

“But It’s Not Real Life!
The “Artificiality” Criticism and
Psychology



Why Natural Isn’t Always Necessary



- ❧ Manipulations may not be able to be accomplished in natural environments.
- ❧ Scientific experiments performed in a laboratory are used to “pry variables apart.”

Why Natural Isn’t Always Necessary



- ❧ Psychologists are generally under specific scrutiny when it comes to this type of misunderstanding.
- ❧ However, many of the techniques used are the same as other sciences, just applied to behavior.
 - ❧ Biofeedback techniques are used to help, among other things, “migraine and tension headaches, hypertension, and relaxation training.”

The “Random Sample” Confusion



- ❧ The media has largely implicated the importance of random samples in assuring accuracy of data gathering, such as opinion polls.
 - ❧ This leads people to assume it is always the same for psychology.
 - ❧ However, other scientists such as chemists and biologists make no attempt for random samples of compounds and cells.

The Random Assignment Versus Random Sample Distinction



- ☞ Random sampling refers to drawing a sample from the population in a manner that ensures each member of the population has an equal chance of being chosen.
- ☞ Random Assignment is a requirement of a true experiment in which an experimental group and a control group are formed by the experimenter.

Theory-Driven Research Versus Direct Applications



- ☞ Theory-driven research is designed to answer questions of how findings apply to real life – random assignment is often more valued than random sampling,
- ☞ Direct-application research is often designed to predict a specific behavior in a specific setting – random sampling is defined as very important in this aspect.

Theory-Driven Research Versus Direct Applications



- ☞ Theory-driven research has “practical applications” that can be reached by using controls and testing – oftentimes on various medications to treat diseases such as schizophrenia.
- ☞ Selig Hecht performed various experiments asking participants questions when studying dark adaptation.
 - ☞ Although the research was not tested in the area it was used, his findings were used by WWII British fighter pilots in their choice of goggles, which helped them to stay dark-adapted.

Applications Of Psychological Theory



- ☞ Many studies on operant and classical conditioning were obtained not in a natural setting, but they have a great influence on psychology today.
- ☞ The “it’s not real life” argument has also been used to mock research on animal subjects, when, in reality, animal studies are quite useful in all facets of scientific research.

The “College Sophomore” Problem



- ☞ The “college sophomore problem” is a general worry that, “because college sophomores are the subjects in an extremely large number of psychological investigation, the generality of the results is in question.”

- ☞ Do you agree?

The “College Sophomore” Problem



- ☞ However:
 - ☞ It does not invalidate the results – it simply calls for further research.
 - ☞ Things that are studied are often as general as the visual system, so the results usually need not depend on sample demographics.
 - ☞ Replication of findings often ensures a large degree of geographic generality.
- ☞ It is still an issue, but if studies initially show results with similar demographics and are then properly replicated, they can be shown to be accurate.

Take-Home Points



- ☞ “Artificial conditions are not an accident that represent a drawback – they are deliberately created so that we can pry variables apart.”
- ☞ Most research is basic research designed to test theories
- ☞ The worry that psychologists do not always use random samples is often unfounded
- ☞ Legitimate concerns, like the college sophomore problem, are sometimes overstated.
- ☞ “Scientists should always be concerned that their experimental conclusions not rely too heavily on one method or particular subject population.”