(a dash "-" indicates student responses)

Administrative:

Midterm next Wednesday, 20% of the grade, all multiple choice or "MCQ". Covers Dan's lectures and recitations and readings (Reader #1-11, Gilovich Ch. 1-7, Stats Ch. 3, 9-12). Many questions about the test. You will need a calculator. Practice questions will be posted.

First formula: nCr. 10 choose 3 = 10x9x8.../1x2x3.

Start collecting data soon. Take a week or two just to collect. Could be time consuming. Draft of final report due right after midterm. Final report should be 15-20 pages. The Writing TA will give the requirements this afternoon. For the rough draft, you obviously don't need to write the results (2 pages) yet. Should be based on background of the survey, the theoretical background and prior work.

Today:

Two papers on field experiments. But first, basic concepts:
"Internal validity vs. External Validity."
What do they mean?

-External means that you can apply your results to general situations, samples in the same population. Internal however is a question of whether the causal relationship that you're testing is in fact causal.

A test within the study vs. without. Formally: Internal is the validity of inferences about whether the relationship between two variables (A -> B) is causal. External is the ability to generalize a causal relationship outside the settings under which it was studied.

Co-relation vs. Observational Study:
Co-relational: A relation between two different variables. Direct, indirect, linear, etc. Does not imply causality. A co-relational study studies the changes between two variables and their relation under change.

Observational study: You do not manipulate the variables. This is used in the parking lot study in the second paper.

Experiment vs. Quasi-experiment:
An experiment ("Randomized Experiment") is one in which you have more than one condition, and the participants are randomly assigned to these conditions. A drug study, for example. Control group vs. test group, must be randomly assigned.

A Quasi-Experiment is not really an experiment. You have more than one condition, but there is no random assignment.

Looking at the two papers this week, which is a Quasi-Experiment?

-The study in the bar, perception of attractiveness under alcohol consumption and time change.

Random choices, but no strict assigning of the players. The population of the bar outside of the testers is not controlled.

Studies vs. Experiments:
Studies take on one condition. An experiment involves more than one condition. One cell vs. multi-cell.

The Car Park paper: Timing cars getting out of a parking lot. Observational Quasi-Experiment. Observational because you manipulate nothing. But a Quasi-Experiment based on two conditions – waiting car and no waiting car.

Another example, not in the paper: Students arriving to class. This is an Observational Study, since the time of arrival to class is the only condition (and it's observational and not controlled).

Field vs. Lab experiments:
Field is run in the conditions natural environment, unbeknownst to (most) of the participants. They aren't prepped or researched, although they may grow suspicious.

Lab is in a setup location. People are recruited. In the field you get more accurate responses, but measuring those responses is harder (and creates inaccuracies). In the lab, there is a bit of fiction, but you can adjust the variables.

A "Confound" – an alternative explanation to your results. In the field, these crop up more often.

First paper: 1979, Pennebaker, the Bar experiment.

Question: What is the difference between a bar and a club study? How would you make that distinction? Would your results be "externally valid" and apply from the bar to a club?

So, to respond: Does attractiveness have to do with place, or time, (or alcohol)? But what if the more attractive people don't necessarily come out until later? Thus a Quasi-Experiment.

Question: What are the objectives of this paper?

-Does attractiveness increase with time, or do you become more prone to being attracted under the pressure of a bar closing?

This variable weakens the study. You can't really tell if it's one or the other that's influencing the attractiveness factor. The authors expect attraction to increase as closing time approaches. But why? Alcohol. Lower standards. More attractive people arrive (?). Fear of leaving alone. They reference the theories of Brehm and Festinger. (Cognitive Dissonance Theory.) Threats to your freedom of choice arrive as closing time approaches ("Time is Running Out"), so you react and choose someone, perhaps over-inflating their worth. Alcohol can be a "confound".

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Determining which force is dominant is crucial to finding valid results, and this paper avoids that. Run multiple studies to weed out confounds – do one that isolates alcohol, another on bar population, reasons for going to a bar not having exclusively to do with meeting people, etc.

"Cognitive Dissonance Theory": As closing time approaches, you try to make your choices more appealing even though they aren't. You undermine your own judgment through rationalization. You create a fight with yourself, between your real cognition (thought or opinion) and your new one that is circumstantial. Related to Atkins and his Reactance Theory.

The experiment itself – 3 men and 3 women, 3 bars, 3 timeframes. People go in pairs. Question others about attractiveness of the global population of the bar, not specific people. Also asked about same-sex attraction as a control. (Again, flawed due to sexual orientation which is not considered.)

What are other flaws or peculiarities?

Independent vs. dependent measurements: Independent is the time of asking and whether it's opposite or same sex measuring, and the dependent variable is the perceived attraction.

So one confound – they don't ask the same people in the bar in each time frame because they're asking about the global population. But this is questionable. How do you put a value on that global attractiveness? How is "average attractiveness" defined?

Difficult to report, especially since you're not asking the same person in each time frame. For example, if you look at two groups of three people, where one is A B C and the other B B B, then the average should be the same, B. But the A or the C (outliers) always skew perception.

One way would be to have the people who go to the bar be the ones who are rated – they would be a control. Have them go in a group and ask to be rated. But then – people are always rated relative to others. So perhaps one would be always an A in every circumstance. They wouldn't necessarily make the "most attractive" in the group be a B because they aren't supermodels. They would be an A relative to the current conditions.

Other confounds:
Again, no measure of alcohol or sobriety.
No study of current emotions of the respondent.
Size of bar population – smaller population allows greater influence from outliers.
Different locations – parties, church functions, etc.

Or stay in one bar all night, observe consumption and interaction and then make measurements over time. The population change – as the night gets later, the people who are there are more likely the ones who want to go home with someone. People who leave early aren't necessarily like that. A twenty-four hour bar would alleviate some but not all of this – it would be more about human habit relative to time and not the specific bar. Human standards and judgment is an issue, but with a big enough sample size it's normalized. Another confound – as you get more tired,

you lose accurate judgment. (TA suggests giving a basic cognitive test to everyone you ask. But this could go either way – tired as being pickier or easier.)

Psychology - Near Exposure Effect: The more familiar you are with a person or place the more you like it. As you stay in a place longer at get more exposure to a person you tend to find them more attractive. This would need to be ruled out in another study, or by asking people how long they've been in a bar.

Overall, it's still a good paper given its age. Might need to be more rigorously done today.

Second paper: 1997, Intruders in Territory.
More recent, many more experiments in it. Studying the effect of intruders on a given territory. Observing a parking lot, moving slowly or quickly if someone is waiting.

Three steps: Observing, then using a confederate, then hypothetical questioning.

They used time as the dependent measure, which is much more quantifiable than "attractiveness". The independent variables were whether a car was waiting or not, or if there was a car if it was honking or not.

One confound: If there is a car waiting, people may take longer so as not to be a nuisance but to be careful when others are watching. The results – when a car was waiting, people are slower.

Due to distraction (like when a car drives past). Much longer time under high intrusion, which could also be a major distraction. Honking could cause many kinds of feelings. Also different due to quality of car (males only). Could also be more levels of intrusion, but they all seem forced. The gender of the confederates is an issue – they are all men here. People would react differently with women perhaps.

Much more rigorous paper since they have a definite measure, and a random assignment. Can also be applied to phone booth, post office, taxi cabs, seating on a plane, waiting for a reserved court or place, other queues, other situations.