Nomological Machines Exp. 2

General Instruction

Dear participant,

We are grateful for your participation in this online study.

For this experiment to work, **you will need to have the Adobe Flash Player installed and activated**. Please make sure that this is the case; if not, you will not be able to complete the experiment.

In the following experiment you will encounter a new kind of machine. Your task will be to explore what happens when you put different objects into this machine. Afterwards, we will ask you some questions about your observations.

The whole survey will take about five minutes. To ensure that you pay enough attention to the task, we inserted an attention check question in the course of the survey. If you fail to answer this simple question correctly, we cannot use your data and have to exclude you from the study. In this case, you will not receive a reward for your participation. So please make sure you pay enough attention to the task in order to avoid disappointment.

We guarantee that the collected data will be made anonymous and only be used in the study at hand.

Please enter your Prolific ID into the field below before proceeding to the experiment by clicking "Continue".

Learning Phase

Imagine you encounter the machine shown below. It has three holes at the top. Your task is to find out what happens when you throw different objects into the center hole. One object is small (diameter of 3 in) and light (weight of 10 lbs). The other object is large (diameter of 4 in) and heavy (weight of 30 lbs).

Please click on one of the objects in order to throw it into the center hole of the machine and watch closely what happens. You are only allowed to put one object at a time into the machine. After the machine has returned to its original state, you can repeat your experiment until you are confident that you understood what happens when you throw the different objects into the machine.

On the front side of the machine, you see a static construction plan of the machine's interior. Please try to imagine how the machine might work while you make your observations.

Flash clip of size-/weight-sensitive machine with center hole on the left/right

Please do not press "Continue" before you have investigated the issue thoroughly. You will not be permitted to return to this page.

Causal Rating Phase

Thank you for exploring the machine. Please let us know what you have observed.

- Throwing the small (3 in) and light (10 lbs) object into the machine…
    - …caused a red balloon to rise from the left hole.
    - …caused a blue balloon to rise from the left hole.
    - …caused a red balloon to rise from the right hole.
    - …caused a blue balloon to rise from the right hole.
- Throwing the large (4 in) and heavy (30 lbs) object into the machine…
    - …caused a red balloon to rise from the left hole.
    - …caused a blue balloon to rise from the left hole.

- …caused a red balloon to rise from the right hole.
- …caused a blue balloon to rise from the right hole.

Instruction to Prediction Phase

Control

On the next screens, you see the same machine again. Please tell us what you would expect to happen if you put different objects into the center hole of the machine.

Experimental

On the next screens, you see the same machine again, but it has been slightly modified in **two places**. Please have a close look at the new construction plan to find out what the two differences are in comparison to the version you have seen before. Then please tell us what you would expect to happen if you put different objects into the center hole of the new machine.

Prediction Phase (random order of the five test trials)

None

Illustration

- Imagine you would throw nothing into the center hole of the machine. How likely are the following events to happen? (11-points scales from 0 [impossible] to 100 [certain])
  - A red balloon will rise from the left hole.
  - A blue balloon will rise from the left hole.
  - A red balloon will rise from the right hole.
  - A blue balloon will rise from the right hole.

Small/Light

Illustration

- Imagine you would throw a small (3 in) and light (10 lbs) object into the center hole of the machine. How likely are the following events to happen? (11-points scales from 0 [impossible] to 100 [certain])
  - A red balloon will rise from the left hole.
  - A blue balloon will rise from the left hole.
  - A red balloon will rise from the right hole.
  - A blue balloon will rise from the right hole.

Large/Light

Illustration

- Imagine you would throw a large (4 in) and light (10 lbs) object into the center hole of the machine. How likely are the following events to happen? (11-points scales from 0 [impossible] to 100 [certain])
  - A red balloon will rise from the left hole.
  - A blue balloon will rise from the left hole.
  - A red balloon will rise from the right hole.
  - A blue balloon will rise from the right hole.

Small/Heavy

Illustration

- Imagine you would throw a small (3 in) and heavy (30 lbs) object into the center hole of the machine. How likely are the following events to happen? (11-points scales from 0 [impossible] to 100 [certain])
    - A red balloon will rise from the left hole.
    - A blue balloon will rise from the left hole.
    - A red balloon will rise from the right hole.
    - A blue balloon will rise from the right hole.

Large/Light

Illustration

- Imagine you would throw a large (4 in) and heavy (30 lbs) object into the center hole of the machine. How likely are the following events to happen? (11-points scales from 0 [impossible] to 100 [certain])
    - A red balloon will rise from the left hole.
    - A blue balloon will rise from the left hole.
    - A red balloon will rise from the right hole.
    - A blue balloon will rise from the right hole.

Debriefing

You did it, thank you very much for participating. In this study, we try to understand how people reason about complex causal relationships. If you have any further questions or comments, feel free to contact us: [redacted]To leave the experiment, you can just close the browser window. Thanks again and good bye!