Research Ethics
- Specific Issues Related to HCI Research

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Introduction

What is ethics?

- A process that guides (a researcher) in making decisions in a situation with conflicting goals
  - Informed, justified decisions
  - Applying values to practice
- Ethics is always context dependent and therefore universal guidelines cannot be given

Ethical approaches

- Different complementary ethical approaches can be identified
  - Consequence ethics
    - What will result from decisions?
    - On which time scale, implications to whom....?
  - Principle ethics
    - Decisions are guided by generally approved principles
    - Good scientific practice
      - Honesty, carefulness, openness, intellectual freedom, etc.
  - Virtue ethics
    - What is good research, what kind of motives and goals does it have?
    - What is a good graduate student like?


Ethical principles in human research

- But first: what is human research?
- Human subjects are implicated when
  - Human behavior is examined (e.g. experiments)
  - Personal information is collected (e.g. questionnaires & interviews)
  - Products of human behavior are examined (e.g. web sites, source code)

Ethical principles in human research

- General ethical principles in human research
  - Safety
  - Consent
  - Privacy

Safety

- Ensure that your research will not cause physical or psychological harm to the participant
- Examples
  - The participant must have a possibility to stop participating at any point without giving an explanation
  - The participant has the right to not answer e.g. an interview question
  - Social harm?

Consent

- An informed consent from the participant is needed
  - Information, understanding, voluntariness
  - The participant must know what will happen and be in the situation voluntarily
  - If the participant can be recognized from the data (video, speech, …) a written consent is preferred
- Examples
  - Giving relevant information
  - Explain the goals and procedures of the research, what information will be recorded and how & where the results will be used
  - Explain possible risks and harms related to participation
  - Provide opportunities for the participant to ask questions and request clarifications
  - Deception / withholding information when studying e.g. psychological processes?

Privacy

- The participant has the right for privacy
- Examples
  - Avoid collecting unnecessary data
  - The data can only be used for the purpose to which the participant gave his / her consent to
  - If you want to use the data to another purpose later, you need a new consent
  - Data must be kept in a safe place and it must be destroyed after it is no longer needed / cannot be stored safely anymore
  - Protect anonymity and privacy when reporting the results
  - “In my work at […] I receive about 30 emails daily...”

In addition

- Also make sure that the following things are in order:
  - All permissions and consents related to the study
    - E.g. permission to videotape, permission to study in a day care center, etc.
  - Laws and regulations
    - E.g. Copyright laws
  - General & cultural norms

Ethical guides for research

- TENK: Hyvä tieteellinen käytäntö (good scientific practice)
- TENK: Tutkijan ammattietytikka (Researcher’s professional ethics)
- Suomen Akatemian tutkimuseettiset ohjeet
  - This one is also in English
Some ethical codes related to HCI

- ACM Code of ethics and professional conduct
  - A very general level code
  - http://www.acm.org/constitution/code.html
- APA Ethical principles of psychologists
  - Some detail on experimental research
- BPS Ethical principles for conducting research with human participants
  - Some detail on experimental research
- UPA Code of conduct for usability professionals

Discussion

Research ethics

- Research is based on trust
  - Carefulness in conducting the research, validity, reliability, honesty, etc.
- Ethical reflection is important
  - The purpose is to discuss and develop the practice of research
  - Often also difficult questions
- Reflecting ethical issues related to research
  - Identify ethical conflicts that you face / have faced
  - How to resolve ethical issues, what are the outcomes of different alternative solutions?

Discussion in small groups

1. Experimental research
   - Research permissions and experimental setups
   - Conducting experiments
2. Constructive research
3. Publishing and reviewing
4. Teaching

Experimental research

- Some ideas for discussion
  - Experimental setups
    - Use of cover stories
    - Conflicting goals in experimental setup
      - Internal vs ecological validity
      - Achieving results (simple, controllable set up)
      - Generalizability of results (realistic setup)
    - Statistical significance
  - Informed consent
    - Permission to record on video
    - Consent to participate in the study
    - How material is stored, reported, presented...
    - In relation to the consent
    - Copyright laws etc. in research
  - Added stress from
    - Video recording
    - Technology use and feelings of incompetence with technology
    - Early prototypes
  - Consequences for participants
    - Physical & psychological
Experimental research: Summary of the discussion

- Consent forms
  - A template (or a collection of templates) could be internally available on TAUCHI pages
  - Or perhaps publically available
    - This should be something that can be publically shown
  - Different needs in different types of research
    - E.g. in usability test asked before the test because of video recording
    - When cover story used, after the debriefing

- Storage of confidential information
  - A place for this?
  - All data including personal information that is not needed after the data collection / data analysis is done should be destroyed

