

Variables and conditions

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Independent Variable, 38

An Independent Variable is a factor manipulated by the experimenter. The effect of the independent variable is the focus of the study.

For example, when examining the effects of breast feeding upon intelligence, breast feeding is the independent variable.

Dependent Variable, 38

A Dependent Variable is a factor that may change in response to an independent variable. In psychology, it is usually a behavior or a mental process.

For example, in our study on the effect of breast feeding upon intelligence, intelligence is the dependent variable.

Confounding variables

- The researcher doesn't control for these and they affect the results of the experiment.
- Example is seen in the movie, *Guns of the Magnificent Seven*



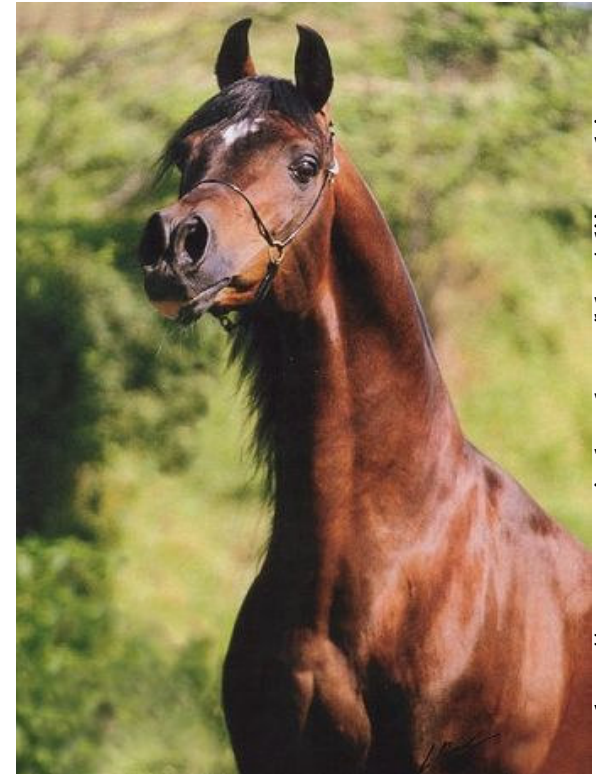
Catching a thief

- A man is accused of stealing a horse, but claims he is innocent
- The town decides to put the suspect on one side of town with the man claiming to be owner on the other.



The variables and the experiment

- The *hypothesis* is that the horse will go to owner.
- The *dependent* variable is the behavior of the horse
- The *independent* variable is the presence of the real owner (presumably the horse will want to go by its owner when called).



The experimental results

- The horse is thirsty.
- Next to the horse thief is a water trough.
- Both men call the horse by name, but...
- The horse goes by the man near the trough, rather than to his owner.

Confounding variable

- The *confounding variable* is that the horse is thirsty and the water trough is by the thief.
- The town didn't "control" for thirst of the horse, so that factor changed the results.



Conditions, 37

- Experimental Condition
 - the condition of an experiment that exposes subjects to the treatment, that is, to one version of the *independent variable*
- Control Condition
 - the condition of an experiment that contrasts with the experimental treatment
 - serves as a comparison for evaluating the effect of the treatment
 - *These subjects do not get the independent variable or treatment*

Practice in Identifying Variables

- With your partner identify the hypothesis, control group, experimental group and variables in each example.
- On side one cross out 4c
- On sides two-three cross out 1a, 2a, 3a, 4c and 5c

Name that method (on side 4)

- Determine whether the research is experimental or correlational
- Do not do no. 3
- If it's experimental: identify the independent and dependent variables
- If it's a correlation: identify the variables
- SEE PAGES 38-39 FOR BACKGROUND, PARTICULARLY TABLE 1.3