Threats to INTERNAL VALIDITY

I. Threats due to *How the Research is Conducted*

A. **Procedure Validity and Reliability** – conducting research accurately & consistently
   1. Administering Accurate Measurement Techniques in a consistent manner
   2. Treatment Validity and Reliability – measuring what we intend to measure
   3. Manipulation Checks – ensure that treatment is valid and reliable

B. Controlling for *Environmental Influences*
   1. **History** – changes in the environment external to a study that influence behavior
   2. **Sleeper Effect** – any effect that is not immediately apparent but appears over time
   3. **Sensitization** – tendency of initial measurement to influence subsequent measurement
   4. **Data Analysis** – improper procedures that result in invalid conclusions

II. Threats due to *Research Participants*

A. **The Hawthorne Effect** – change in research participant behavior is due to the fact that they know they are being observed

B. **Selection** (self-selection bias) – selection of texts or people that influence conclusions

C. **Statistical Regression** – tendency of people selected on the basis of initial extreme scores on a measurement instrument to behave less atypically on the second and subsequent times on that instrument.

D. **Mortality** (attrition) - differential loss of research participants from the beginning to the end of a research study

E. **Maturation** – internal changes that occur in people over the course of the study (e.g. age)

F. **Intersubject bias** – occurs when people being studied influence one another

III. Threats due to *Researchers* - researcher influences people’s responses

A. Researcher **Personal Attribute Effect** – particular characteristics of a researcher influence subject behavior

B. Researcher **Unintentional Expectancy Effect** (Rosenthal or Pygmalion effect) – influence subject responses by inadvertently letting them know the behavior they desire; researchers lead participants to behave or respond in particular ways

C. Researcher **Observational Biases** – demonstrate of inaccuracies during the observational process
   - **Observer drift** – become inconsistent in criteria used;
   - **Observer bias** – research knowledge influences observations
   - **Halo effect** – overrate or underrate subjects due to multiple judgments of same person over time