Experimental research: Summary of the discussion

- Avoiding harm to participants
  - Careful design of test setups - also from this perspective
    - E.g. consider the psychological stress that is caused to the participant when planning the experiment
  - What can the experimenter do to ensure participant’s well-being during the experiment?
    - The instruction of the experiment is designed with consideration to the participant’s well-being and ease
    - Answer questions, be present, observe the participant, suggest a break if necessary, ask how the participant is doing, be calm
    - The experimenter can provide contact details so that the participant has a possibility to contact him/her later

Experimental research: Summary of the discussion

- Use of cover stories (or when the hypothesis / research question cannot be told beforehand)
  - Should only be used when the study is impossible to do without
    - No radical deception - the cover story should be as close to the actual purpose of the study as possible
    - E.g. when physiology is measured, the nature of the signal is different in the cover story: heart rate → skin temperature
  - Briefing is especially important
  - Consent forms should never present the cover story but they should describe what is actually studied
  - Participant has the right to withdraw the use of his/her data after debrief has been done

Constructive research: Summary of the discussion

- Some ideas for discussion
  - Aim: producing novel solutions for relevant problems
    - Scientific research vs technology development
    - Benefit and impact in real world
  - Testing and validating
    - Evaluation of own products
    - Stating the contributions of your solution vs. providing fair criticism and expressing the limitations
      - How this affects getting your work published
      - …

Constructive research: Summary of the discussion

- What is the goal of constructive work?
  - Scientific knowledge
  - Working maintainable reliable software

- Publishing results / what should result from research?
  - Is it enough to publish to the scientific community?
  - Or should we build real software the society can benefit from?
  - It is important to state the goal to test users so that they do not have unrealistic expectations of future availability of the tested software
Constructive research: Summary of the discussion

- Ethics & value of technology
  - How we see technology in the big picture?
  - Value as such, utility, better world?
  - Unethical research goals
  - E.g. weapon technology
- Analyzing & publishing constructive research
  - Evaluation sometimes impossible
  - Whether the results of evaluation and user tests really affect the future development
  - And especially when we test our own products and ideas that we love...
  - Reporting some what subjective
  - A publication typically presents the good things

Publishing and reviewing: Summary of the discussion

- Name policy in publishing
  - Who is entitled to get a name on a manuscript?
  - Order of the names?
  - Amount of work or some other justification?
  - The name policy should always be openly discussed before doing the work!
- Reviewing
  - Problems when you know the author
    - If you have conflicts with him/her you should refuse the reviewing task
    - If you respect him/her and regard as a guru can also affect the objectivity of the review

Teaching: Summary of discussion

- Some ideas for discussion
  - The teaching situation
    - Difficult situations you have faced in teaching
    - How to deal with plagiarism?
  - The contents of teaching
  - What is the lecturer’s responsibility?
- A course or a seminar on ethics?

Some ideas for discussion: These topics were not discussed

- Established norms within a scientific community
  - Approved and recognized methods in the field
    - What are legitimate phenomena to study, tools to use...
    - "Hard" and "soft" sciences / methods
    - What is studied, what work gets published?
  - Norms of related fields
  - Developmental stage of HCI
    - Lack of paradigm?
- Justification of methods
  - Quantitative vs. qualitative methods
  - "Not everything that can be counted counts, and not everything that counts can be counted" (Einstein)
Some guidelines on the authorship of publications exist.

Committee on publication ethics (COPE): Guidelines on good publication practice

- The award of authorship should balance intellectual contributions to the conception, design, analysis and writing of the study against the collection of data and other routine work. If there is no task that can reasonably be attributed to a particular individual, then that individual should not be credited with authorship.
- To avoid disputes over attribution of academic credit, it is helpful to decide early on in the planning of a research project who will be credited as authors, as contributors, and who will be acknowledged.
- If professional writers employed by pharmaceutical companies, medical agencies, or other parties have written the paper, then their names should be included, and any conflicts of interest declared.
- All authors must take public responsibility for the content of their paper. The multidisciplinary nature of much research can make this difficult, but this can be resolved by the disclosure of individual contributions.
- Careful reading of the target journal’s “Advice to Authors” is advised, in the light of current uncertainties.
- Authors should be vigilant about allowing their name to be used on a piece of work to add credibility to the content.

International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals: writing and editing for biomedical publication

- Authorship credit should be based on 1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published. Authors should meet conditions 1, 2, and 3.
- When a large, multi-center group has conducted the work, the group should identify the individuals who accept direct responsibility for the manuscript (3). These individuals should fully meet the criteria for authorship/contributorship defined above (…)
- Acquisition of funding, collection of data, or general supervision of the research group, alone, does not justify authorship.
- All persons designated as authors should qualify for authorship, and all those who qualify should be listed.
- Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.

Pohditava: Kuka on perustellusti kirjoittaja?


Lähde: Clarkeburn&Mustajoki, 2007, Tutkijan arkipäivän etikka, s. 117-118

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