Ethics in human computer interaction and user experience research and practice: macro and micro-ethical issues

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The initial context

- HCI has been around in the form we know it since the 1980s – first CHI conference 1981, first INTERACT 1984, York HCI Group founded 1983
- Initially focused on individual users interacting with computers in work oriented settings
- Empirical studies were almost always lab based experiments or quasi-experimental studies
- e.g. CHI ‘84 (the first for which the full papers are archived) – 21 empirical papers (18 lab studies, 1 “in the wild” study, 1 study of existing data, 1 analysis of logging data)
- Things began to change by CHI ‘90 – 16 empirical papers (8 lab studies, 1 kind of participatory design, 2 very informal, 1 case study)
Current context

- HCI/UX looks at many more situations, many personal and even intimate situations
- Interactive technologies pervade every aspect of most societies
- A wide variety of methods of working with humans (and animals)
- drawn from numerous disciplines (psychology, anthropology, sociology, design), sometimes
- adapted for our purposes and some we have developed ourselves
Two problem areas in macro-ethics

- Macro-ethics – ethical issues for organizations, communities (i.e. HCI researchers, practitioners) and society
- Interactive technologies are pervasive, but HCI researchers and practitioners are only part of a “work flow” – how can we ensure ethical end products?
- Anticipatory and retrospective ethics
- Problem with anticipatory ethics for HCI/UX community – the uses of interactive technologies evolve drastically
- Early predicted uses of PCS – home accounting and recipes/meal planning (possibly mis-placed feminism, an attempt to include women?)
Solve your personal energy crisis. Let VisiCalc™ Software do the work.

If she can only cook as well as Honeywell can compute.

Her souffles are supreme, her meal planning a challenge. She's what the Honeywell people had in mind when they devised our Kitchen Computer. She'll learn to program it with a cross-reference to her favorite recipes by N-M's own Helen Corbett. Then by simply pushing a few buttons obtain a complete menu organized around the entrée. And if she pales at reckoning her lunch tab, she can program it to balance the family checkbook. 84A 10,600.00 complete with two week programming course 84B Fed with Corbett data: the original Helen Corbett cookbook with over 1,000 recipes 5.00 (.75) 84C Her Potluck, 375 of our famed Zodiac restaurant's best kept secret recipes 3.95 (.75) Epicure 84D Her tabard apron, one-size, yours along by Garden House in multi-pastel provincial cotton 29.00 (.90) Trophy Room
Smartphones

- Are they even phones any more?
- Use of phones for voice calls is steadily dropping
- Did Steve Jobs expect that when he developed the iPhone
- After all, Nokia were dismissive of it, as someone Nokia allegedly said “Apple isn’t a phone company, it won’t be a success”
Anticipatory ethics

- I’m not saying we give up on anticipatory ethics
- We have techniques in HCI like design probes, provocations, design fictions which help us understand how the use of interactive technologies might evolve
- So we are well placed to influence design teams, but we have to flex our muscles more
- As Alan Dix (and Paul Cairns earlier), HCI is the conscious of CS
Retrospective ethics

- But if we accept that the uses of interactive technologies charge drastically
- Or that consequences were not spotted
- We have both a responsibility and the skills and methods to work to rectify the situation
- Not easy, some of my own work is about trying to rectify accessibility issues (which should have been obvious)
Retrospective ethics

**Panel A**
Create password
Your password must have:
- 8 characters or more
- 1 capital letter or more

Confirm password

Agree to our terms of use
We will collect and store your information securely. We will not share your personal information without your consent.
By continuing, you confirm that you agree to our privacy notice and terms and conditions.

Agree and continue

**Panel B**
Scan instructions
Follow these steps:
1. Turn up the screen brightness on your device.
2. Select 'start scan' and follow the instructions.

Start scan

What you can do if the scan keeps failing
If the face scan does not work, you can send us a short video instead.
Try with a video instead

**Panel C**

**Panel D**
What to do if you are visually impaired
If you cannot see your photo clearly, you do not need to check it. Instead, you can send it now.
Or you could ask someone to help you check your photo.

