

Stanovich Chapter 6: Ariel Hargrave and Stephanie Fitzgerald

## Getting Things Under Control: The Case of Clever Hans

## Studies

1. Correlational
2. Experimental

### Correlational Study

- The investigator simply observes whether the natural fluctuation in two variables displays a relationship.

### Experimental Study

- The investigator manipulates the variable hypothesized to be the cause and looks for an effect on the variable.
- Results in cause and effect relationships.

### Scientific thinking is based on...

- 1. Control
- 2. Comparison
- 3. Manipulation

### Steps in Experimental Design

- Isolation
- Random assignment
- Independent and dependent variables
- Large sample size
- Parsimony

### The Case of Clever Hans



### Here's your freaking take home message:

- If you are going to infer causal action you need to follow the 3 steps of experimental design:
  - Control
  - Comparison
  - Manipulation