

Clarifying Categorical Concepts in a Web Survey

by

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“But I would like to explore a lesser-known debate triggered by 9/11. Exactly how many events took place in New York on that morning in September?...The 9/11 cardinality debate is not about the facts, that is, the physical events and human actions that took place that day...But the construal of those facts: how the intricate swirl of matter in space ought to be conceptualized by human minds. As we shall see, the categories in this dispute permeate the meanings of words in our language because they permeate the way we represent reality in our heads.”

Pinker, S. (2007). *The Stuff of Thought: Language as a Window into Human Nature*.

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Clarification

- Interviewer interventions
 - Allow interviewers to provide clarification collaboratively
- Definitions
 - Accuracy is highest when always provided
- Instructions
 - Attracting attention through the use of visual cues improves performance
- Examples
 - Subcategories that are meant to illustrate the category being asked about

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Factors Affecting Use

- Analysis of Interviewer-Respondent Interactions
 - Anticipate the end of a question & interrupt

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Factors Affecting Use

- Analysis of Interviewer-Respondent Interactions
 - Anticipate the end of a question & interrupt
- Visual Channel
 - Respondents spend more time at beginning of question than end
- Working Memory Overload
 - Taxes working memory when long and complex
 - Decomposition is one strategy

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Web Survey Experiment

- Decomposing the categories into subcategories and presenting the subcategories as instructions
- Positioning the instructions before the question vs. after the question
- Transforming the instructions into a series of questions

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Items

- Patterned after major federal surveys
 - Residents
 - Shoes
 - Coats and jackets
 - Hours worked last week
 - Trips
 - Furniture purchases
 - Bedrooms
 - Rooms

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Example of Instructions

- How many pairs of shoes do you own? For the purposes of this item, **do not include boots, sneakers, athletic shoes, or bedroom slippers.** Include sandals, other casual shoes, and dress shoes. If you do not own a pair of shoes (as we have defined them), enter “0.”
- Modified Instructions
 - Exclude at least one prevalent subcategory
 - Lengthy

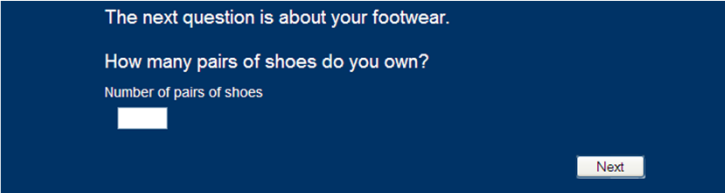
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Three Main Conditions

1. No Instructions
2. Instructions
Two Positions (After/Before)
Two Font Styles (Same as Question vs. Italics)
3. Multiple Questions

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Condition 1: Question and No Instructions

A screenshot of a survey question interface. The background is dark blue. The text is white. It says "The next question is about your footwear." followed by "How many pairs of shoes do you own?". Below that is "Number of pairs of shoes" and a white input box. In the bottom right corner, there is a "Next" button.

The next question is about your footwear.

How many pairs of shoes do you own?

Number of pairs of shoes

Next

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Conditions 2 and 4: Question with Instructions After

The next question is about your footwear.

How many pairs of shoes do you own? For the purposes of this question, do not include boots, sneakers, athletic shoes, or bedroom slippers. Include sandals, other casual shoes, and dress shoes. If you do not own a pair of shoes (as we have defined them), enter "0."

Number of pairs of shoes

Next

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Conditions 3 and 5: Instructions Before Question

The next question is about your footwear.

For the purposes of this question, do not include boots, sneakers, athletic shoes, or bedroom slippers. Include sandals, other casual shoes, and dress shoes. If you do not own a pair of shoes (as we have defined them), enter "0." How many pairs of shoes do you own?

Number of pairs of shoes

Next

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Condition 6: Multiple Questions

The next question is about your footwear.

How many pairs of shoes do you own?

Number of pairs of shoes

When you reported the pairs of shoes that you own, how many pairs of boots, sneakers, athletic shoes, or bedroom slippers, if any, were included?

Number of pairs of shoes

When you reported the pairs of shoes that you own, how many pairs of sandals, other casual shoes, or dress shoes, if any, were included?

