

Effect of Confidence Interval Construction on Judgment Accuracy

SUPPLEMENTARY MATERIALS

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Appendix A

Elicitation Instructions**Elicitation Method = Lower/Higher → Confidence → Best response****--Page 1--**

In the following you will be presented with a series of questions (e.g., what percentage of stuffed animals are teddy bears?) for which we will ask you to provide four different estimates.

Realistically, what do you think the **LOWEST** plausible value could be?

Realistically, what do you think the **HIGHEST** plausible value could be?

How confident are you that the interval you created, from **LOWEST** to **HIGHEST**, could capture the true value? Please enter a number between 50 and 100%?

Realistically, what is your **BEST** response?

Each estimate will be in the form of a percentage. Please try to be as accurate as possible.

PLEASE DO NOT LOOK UP THE ANSWERS (e.g., on the Internet). In the next few pages we will review how to respond to each of the questions above. It is important that you understand how to respond to each. Please read carefully.

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When answering the following question: Realistically, what do you think the **LOWEST** plausible value could be?

You should give us the **LOWEST** value you believe to be plausible between 0% and 100%. For example, imagine if you were asked "what percentage of stuffed animals are teddy bears?" You might have seen some teddy bears so 0% might not seem plausible. Could it be as low as 20%? What about 70%? Please pick the value that seems most plausible to you for each question.

Your **LOWEST plausible value should be lower than your **HIGHEST** plausible value.**

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When answering the following question: Realistically, what do you think the **HIGHEST** plausible value could be?

You should give us the **HIGHEST** value you believe to be plausible between 0% and 100%. For example, imagine if you were asked "what percentage of stuffed animals are teddy bears?" You might have seen stuffed animals that were not teddy bears so 100% might not seem plausible. Could it be as high as 80%? What about 30%? Please pick the value that seems most plausible to you for each question.

Your **HIGHEST plausible value should be higher than your **LOWEST** plausible value.**

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When answering the following question: How confident are you that the interval you created, from LOWEST to HIGHEST, could capture the true value? Please enter a number between 50 and 100%?

Your confidence reflects how sure you are that the true value is contained between your LOWEST and HIGHEST estimates. Your confidence should fall between 50 and 100% for the following reasons. If you state your confidence is less than 50% it means you are more certain that the true value is located outside of your interval than it being captured by your interval. In this case it would be sensible to make your LOWEST and HIGHEST estimates wider and increase your level of confidence that you have captured the true value. If you state your confidence is 100% it means you are absolutely certain that the truth could not fall outside your LOWEST and HIGHEST estimates. It means you should be willing to bet your house or job on it because there is no plausible way the truth could be located outside your interval.

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When answering the following question: Realistically, what is your BEST response?

Please provide your best estimate between 0 and 100%. For example, imagine if you were asked "what percentage of stuffed animals are teddy bears?" We want the % that you feel most confident about.

Your BEST response should fall between your LOWEST and HIGHEST estimates.

Elicitation Method = Best response → Lower/Higher → Confidence**-- Page 1--**

In the following you will be presented with a series of questions (e.g., what percentage of stuffed animals are teddy bears?) for which we will ask you to provide four different estimates.

Realistically, what is your BEST response?

Realistically, what do you think the LOWEST plausible value could be?

Realistically, what do you think the HIGHEST plausible value could be?

How confident are you that the interval you created, from LOWEST to HIGHEST, could capture the true value? Please enter a number between 50 and 100%?

Each estimate will be in the form of a percentage. Please try to be as accurate as possible.

PLEASE DO NOT LOOK UP THE ANSWERS (e.g., on the Internet). In the next few pages we will review how to respond to each of the questions above. It is important that you understand how to respond to each. Please read carefully.

--Page 2--

When answering the following question: Realistically, what is your BEST response?

Please provide your best estimate between 0 and 100%. For example, imagine if you were asked "what percentage of stuffed animals are teddy bears?" We want the % that you feel most confident about.

Your BEST response should fall between your LOWEST and HIGHEST estimates.

--Page 3--

When answering the following question: Realistically, what do you think the LOWEST plausible value could be?

You should give us the LOWEST value you believe to be plausible between 0% and 100%. For example, imagine if you were asked "what percentage of stuffed animals are teddy bears?" You might have seen some teddy bears so 0% might not seem plausible. Could it be as low as 20%? What about 70%? Please pick the value that seems most plausible to you for each question.

Your LOWEST plausible value should be lower than your HIGHEST plausible value.

-- Page 4--

When answering the following question: Realistically, what do you think the HIGHEST plausible value could be?

You should give us the HIGHEST value you believe to be plausible between 0% and 100%. For example, imagine if you were asked "what percentage of stuffed animals are teddy bears?" You might have seen stuffed animals that were not teddy bears so 100% might not seem plausible. Could it be as high as 80%? What about 30%? Please pick the value that seems most plausible to you for each question.

Your HIGHEST plausible value should be higher than your LOWEST plausible value.

--Page 5--

When answering the following question: How confident are you that the interval you created, from LOWEST to HIGHEST, could capture the true value? Please enter a number between 50 and 100%?

