

Fragebogen

1 General_Instruction

Dear participant,

thank you very much for your participation in this psychological experiment.

We guarantee that your data will be treated anonymously and used exclusively for scientific purposes. If you have any questions or comments, please don't hesitate to contact Sarah Placi (sarah.placi@unitn.it).

In this study, we investigate how people perceive objects. In particular, we want to find out how people, in the absence of any guidance, categorize objects.

It is very important for us that you *read all the instructions thoroughly*.

Again, thank you very much for your help in this research project.

This research is conducted under the scientific direction of:

Dr. Sarah Placi

*Animal Cognition and Neuroscience lab – Center for Mind/Brain Sciences,
University of Trento, Italy.*

Before you start, please:

- **maximize your browser window;**
- **switch off phone/e-mail/music & anything else distracting**
- **and please enter your Prolific ID:**

This study works properly only on Desktop PCs and Laptops, and not on Smartphones or Tablets. Please confirm that you take part via Desktop PC or Laptop.

- ☐ I confirm that I take part via Desktop PC or Laptop.
- ☐ I do not confirm that I take part via Desktop PC or Laptop.

For the scientific utility of the results, it is very important that you provide complete and careful responses.

How seriously will you take your participation in the study?

- ☐ I confirm that I will take my participation in this study seriously.
- ☐ I confirm that I will not take my participation in this study seriously.

2 Detailed instructions

Please read the following instructions:

In this experiment, you will be presented with arrays, each composed of six blue panels (a; b; c, d, e, and f). In each panel, you will see a 2D object. Your task will be to select the object that seems different to you. Here is an example:

Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

If you have understood everything accurately and feel prepared to start, click "Continue" to start the experiment with the first array of six panels.

3.1.1 Y_Symmetry1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.1.2 Y_Symmetry2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.1.3 Y_Symmetry3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.1.4 Y_Symmetry4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.1.5 Y_Symmetry5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.1.6 Y_Symmetry6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.2.1 X_Symmetry1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.2.2 X_Symmetry2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.2.3 X_Symmetry3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.2.4 X_Symmetry4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.2.5 X_Symmetry5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.2.6 X_Symmetry6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.3.1 Rotation1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.3.2 Rotation2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.3.3 Rotation3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.3.4 Rotation4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.3.5 Rotation5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.3.6 Rotation6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.4.1 Angle1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.4.2 Angle2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.4.3 Angle3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.4.4 Angle4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.4.5 Angle5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.4.6 Angle6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.5.1 Size1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.5.2 Size2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.5.3 Size3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.5.4 Size4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.5.5 Size5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.5.6 Size6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.6.1 X_Translation1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.6.2 X_Translation2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.6.3 X_Translation3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.6.4 X_Translation4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.6.5 X_Translation5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.6.6 X_Translation6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.7.1 Y_Translation1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.7.2 Y_Translation2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.7.3 Y_Translation3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.7.4 Y_Translation4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.7.5 Y_Translation5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.7.6 Y_Translation6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.8.1 Angle_Y_Sym1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.8.2 Angle_Y_Sym2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.8.3 Angle_Y_Sym3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.8.4 Angle_Y_Sym4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.8.5 Angle_Y_Sym5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.8.6 Angle_Y_Sym6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.9.1 Angle_Rot1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.9.2 Angle_Rot2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.9.3 Angle_Rot3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.9.4 Angle_Rot4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.9.5 Angle_Rot5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.9.6 Angle_Rot6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.10.1 Angle_Size1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.10.2 Angle_Size2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.10.3 Angle_Size3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.10.4 Angle_Size4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.10.5 Angle_Size5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.10.6 Angle_Size6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.11.1 Y_Symmetry_Size1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.11.2 Y_Symmetry_Size2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.11.3 Y_Symmetry_Size3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.11.4 Y_Symmetry_Size4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.11.5 Y_Symmetry_Size5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.11.6 Y_Symmetry_Size6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.12.1 Y_Symmetry_Angle1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.12.2 Y_Symmetry_Angle2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.12.3 Y_Symmetry_Angle3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.12.4 Y_Symmetry_Angle4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.12.5 Y_Symmetry_Angle5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.12.6 Y_Symmetry_Angle6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.13.1 Y_Symmetry_Rot1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.13.2 Y_Symmetry_Rot2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.13.3 Y_Symmetry_Rot3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.13.4 Y_Symmetry_Rot4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.13.5 Y_Symmetry_Rot5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.13.6 Y_Symmetry_Rot6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.14.1 Size_Angle1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.14.2 Size_Angle2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.14.3 Size_Angle3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.14.4 Size_Angle4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.14.5 Size_Angle5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.14.6 Size_Angle6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.15.1 Size_Rot1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.15.2 Size_Rot2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.15.3 Size_Rot3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.15.4 Size_Rot4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.15.5 Size_Rot5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.15.6 Size_Rot6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.16.1 Size_Y_Sym1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.16.2 Size_Y_Sym2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.16.3 Size_Y_Sym3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.16.4 Size_Y_Sym4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.16.5 Size_Y_Sym5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.16.6 Size_Y_Sym6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.17.1 Rot_Y_Sym1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.17.2 Rot_Y_Sym2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.17.3 Rot_Y_Sym3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.17.4 Rot_Y_Sym4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.17.5 Rot_Y_Sym5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.17.6 Rot_Y_Sym6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.18.1 Rot_Angle1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.18.2 Rot_Angle2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.18.3 Rot_Angle3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.18.4 Rot_Angle4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.18.5 Rot_Angle5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.18.6 Rot_Angle6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.19.1 Rot_Size1



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.19.2 Rot_Size2



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.19.3 Rot_Size3



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.19.4 Rot_Size4



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.19.5 Rot_Size5



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

3.19.6 Rot_Size6



Which of the following 2D objects seems different to you?

- ☐ a)
- ☐ b)
- ☐ c)
- ☐ d)
- ☐ e)
- ☐ f)

4 Personal information

The experiment is now finished.

Before you leave, please answer the following questions:

How old are you?

Please indicate with which gender you identify.

- ☐ male
- ☐ female
- ☐ other
- ☐ prefer not to say

5 Endseite

Thank you for taking part in this study!

The aim of this experiment is to find out more about how people make causal judgments. If you are interested in further details or if you have any questions or comments concerning the experiment, feel free to contact me (Sarah Placi) under sarah.placi@unitn.it

To ensure you receive your reward, please click on the following link to return to the Prolific website:

[Link to Prolific](#)
