

# Participant Questionnaire

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*Thank you in advance for participating in the study! We would like you to answer a series of questions that will be helpful in understanding the factors behind how people apply information to solve problems like those posed in this study. Completing this questionnaire will take about 15 to 20 minutes. The information you provide is voluntary and will be kept confidential and treated as anonymous. If you have any questions or concerns about what you are being asked, please contact the study moderator.*

**Participant ID:**

## A. Questions about your background and experience.

1. Your age:
2. Your gender: ☐ Female ☐ Male
3. Do you have any visual impairment, or color blindness? ☐ No ☐ Yes

If yes, what kind(s)?

4. Your completed educational degree(s) and the discipline(s) of study

|   |            |                      |
|---|------------|----------------------|
| <input type="checkbox"/> Associate                  | Discipline | <input type="text"/> |
| <input type="checkbox"/> Bachelor                   | Discipline | <input type="text"/> |
| <input type="checkbox"/> Certificate                | Discipline | <input type="text"/> |
| <input type="checkbox"/> Master                     | Discipline | <input type="text"/> |
| <input type="checkbox"/> Ph.D.                      | Discipline | <input type="text"/> |
| <input type="checkbox"/> Other <input type="text"/> | Discipline | <input type="text"/> |

5. Educational degrees and programs you are currently enrolled in

|                      |                      |
|----------------------|----------------------|
| Degree / Level       | <input type="text"/> |
| Discipline / Program | <input type="text"/> |

6. Please indicate your current and previous work experience (include military service) starting with most recent employer:

| Employer | Job Title/Position | Number of Years |
|----------|--------------------|-----------------|
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7. What is your level of training in probability and statistics?

- ☐ None. I have no training in probability and statistics.
- ☐ Elementary. I have taken a basic course or two.
- ☐ Intermediate. I have taken some courses or read some articles on the subjects.
- ☐ Advanced. I have taken many courses or read many articles on the subjects.

8. In the past, how often have you used probabilities or statistics to answer questions or solve problems?

- ☐ Never. I have never done this before.
- ☐ Rarely. I have done this a few times or less.
- ☐ Occasionally. I have done this occasionally.
- ☐ Often. I have done this often.

9. In the past, how often have you worked with geospatial<sup>1</sup> data to answer questions or solve problems?

- ☐ Never. I have never done this before.
- ☐ Rarely. I have done this less than a few times.
- ☐ Occasionally. I have done this occasionally.
- ☐ Often. I have done this often.

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<sup>1</sup> Defined as the position of things on a map or the earth's surface

10. How would you rate your level of expertise in geospatial intelligence analysis<sup>2</sup>?

- ☐ None.
- ☐ Novice.
- ☐ Intermediate.
- ☐ Expert.

11. How would you rate your spatial ability<sup>3</sup>?

- ☐ Poor.
- ☐ Weak.
- ☐ Average.
- ☐ Good.
- ☐ Excellent.

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<sup>2</sup> Geospatial intelligence analysis is the exploitation of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on the earth.

<sup>3</sup> Spatial ability is the ability to reason about objects in 2 dimensional and 3 dimensional space, and to draw conclusions about these objects given limited information

## B. Questions about your opinions and attitudes.

*Each following item is a statement that a person may either agree with or disagree with. For each item, indicate how much you agree or disagree with what the item says. Please respond to all the items; do not leave any blank. Choose only one response to each statement. Please be as accurate and honest as you can be. Respond to each item as if it were the only item. That is, don't worry about being "consistent" in your responses.*

| Statement   | Very true for me         | Somewhat true for me     | Somewhat false for me    | Very false for me        |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. A person's family is the most important thing in life.                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Even if something bad is about to happen to me, I rarely experience fear or nervousness. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I go out of my way to get things I want.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. When I'm doing well at something I love to keep at it.                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I'm always willing to try something new if I think it will be fun.                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. How I dress is important to me.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. When I get something I want, I feel excited and energized.                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Criticism or scolding hurts me quite a bit.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. When I want something I usually go all-out to get it.                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. I will often do things for no other reason than that they might be fun.                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Continues on next page...   |                          |                          |                          |                          |

| Statement  | Very<br>true<br>for me   | Somewhat<br>true<br>for me | Somewhat<br>false<br>for me | Very<br>false<br>for me  |
|--|--------------------------|----------------------------|-----------------------------|--------------------------|
| 11. It's hard for me to find the time to do things such as get a haircut.                | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 12. If I see a chance to get something I want I move on it right away.                   | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 13. I feel pretty worried or upset when I think or know somebody is angry at me.         | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 14. When I see an opportunity for something I like I get excited right away.             | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 15. I often act on the spur of the moment.   | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 16. If I think something unpleasant is going to happen I usually get pretty "worked up." | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 17. I often wonder why people act the way they do.                                       | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 18. When good things happen to me, it affects me strongly.                               | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 19. I feel worried when I think I have done poorly at something important.               | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 20. I crave excitement and new sensations.   | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 21. When I go after something I use a "no holds barred" approach.                        | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 22. I have very few fears compared to my friends.  | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 23. It would excite me to win a contest.   | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |
| 24. I worry about making mistakes.   | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>    | <input type="checkbox"/> |