Do you want to check your photo?
- Yes - check photo
- No - send photo now

Figure 1: Selected screenshots of registering for NHS services
Accessibility example

UK National Health System digital identity system
You have to take a photo of a photo ID
Then you have to take a photo of yourself
AI then authenticates you
(in fact it’s largely Wizard of Oz, the AI doesn’t work very well)
And if you are blind ....? 
They asked me to solve this
But I keep asking them why they didn’t think of this before rolling out to the public
So it doesn’t happen again
Another face recognition problem

Joy Buolamwini – a PhD student at MIT Media Lab showed that 3 commercial face recognition systems were poorer at recognizing people with darker skintones compared to lighter and poorer at recognizing women compared to men.

How did this happen?

Severe real world consequences - people have been incorrectly arrested.

IBM has now abandoned its face recognition research.
Micro-ethics

- Micro-ethics – our personal responsibility as researchers and practitioners
- A lot of us have to go through ethical approval before we even smile at a participant
- And those of us who teach ethics for research or practice insist that the ethics process creates good research, but I’m not sure our students actually believe us
- It is true, although some of the bureaucracy around the process of getting ethical approval is getting out of hand (and I will illustrate a couple of points)
Codes of Ethics/Conduct

Little somewhat historical digression

- All professional organizations (in our area) have Codes of Ethics or Conduct
- I’m not sure that people in computer science take them that seriously
- I’m a Chartered Psychologist (which is important to me) and I have to take it seriously – each month the Psychologist Magazine publishes the list of psychologists who have faced disciplinary hearings for breaking the Code of Conduct and are struck off (more like medics)
- You can trace back through all the codes of ethics to the Nuremburg Code, the Declaration of Helsinki and the UN Declaration of Human Rights
- Including their slightly bizarre legal and philosophical language (e.g. beneficience)
Key ethical principles

These then led to another generation of ethics codes for organizations like the ACM and IFIP, whose basic principles are:

- Contribute to society and to human well-being, acknowledging that all people are stakeholders in computing
- Avoid harm
- Be honest and trustworthy
- Respect the work required to produce new ideas, inventions, creative works, and computing artifacts
- Respect privacy
- Honour confidentiality
So just tell me what to do

- All well and good, but not much practical use for a poor overworked researcher or practitioner!
- The best code of ethics IMHO is the UXPA International
- Takes the same principles, writes them in the simplest language possible and illustrates with some concrete examples
- Practicing what they preach

2. Be Honest with Everyone

2.1. UX practitioners shall not knowingly mislead a client or potential client about the suitability of a product or service.

2.2. UX practitioners shall give recommendations that are objective, consistent with accepted principles, and/or based on the judgment of qualified professionals.

2.3. UX practitioners shall never deliberately misinform or mislead individuals for whom they are providing services.

2.4. UX practitioners shall credit the intellectual property right of work, methods, and tools done or created by others in such a way that all parties involved are always clear as to the origin of such and the rights of the UX practitioner to use or cite such work, methods or tools.
The nitty gritty

- But to get a lot of detailed information about how to work with humans
- You need to go to the anthropology, psychology, sociology organizations
- Perhaps because they have years of lots of experience
- And some disasters
  - Milgram
  - Zimbardo
  - “Tearoom Trade: A Study of Homosexual Encounters in Public Places”
Welcome to Ethnav, a tool to help you navigate some of the complexities that now face ethnographers when presenting their research plans to the various bodies charged with responsibility for regulation and governance of research. The tool takes the form of a series of basic questions. If you click on these you will see text boxes which expand on these questions. Click further and you will find a series of essays which attempt to elaborate and explain the context of current regulation and governance. The documents are cross referenced by way of links that will enable you to move easily between essays, ethics codes and the bibliography we have compiled.

We hope that you find this tool useful. Needless to say, the landscape is a changing one and we would welcome users' ideas for how the tool might be improved and updated.

With best wishes
Bob Simpson, Durham University
Margaret Sleeboom-Faulkner, Sussex University.

Why the need for ethical navigation?
For researchers using qualitative methods in the social sciences issues of ethics, governance and regulation have become extremely complex. The approaches taken by social anthropologists create particular challenges which can make the planning and carrying out of research confusing and
Back to macro-ethics for a minute ...

