CSE 291: Usability of Programming Languages ("Programmers Are People Too")

GenderMag

Content Requests?

- We have only eight classes left (including Monday)

- What do you want to learn?

Case Study Research

after Robert Yin, "Case Study Research and Applications: Design and Methods"

When To Use a Case Study (Source: Yin)

Method	Question form	Requires intervention?
Experiment	how, why?	yes
Survey	who, what, where, how many, how much?	no
Case Study	how, why?	no

Case Studies:

- Investigate contemporary phenomena in depth in a real-world context

- Especially when boundaries between phenomena and context are unclear

  - Can you really separate SE tools from SE teams, which operate in organizations?

Case Study Components

- Research questions

- Propositions (hypotheses), if any

- The case: an entity or entities

  - Bounds for the case: outside the bounds is the *context*

- Logic linking data to propositions

- Criteria for interpreting findings

Cases Can Be Hard To Find

- The Cuban Missile Crisis

  - Can't do an experiment

  - Can't do a survey (of all the *other* similar crises?)

Data Collection

- Documentation

- Interviews

- Direct observations

- Physical artifacts

Analysis

- Grounded theory

- Thematic analysis

- Leverage your propositions to focus your analysis

Contrast: Ethnography

- Ethnography is *immersive* and *long-term*

- Case study: apply tool T to software S yourself; interview developers

- Ethnography: embed yourself within T's team for six months

GenderMag: Five Facets

- Motivation: goal-oriented vs. technology-oriented

- Information processing style: gather complete information first vs. follow first promising information, and backtrack as needed

- Computer self-efficacy: confidence in success

- Risk aversion

- Tinkering

GenderMag Evaluation (Case Study)

- What aspects did you find convincing?

  - Unconvincing?

- To what situations might this generalize?

- What changes would you have made to the evaluation methodology?

Proposed Mags

- Let's talk about your ideas.

Implications on PL/SE

- What languages/tools might be gender-biased?

Case Study Methodology

- What research questions might be addressable via case studies?

  - Questions? Cases?