ETHICS AND VALUES IN CO-DESIGN FOR DIGITAL DEVELOPMENT

Reflections on the challenges and opportunities in engaging across borders with stakeholders as equal partners in design

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University of Cape Town

DIODE Workshop
22 January 2018
Cape Town

UCT CENTRE IN ICT4D

The Executive Committee
- Acting Director: Melissa Densmore, HCI
- Director: Edwin Blake, CS
- Ulrike Rivett, IS
- Wallace Chigona, IS
- Marion Walton, Film and Media
- Brian DeRenzi, CS

Pho: Sara Brittan Photography, Elevate Festival

13 Staff, 4 Departments, 3 Faculties, 50ish Postgrads
student geographic representation

“I dream of establishing a similar centre for ICT4D research and practice in Lesotho.”

Maletšabisa Molapo
MSc 2013
PhD (very soon)

Research Themes

| co-design & mobile hci | digital participation |
| educational technology | heritage | health |
| service delivery | community networks |
RESEARCH THEMES

<table>
<thead>
<tr>
<th>co-design &amp; mobile HCI</th>
<th>digital participation</th>
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<tr>
<td>educational technology</td>
<td>heritage</td>
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<tr>
<td>service delivery</td>
<td>community networks</td>
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CO-DESIGN AS AN ETHICAL STANCE

Telecentre: https://en.wikipedia.org/wiki/Telecentre
Where your Computer Goes to Die: Jay Akbar for MailOnline, 23 April 2015
Rangaswamy, Nimmi, and Melissa Densmore. "Understanding Jugaad: ICTD and the tensions of appropriation, innovation and utility." *ICTD2013 Notes*. Cape Town, South Africa


Inclusive Design – Testing our Assumptions

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Reality</th>
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<tbody>
<tr>
<td>Multiple Devices</td>
<td>Cost</td>
</tr>
<tr>
<td>Unlimited Bandwidth</td>
<td>Mobile First/Only/Shared</td>
</tr>
<tr>
<td>Unlimited Power</td>
<td>Bandwidth Caps</td>
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<td>Intermittent Power</td>
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“Co-Design is a method. It is a way of progressing through a problem or design scenario... it refers to any act of collective creativity, that is shared by two or more people... co-design refers to the creativity of designers and people not trained in design working together in the design development process.”

Proposal for “minimum ethical standards” in ICTD/ICT4D Research ([https://ictdethics.wordpress.com/](https://ictdethics.wordpress.com/)), led by Andy Dearden and Dorothea Kleine

- Principles: Positionality, Cultural Awareness, Appropriate Research Methods, Reciprocity and Partnerships, Honesty and Realism, Link to others, Authentic Participation, Accountability and Reporting, Risks, Non-discrimination, Disclosure and Informed Consent, Confidentiality, Treatment of Data
**vocabulary**

**cultures**

**resources**

**values**

**literacies**

**languages**

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**A Common Base of Understanding**


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**LOST IN TRANSLATION**

“contrasting sense of self, individuality and community, orality versus print-based literacy, and technological skills versus local situational knowledge”

Crowdsourcing 3D Models of Ovahimba Culture


Too perfect! Not my house She has no clothes on The dress code is not right

Bophele Haeso – Good Health for My Village

Productive Participation requires:

Time for Exploration

Frequent Engagement

Long-Term Deployments
THE CO-DESIGN CYCLE

- Partner Identification
- Needs Assessment
- Co-Design
- Co-Deploy

- Identify Current Processes
- Find Common Ground
- Set Expectations

- Evaluate

TOOLS AND METHODS
TOOLS AND METHODS


LOCAL IS LEKKER
SEPARATE THE CONCEPT FROM THE ARTEFACT

“li tlohelleng li hole ‘moho!’
let them grow together!

What if…?