- One of the consequences of the publicity around the Milgram and Zimbardo studies (both of which it can be argued produced important results) was that people became suspicious and dis-trusting of psychological research
- We have seen history repeat itself in the digital age
- Kramer, Guillory & Hancock (2014) (from Facebook, U of California and Cornell) manipulated 689,003 people’s Facebook feeds with more positive or negative messages to see if this lead to people feeling more positive or negative (as measured by their subsequent posts)
- No informed consent was obtained!
- Created a stir, the journal published a “distancing statement”, Cornell passed the buck to Facebook
- We need to think about reputation of our discipline (OK, it was Facebook ...)
Good ethics = good research

- I could give a whole series of lectures on this, but just to highlight a couple of points
- Thinking ethically helps with many aspects of study design
  - I need to brief participants, can I do that in a way that makes them feel co-researchers
  - I need to debrief participants, I can ask them what they thought the study was about, which may reveal interesting misunderstandings
  - I should not bore my participants – I should pilot my study to see how long and tedious is it (otherwise I’ll just get bad data)
But ethics can be poor

- The current ethics regime insists that I tell participants there is no risk to doing my study
- In psychology this is called the “pink elephant” phenomenon
- If I say “Don’t think of a pink elephant” – you will!
- If I say “there’s no risk”, you’ll think “what risk?”
- It’s unethical to scare your participants unnecessarily
- That’s an issue for the ethics approval process – if there is no risk, end of story
- Only if the material itself might make participants consider risk should it be mentioned (our password studies)
No-one read the small print

We also have to include a lengthy and largely incomprehensible statement about the Data Protection

This does not make the participant feel like a co-researcher, more like someone submitted to a painful bureaucratic process by Google

We should have a brief explanation in plain English and a longer but comprehensible explanation available separately

In accordance with data protection law, the University of York is the Data Controller for this project. This means that the University are responsible for making sure your personal information is kept secure, confidential and anonymous. The University will also ensure that the information is only used in the way you have been told it will be used. Your information will only be accessible in its original form to xxxx.

Information from this study will be stored on the University of York’s cloud storage systems. The University’s cloud storage solution is provided by Google, which means that data can be located at any of Google’s globally spread data centres. The University has data protection compliant arrangements in place with this provider (see https://www.york.ac.uk/it-services/google/policy/privacy/). The University processes personal data for research purposes under Article 6 (1) (e) of the General Data Protection Regulation (GDPR).
Research in the digital age

- Much research is conducted online now (accelerating since the pandemic)
- Throws up many new (or intensified) ethical issues
- Is our data on social media public and therefore usable without informed consent
- What if I participate in a chatroom (as a legitimate person) but use the data
- Are MTurkers paid an appropriate amount (far less than the minimum wage)
Research in the digital age

- Are people who they say they are (allegedly MTurkers in poorer countries using US IP addresses, because researchers often ask for US participants
- Are we only sampling from the digitally experienced
- Are people concentrating on what we are asking or are they checking their phone, listening to music, eating a sandwich ..
- With a Phd I recently ran an online study with 209 participants, 36 questions plus 4 attention check questions
- On strict scoring of the attention checks, over 50% of participants got more than 2 wrong!
Research in the digital age

The research communities using online research are still struggling with the ethics (and validity) of online research

Association of Internet Researchers (AoIR) has guidelines – interesting but will send you to sleep, take home message “assess on a case by case basis”

British Psychological Society – also has guidelines, which don’t really help

So very hard to find firm guidance at the the moment

Interesting the many years of face-to-face research has given us a lot of guidance and good practice, we are still working that out for digital research, in all disciplines
Not in conclusion

On that rather inconclusive note, I leave you with the thought that we live in very complicated, very technological, rapidly changing times.

In terms of countries leaving the EU, pandemics, political scandals, wars and HCI ethics.
Thank you for listening.

If you would like further information on any of these areas, I’m happy to provide resources.

Contact me at: helen.petrie@york.ac.uk

Any questions?