Limitations of experiments

Mastering vocabulary

The following vocabulary is the basis for evaluating experimental studies. Although there are other ways to evaluate research, all of the following concepts have to do with *how* the research is carried out. In the language of psychology, we call these *methodological considerations*.

Demand characteristics: participants form an interpretation of the experiment's purpose and subconsciously change their behaviour to fit that interpretation

Expectancy effect	
Reactivity	
Screw you effect	
Social desirability effect	

Researcher biases: when the beliefs or opinions of the researcher influence the outcomes or conclusions of the research.

Confirmation bias	
Publication bias	

How to control for demand characteristics and researcher bias?

Order effects: differences in research participants' responses that result from the order (e.g., first, second, third) in which the experimental materials are presented to them.

Fatigue effects	
Interference effects	
Practice effect	

Procedural issues

Construct validity	
Ecological validity	
Ethics	

Your task

Please read the following study. Do you think that we can trust the results of this study? Use the vocabulary above when describing the procedure and findings.

A researcher was interested in the effects of alcohol on perceptions of physical attractiveness of the opposite sex. To study this, he used students from two of his classes, a senior seminar for psychology majors which met one evening a week from 6-9pm, and a freshman introductory psychology class, which met two morning a week at 10 am.

Because the seniors were all at least 21 and thus legally able to drink, he assigned them all to the condition that received 2 oz. of alcohol mixed in with 6 oz. of orange juice. The freshman were assigned to the "placebo" alcohol condition, in which they received 2 oz. of tonic water (which tastes like alcohol) mixed in 6 oz. of orange juice. However, they believed that they were really being served alcohol as part of the psychological study.

Students were invited to participate in the study if they had a free hour after their class with the professor. The professor conducted the study on a Thursday, on a day when the introductory class had had an exam. Students drank either the "alcohol" or the placebo drink, waited 30 minutes in a lounge for the alcohol to take effect, and then sat at a

computer and performed a five-minute task in which they rated various faces of the opposite sex on physical attractiveness.

The group that had received alcohol rated the faces as more attractive than the group that did not receive alcohol and the professor concluded that alcohol makes people of the opposite sex appear more attractive.