

The importance of replication

Dewey (2007, Chapter 1)

http://www.intropsych.com/ch01_psychology_and_science/importance_of_replication.html

Not just definitions but individual acts of experimentation must be checked for reliability. Research must be repeated before a finding can be accepted as well-established. Findings obtained at one time might not hold true at another time with different researchers or different experimental subjects. To check the reliability of a finding, one must replicate the research. That means to *repeat the research in all its important details*.

Replication is vital to science. It helps make science a self-correcting system. Any time a result is surprising, researchers will try to replicate it, to see if the phenomenon is dependable or just a fluke (a one-time occurrence).

What are common reasons a replication fails? If a surprising result from a research cannot be replicated, that does not mean that somebody lied or cheated. Most scientists are honest, and most non-replicated research is due to some difference in the way the research was performed, differences in the subjects involved, or other details (perhaps the weather, the location, the time of day, or the instrumentation).

Seemingly minor details might influence the outcome of an experiment. If so, scientists need to find out about it. That is why replications are performed.