# SI 710 Assignment 4: Experiment Design

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## 1 Experiment Design

- 1.1 "Control vs. Treatment group"
- 1.2 Market Mechanism
- 1.3 Hypothesis and Testing

## 1.4 Network Elicitation Method

Given the contextual setting of lab-experiment, we are restricted to a network of at most 25 subjects (max capacity of the lab in North Quad), which makes a thorough elicitation of the social network possible. The goal is to elicit the social network of subjects (both in control and treatment groups) as complete and detailed as possible, with an emphasis of measuring the strength of ties, i.e. acquaintances (weak ties), close friends (strong ties), etc.

Inspired by Alan's experiment design, we here have experimenter nominate each subject one at a time, and have the rest of subjects fill up a survey composed of the following list of questions:

- 1. How would you evaluate your relationship with him/her:
  - (a) barely know each other;
  - (b) acquaintances;
  - (c) close friend;

(Note here, Linfeng has omitted the category of "friends".)

2. What is his/her major?

A drop-down manual shall follow this question;

3. Where does him/her come from?

Open question box, and later we can check the matches at various levels (State, region, county and score the matches.)

- 4. Are you in the same study group with him/her?
- 5. Are you two in the same class other than Econ 102?

- 6. What is him/her favorite (pick any one, or more, from the following)
  - (a) movie;
  - (b) TV Show
  - (c) book
- 7. TBD (may need to refer to Alan's questions for inspiration).

This list of questions shall compose a length of one-full-screen that suits the computers in the lab.

#### 1.4.1 Incentive structure

Minimum incentive shall be provided, so as not to interfere with the market game. Details to be settled when the full "market game" is settled, from which we may calculate the expected payoff. As of now, I can only expect the total payment from answering the survey to be less than, say, two dollars.

### 1.4.2 Experimenter effect

It should be well stated that, although the true names were used in the survey and the market experiment (for treatment group), the experimenters will only access the data through numeric IDs. This needs to be stated in a trust-worthy way, so that the subjects do buy the argument and shall answer truthfully to the "friendship survey".

## References