*Each following item is a statement that a person may either agree with or disagree with. For each item, indicate whether you agree or disagree with what the item says.*

| <b>Statement</b>  | <b>Agree</b>             | <b>Disagree</b>          |
|---|--------------------------|--------------------------|
| 1. Scholars are usually at greater risk of exaggerating how complex the world is than they are of underestimating how complex it is.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. We are closer than many think to achieving parsimonious explanations of politics   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I think politics is more cloudlike than clocklike ("cloudlike" meaning inherently unpredictable; "clocklike" meaning perfectly predictable if we have adequate knowledge). | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. The more common error in decision making is to abandon good ideas too quickly, not to stick with bad ideas too long.   | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Having clear rules and order at work is essential for success.   | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Even after I have made up my mind about something, I am always eager to consider a different opinion.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. I dislike questions that can be answered in many different ways.   | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. I usually make important decisions quickly and confidently.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. When considering most conflict situations, I can usually see how both sides could be right.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. It is annoying to listen to someone who cannot seem to make up his or her mind.   | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. I prefer interacting with people whose opinions are very different from my own.   | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. When trying to solve a problem I often see so many options that it is confusing.  | <input type="checkbox"/> | <input type="checkbox"/> |

| <b>Statement</b>  | <b>I'm more of a hedgehog</b> | <b>I'm more of a fox</b> |
|---|-------------------------------|--------------------------|
| 13. Isaiah Berlin classified intellectuals as hedgehogs or foxes. The hedgehog knows one big thing and tries to explain as much as possible within that conceptual framework, whereas the fox knows many small things and is content to improvise explanations on a case-by-case basis. I place myself towards the hedgehog or fox end of this scale. | <input type="checkbox"/>      | <input type="checkbox"/> |

## C. Questions about your abilities and knowledge.

*The following consists of several statements about your spatial and navigational abilities. After each statement, you should check a box to indicate your level of agreement with the statement.*

| Statement  | Strongly agree           | Agree                    | Slightly Agree           | Neither agree nor disagree | Slightly Disagree        | Disagree                 | Strongly Disagree        |
|--|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| 1. I am very good at giving directions.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I have a poor memory for where I left things.                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I am very good at judging distances.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. My "sense of direction" is very good.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I tend to think of my environment in terms of cardinal directions (N, S, E, W). | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. I very easily get lost in a new city.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. I enjoy reading maps.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. I have trouble understanding directions.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. I am very good at reading maps.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. I don't remember routes very well while riding as a passenger in a car.        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. I don't enjoy giving directions.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. It's not important to me to know where I am.                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. I usually let someone else do the navigational planning for long trips.        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. I can usually remember a new route after I have traveled it only once.         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. I don't have a very good "mental map" of my environment.                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Below are six rows containing images of vessels filled with various amounts of water. For each image on the left, select the corresponding box under one image on the right that correctly shows what the water would look like inside the vessel after it has been tilted. Assume the vessels are sitting still on a table top and the water inside has come to a rest in all vessels.

|    |   |   |   |   |   |   |   |   |
|----|---|---|---|---|---|---|---|---|
| 1. |    |    |    |    |    |    |    |    |
|    | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  |
| 2. |    |    |    |    |    |    |    |    |
|    | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  |
| 3. |    |    |    |    |   |    |    |    |
|    | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  |
| 4. |   |   |   |   |   |   |   |   |
|    | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  |
| 5. |  |  |  |  |  |  |  |  |
|    | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  |
| 6. |  |  |  |  |  |  |  |  |
|    | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  | <input type="checkbox"/>  |

Please answer the following questions

- | Question   | Answer                       |
|--|------------------------------|
| 1. A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost?  | <input type="text"/> cents   |
| 2. If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?  | <input type="text"/> minutes |
| 3. In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake? | <input type="text"/> days    |



*Please check the best answer for each of the following questions.*

1. Have you ever played video games? ☐ Yes ☐ No

2. Have you played video games in the last 12 months? ☐ Yes ☐ No

3. Approximately how often and how much time do you spend playing video games?

On average, I play video games at least once per ... (pick one of the following)

☐ Day

☐ Week

☐ Month

☐ Year

and spend about  hours playing per that unit of time (for example, 1 hour per day, 10 hours per year, etc.)

*This is the end of the questionnaire. Thank you again for your responses!*