CO-DESIGN FOR MOTHERS
How can we empower mothers to participate in the digital?
- Interrupted interactions
- Single-handed interaction
- Don’t distract the baby (or do, once they’re old enough)
- Feedback and choice
- Positive Reinforcement

Implications for Co-Design
- Accommodate Scheduling and Attention Constraints
  - Workshops vs interviews with children
  - Surveys vs Usage Logs – prefer passive data collection
  - Probes support intermittent data collection over a long time without being there
  - Provide childcare
  - Expect interruption
  - Expect lack of focus
- Working with an NGO
  - Turnover and time constraints affects pace of research
  - Conflicts between moms-as-co-designers vs ngo-as-co-designer

CO-DESIGN FOR UNEMPLOYMENT

- Working alongside Afrika Tikkun and the Zanokhanyo Network, NGOs that provide training (job readiness) and resources (computer access and job placement) to participants
- Barriers to job-seeking
  - Language, skills
  - Searching the internet for relevant jobs is difficult
  - Communication is limited
  - Lack of funds
  - Need to support mobile-first modalities of use
- Barriers to co-design
  - Participants are itinerant, different for each cycle
  - Participants are not confident – power differentials, language barriers
INITIAL SET OF FREE LOCAL SERVICES

- Owncloud
  - Local File sharing service to share music, videos, documents

- Rocket chat
  - Local chat program similar to WhatsApp to chat to friends in your local community

- Diaspora
  - A local social networking service similar to Facebook to socialize with your friends in your local community

Exploring and co-designing:

- Community Radio
- iNethi Music
- IoT
- Employment
iNETHI OVERVIEW AND PHILOSOPHY

- iNethi Network uses mesh with TVWS and WiFi radios
  - Mesh provides simple set-up (self-forming) and repair (self-healing)
  - Mesh routes over TVWS or WiFi or both to provide better coverage, capacity and redundancy
- iNethi Cloudlets for decentralized content distribution
  - Encourage content generation and local innovation
  - Create wiki content, build locally hosted apps, locally hosted services
- Community driven design and ownership
  - iNethi will be a co-op / community owned network
  - Cloudlet Platform will support new services designed for and by the community

COMMUNITY DRIVEN – OUR LOCAL GEEKS IN OCEAN VIEW

Andre van Zyl
Computer Teacher, OV Secondary

Marius Waries
iLearning Lab

Ganief Manuel
The Community Food Project

and the women of Ocean View?
WORKSHOPS AND MEETINGS

Two workshops
Deployments
Braais
Weekly meetings
(alternating OV and UCT)

VALUES & ETHICS: CO-DESIGN AS A CONTRACT

- Community vs Individual Consent?
- Reciprocity: creating partnership vs dependency
- Intellectual Property Ownership
- Who is ‘local’ – reflexivity and
- Resolving Value Conflicts


- Be willing to “fail” your technology

Claim Mobile: When to Fail a Technology.
M. Densmore. In CHI 2012. Austin, TX, USA.
Ethics in research should extend to reflecting on how we treat other researchers, and how we frame our research activities, as well as respect for local norms and laws - or having a very good reason for violating them.

How do you recruit research assistants?

Is it legal to take South African data out of the country?

POPI Act
**YOU’RE INVITED**

- Tour of Campus and visit to Centre in ICT4D Lab
- 2:00p Tues – start from lunch
- 10:30a Wednesday
  - Meet in the Computer Science building, 3rd floor
  - Meet the students: 11:00a
- Find me on WhatsApp: +27 79 672 1262

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**SAN CODE OF RESEARCH ETHICS**

- Justice and Fairness
- Honesty
- Respect
- Care
- Process
AFROFUTURISM  
IMAGINING THE FUTURE OF BLACK IDENTITY
RECLAIMING THE HISTORICAL NARRATIVE

vs.

COMPUTER SCIENCE ACROSS BORDERS
DO APPS HAVE POLITICS?

You can de-politicize your Facebook feed. Browser extensions like 'Social Fixer' and 'Remove All Politics From Facebook' filter through the text of posts and block the ones you don't want to see in your newsfeed. Because the extensions allow you to choose specific keywords to block, you can also hide sponsored posts and TV spoilers.

Ubuntu

"If you want to go quickly, go alone. If you want to go far, go together." - Micah Posnak

WALK FREE
Another Example DTN Network


ONE LAPTOP PER CHILD (LAPTOP.ORG)
LONG DISTANCE WiFi, ARAVIND EYE HOSPITAL AND TULIP IT


PROJECTS

Inethi (HPI)  Job Seeking  Language Learning

NICU Mothers (HPI)  Milk Donor Motivation  Bophelo Haeso (HPI)