Number of pairs of shoes

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Follow-up Questions

When you reported the pairs of shoes that you own, how many were:

	Number of pairs of shoes
boots?	<input type="text"/>
sneakers and/or athletic shoes?	<input type="text"/>
bedroom slippers?	<input type="text"/>
sandals?	<input type="text"/>
other casual shoes?	<input type="text"/>
dress shoes?	<input type="text"/>

[Next](#)

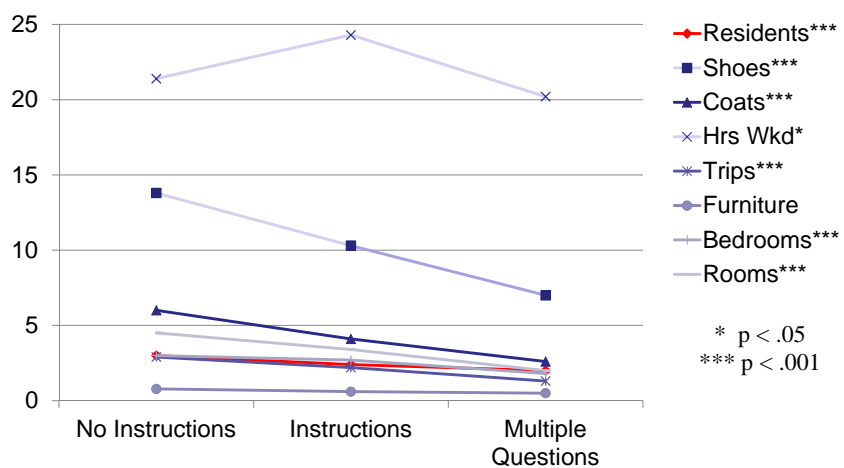
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Data Collection & Sample

- 11th wave (August 1-October 31, 2009) of a 12-month Web panel survey
- National multi-stage area probability sample of addresses in the U.S
- Overall unweighted response rate for the initial 1000 recruits was 42.5 %
- 913 of the 1000 recruited had completed in the 11th wave
- 38.8 % Response Rate (42.5 x 91.3)

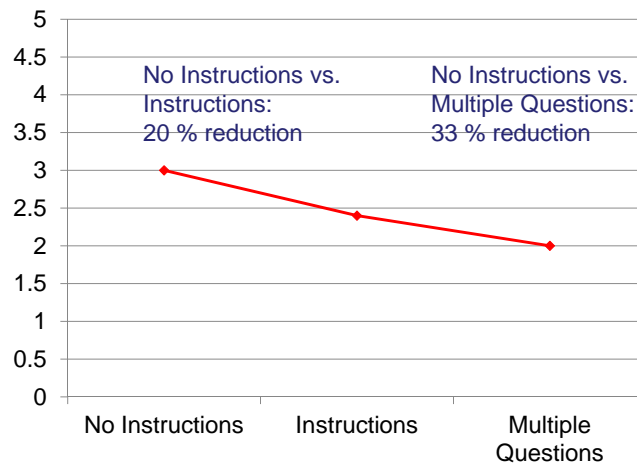
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Mean Response to Items for Three Main Conditions



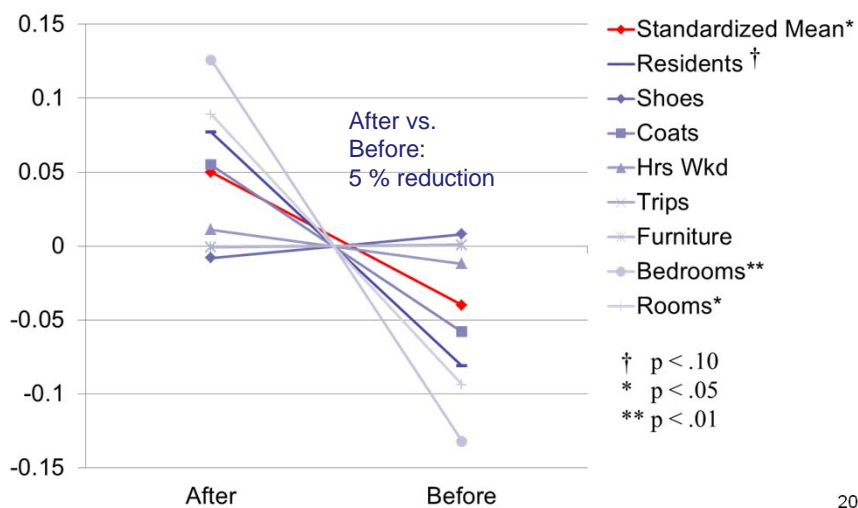
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Average Percent Reduction



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Standardized Mean Response by Position of Instructions



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Follow-Up Questions

For Shoes

When you reported the pairs of shoes that you own, how many were:

Number of pairs of shoes

boots?.....0
sneakers and/or athletic shoes?.....0
bedroom slippers?.....0
sandals?.....
other casual shoes?.....
dress shoes?.....

0 Denotes a response consistent with research intentions

For Hours Worked

When you reported the hours you worked for either pay or profit last week, how many were spent:

Number of hours

doing tasks required of your job or jobs?.....

