child to do a combination of multiple activities including feeding, dressing, bathing, combing hair, getting in and out of bed

Physical capability of child to feed themselves

Physical capability of child to put on clothes

Physical capability of child to feed and dress themselves

Willingness of child to eat what he/she is given; whether child is a "fussy" eater

Willingness of child to wear appropriate clothing

Willingness of child to eat what he/she is given coupled with the willingness of child to wear appropriate clothing

Discussion