

## Chapter 2: Studying Groups Scientifically

1. Define basic research and applied research. Give an example of each type, other than those mentioned in Chapter 2. How do these two types of research relate to each other?
2. Define a theory and a research hypothesis. Give a specific example of each. What role do each play in research?
3. Consider how network analysis and SYMLOG are used to organize data and to understand group behavior in observational studies.
4. What are the goals of observational, correlational, and experimental research? What are the advantages and disadvantages of each research approach?
5. A scientist studying work groups in businesses has found a positive correlation between the average social identity of the members of a group and the group's task performance. How should such a relationship be interpreted?
6. Describe a correlational research design that might be used to test the research hypothesis that increases in group size lead to decreases in group cohesion. Describe the operational definitions of the predictor and outcome variables, and explain why the correlational design does not allow us to draw conclusions about causal relationships between them.
7. Describe an experimental research design that might be used to test the research hypothesis that increases in group size lead to decreases in group cohesion. Describe the operational definitions of the independent and dependent variables, and explain why the experimental design allows us to draw conclusions about causal relationships between them. Be sure to consider the creation of initial equivalence between the groups.
8. Describe the meaning of statistical significance and the effect size. What is the difference between them, and how is each used in research?
9. What is external validity? How is a meta-analysis used to determine whether or not a group of studies have it?