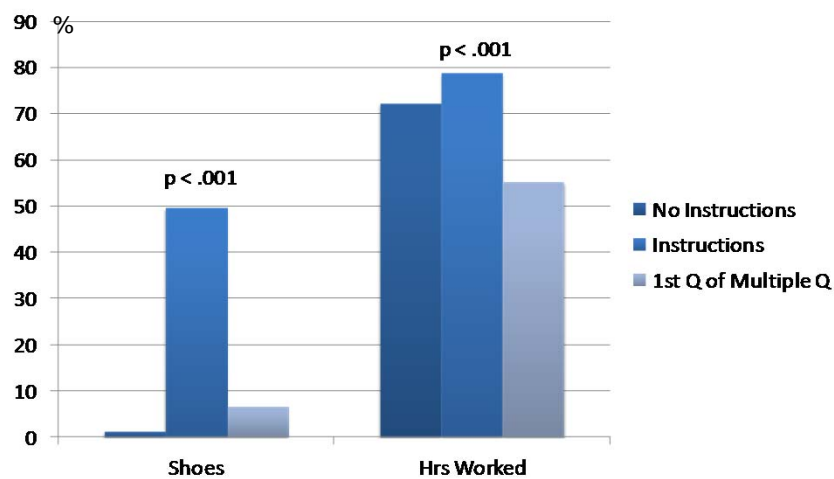
telecommuting or working from home?.....0

surfing the Web, working on personal matters, or socializing?.....0

0 Denotes a response consistent with research intentions

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Percentage of Consistent Responses



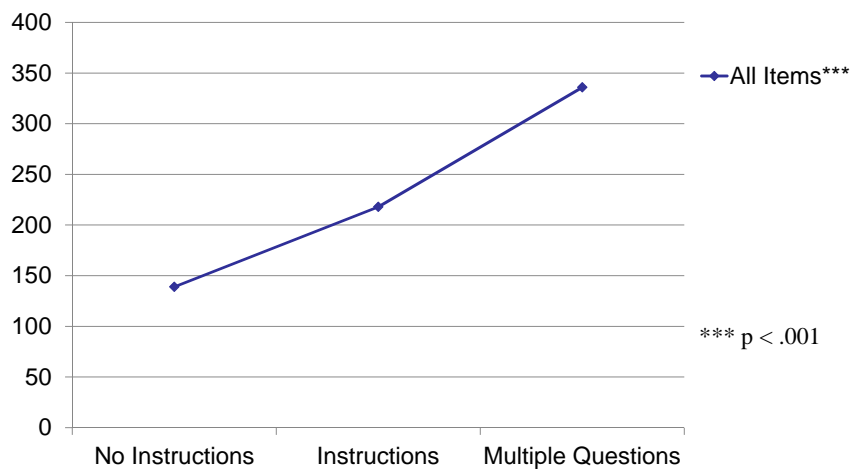
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Percentage of Consistent Responses by Position of Instructions



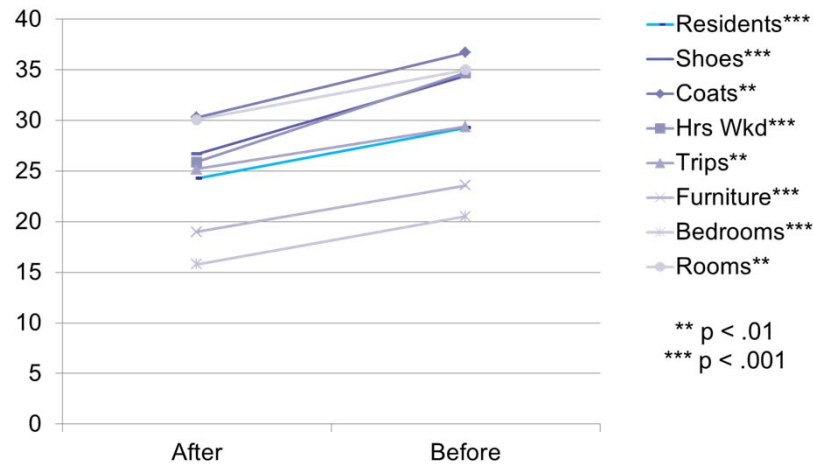
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Mean Seconds over All Items by Three Main Conditions



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Mean Seconds per Item by Position of Instructions



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Summary

- If a survey's definition differs from respondent's definition then clarification matters
 - Mean responses were lower in the presence of instructions
- Position matters
 - Mean responses were lower and more time devoted when instructions preceded item than followed item
- Structure matters
 - Providing instructions not as effective as asking multiple questions

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Future Research

- Findings should apply to instructions that exclude commonly counted categories as those that include commonly omitted categories
- Findings should apply to a combination

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Thank you!

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