Your confidence reflects how sure you are that the true value is contained between your LOWEST and HIGHEST estimates. Your confidence should fall between 50 and 100% for the following reasons. If you state your confidence is less than 50% it means you are more certain that the true value is located outside of your interval than it being captured by your interval. In this case it would be sensible to make your LOWEST and HIGHEST estimates wider and increase your level of confidence that you have captured the true value. If you state your confidence is 100% it means you are absolutely certain that the truth could not fall outside your LOWEST and HIGHEST estimates. It means you should be willing to bet your house or job on it because there is no plausible way the truth could be located outside your interval.

Appendix B

Post Instruction Comprehension Questions

(1) Let's check to make sure you understand the instructions. Your LOWEST estimate should be lower than your HIGHEST estimate.

True False

The correct answer is TRUE. Your LOWEST estimate should be lower than your HIGHEST estimate.

(2) Your BEST response should fall between your LOWEST and HIGHEST plausible estimates

True False

The correct answer is TRUE. Your BEST response should fall between your LOWEST and HIGHEST plausible estimates. Good luck.

Appendix C

General Knowledge Questions used in IDEA protocol

What percentage of survey respondents reported having given a monetary tip (e.g., at a restaurant) in the last 3 days

What percentage of survey respondents reported having used a calculator in the last 7 days

What percentage of survey respondents reported having ate a piece of birthday cake over the last month

What percentage of survey respondents reported having rode a bike in the last 6 months

What percentage of survey respondents reported having sitting by a fire outside in the last year

What percentage of survey respondents reported having been on a cruise (the type of vacation) in the last ten years

What percentage of survey respondents correctly answered the following TRUE/FALSE question: Napoleon Bonaparte died between January 1, 1700 and December 31, 1749 (FALSE)

What percentage of survey respondents correctly answered the following TRUE/FALSE question: The Statue of Liberty skin is made of steel (FALSE)

What percentage of survey respondents correctly answered the following TRUE/FALSE question: Glasgow is the capital of Scotland (FALSE)

What percentage of survey respondents correctly answered the following TRUE/FALSE question: The Pacific Ocean is the largest of Earth's oceans (TRUE)

What percentage of survey respondents correctly answered the following TRUE/FALSE question: Out of a straight, a flush, and three-of-a-kind, a flush is the best hand In 5-card-draw poker (TRUE)

What percentage of survey respondents correctly answered the following TRUE/FALSE question: Algeria is the largest country in Africa (TRUE)

What percentage of the capital cities in the United States had populations less than 200,000 in 2010

What percentage of a typical adult human's bones are located in its head?

The circumference of an American dime is what percentage of the circumference of an American Quarter?

The area of Canada is what percentage of the area of North America

What percentage of all the planets in the solar system are larger than earth?

What percentage of the Major League Worlds Series have been won by the New York Yankees

What percentage of survey respondents reported having a pet a cat in the last 3 days

What percentage of survey respondents reported having worn plaid clothing in the last 7 days

What percentage of survey respondents reported having eaten popcorn in the last month

What percentage of survey respondents reported having opened an umbrella in the last 6 months

What percentage of survey respondents reported having broken a glass or dish over the last year

What percentage of survey respondents reported having visited a country in Europe in the last ten years

What percentage of survey respondents correctly answered the following TRUE/FALSE question: There are fewer than 20 bones in the human hand (FALSE)

What percentage of survey respondents correctly answered the following TRUE/FALSE question: In the Earth's solar system, Mars is the fifth planet from the Sun (FALSE)

What percentage of survey respondents correctly answered the following TRUE/FALSE question: The cell body of a neuron is called the axon (FALSE)

What percentage of survey respondents correctly answered the following TRUE/FALSE question: Mount Rushmore is located in South Dakota (TRUE)

What percentage of survey respondents correctly answered the following TRUE/FALSE question: Einstein was born in Germany (TRUE)

What percentage of survey respondents correctly answered the following TRUE/FALSE question: Volvo is a Swedish car manufacturer (TRUE)

What percentage of the capital cities in the United States had populations under 150,000 in 2010

What percentage of a typical adult human's bones are located in its two feet?

The diameter of a Canadian penny is what percentage of the diameter of a Canadian Quarter?

The area of the United States is what percentage of the area of North America

What percentage of all the planets in the solar system are larger than Venus?

What percentage of the Super Bowls have been won by the New England Patriots

Appendix D

General Knowledge/Behavior Questions used to Provide Answers for Non-searchable Questions

Have you pet a cat in the last 3 days

Have you worn plaid clothing in the last 7 days

Have you eaten popcorn in the last month

Have you opened an umbrella in the last 6 months

Have you broken a glass or dish over the last year

Have you visited a country in Europe in the last ten years

There are fewer than 20 bones in the human hand

In the Earth's solar system, Mars is the fifth planet from the Sun

The cell body of a neuron is called the axon

Mount Rushmore is located in South Dakota

Einstein was born in Germany

Volvo is a Swedish car manufacturer

Have given a monetary tip (e.g., at a restaurant) in the last 3 days

Have you used a calculator in the last 7 days

Have you ate a piece of birthday cake over the last month

Have you rode a bike in the last 6 months

Have you sat by a fire outside in the last year

Have you been on a cruise (the type of vacation) in the last ten years

Napoleon Bonaparte died between January 1, 1700 and December 31, 1749

The Statue of Liberty skin is made of steel

Glasgow is the capital of Scotland

The Pacific Ocean is the largest of Earth's oceans

Out of a straight, a flush, and three-of-a-kind, a flush is the best hand in 5-card-draw poker

Algeria is the largest country in Africa