Challenges of (and opportunities for) doing research in Africa
some thoughts
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Digital Labour in Africa
Yogya 2017

Why Africa?
• There is more diversity in Africa than elsewhere
• 54 (49) countries spanning much of the HDI spectrum
• Very underdeveloped statistics capabilities
AFRICA IS DIFFERENT
An IoT solution ... rejected!
Adoption Factors of (IoT)-based Services in Informal Settlements in Cape Town

Traditional ICT “adoption” models don’t apply!

**HOW** is Africa different?
Greater Inequality

The most unequal regions in the world

GiNI index measure of inequality

Greater (economic) inequality

More diversity inside Africa than with other continents

And poverty and unemployment

World Unemployment

Wikipedia

More diversity inside Africa than with other continents
Ethical Issues

- Protecting the rights of the vulnerable groups (Amersen & Strang, 2015: Addressing the Challenges of Conducting Research in Developing Countries)
- Applying 1st world ethics standards?
- Do you pay your respondents / interviewees?
- What artifacts do you leave behind?
- What expectations do you create?
- Sustainability of the intervention? (esp. ICTs!)
- Paying your local researchers “a fair wage”?
- Over-researching communities (creating dependencies)
- ... and respondents telling you what they think you want to hear
Governance Issues e.g. corruption

Governance Issues e.g. red tape
Challenges...

- Getting ethics approval
- Getting government officials to speak to you
- Using (or comparing) statistics
  - Availability of statistics
  - Recency of stats
  - Quality of stats
  - Bias of stats

Infrastructural constraints

Internet users as a percentage of a country's population (2015 / Wikipedia)
Infrastructural constraints
Language Diversity

Increased participation in local government through the use of mobile phones: What do South African youths think?

How do you translate:

- Privacy
- Open Source
- Family
Colonial past & conflict

More ‘friction’

- Borders (visas)
- Finance (forex, transfers)
- Government

Average cost of sending money internationally
Efficiency and effectiveness are often not key drivers

- Akinlolu flying to Nigeria
- JP @ Venda
- Etc...

Youngest population by far

![World Median Ages](image)
Sense of community and family

Social influence e.g. “Ubuntu”

“The spirit of Ubuntu – that profound African sense that we are human only through the humanity of other human beings – is not a parochial phenomenon, but has added globally to our common search for a better world”

Has POSITIVE but also NEGATIVE aspects e.g. “don’t stick out” e.g. ???
“Neighbours notice that an interview is taking place and offer themselves for subsequent ones, attracted by the possible reward. This allows the interviewer to finish his work quickly but violates the random-walk principle. GPS data collected about the positioning of the interviews allowed to detect if such shortcuts were being taken. Similarly, if the interview is too quick it shows the interviewer is not following proper process. Without the mobile technology it would have not been possible to detect such errors.”

Maurizio Santamicone, Savings and Shock Coping Behaviour in SA Metropolitan Townships, 2014
• “performing the interview inside the shack was not conducive due to very bad weather conditions and the interview was therefore performed inside the researcher’s vehicle.” … “many of the shacks approached were being emptied or cleaned because of the heavy rainfall during the previous few days”

• “Unlike Barry & Rüther (2005) who advocated the use of a palm top computer for data collection in the informal settlements of Cape Town, instead of using a mobile device to read questions and take notes, the interviewer used a clipboard, paper and pen because it proved to be more practical in the environment in which the interviews were performed. The pen and paper were used to make notes regarding the interview or peculiar expressions made by the interviewee (such as long pauses) that could potentially serve as clues to behaviour - such as attitude or perception - of the interviewee towards the question asked.”

• “during an interview it was not uncommon for someone to enter the shack or place of interview and listening in – or even participating – in the interview.”

• “several potential interviewees were found to be inebriated [...], particularly those interviews that were performed towards the end of the month. These interviews were not recorded as part of the data collection. This problem was exacerbated by the noise of the ongoing political campaigning of the imminent municipal elections”

Achmat Luqman: Adoption factors of the Internet of Things based services in informal settlements in Cape Town
Interview dynamics (race / background)

Migrants & refugees

Personal safety

OPPORTUNITIES
Opportunities

• “The omnibus survey is our most immediate and cost-efficient way of collecting data in townships - there are no set-up costs involved and we can guarantee 1000 responses in the space of four weeks from township residents in Johannesburg, Cape Town and Durban on a fixed price per question basis.” (Source: email correspondence with ikapadata.com).

• Surveys using (often) micro-work platforms e.g. M4JAM (Money-for-Jam)

Thoughts on ICT(4)D

• Changing mindsets
  – Global North helping ➔ Global South?
  – “Divide” (rich/poor ; haves/have-nots)
  – “Development issues” in the North
  – Technicist approach ➔ interdisciplinary CS+IS+DS+
  – The poor have no capital / don’t save / ...

• Measuring impact
  – Economic
  – “freedoms” and “capabilities” [Sen ➔ Kleine]
Thoughts on ICT(4)D

• ICT4D in Africa: Mobile is everything
• Mobile is not everything
e.g. water service delivery in Eastern Cape
• Whose agenda drives the research?
• Ethical implications of doing research in a resource-poor environment?
  Creating dependencies | give ↔ take | what happens at project end
• How do you conceptualize the “IT” artifact?
e.g. Orlikowski: tool/feature | proxy | nominal | ensemble/functional | computational view
• Interdisciplinarity (I17Y) (↔ I18N)
“relevance ↔ quantity”

• Publish or perish (?)
↔ (?) making a difference

• What impact does your research have?
(academic citation ↔ real world implementation)

“One person can make a difference, and everyone should try.”
— John F. Kennedy

ICT(4)D

ICT4SDG: where can ICTs (you?) make the greatest difference?
The challenge

- 17 Sustainable Development Goals
- 169 targets
- 230 (?) indicators
- “leave no one behind” i.e. disaggregation
  - Unemployed; aged; children; migrants; disabled; rural...
- Previously: 8 MDGs with << indicators & little disaggregation
- Even the most developed countries have huge measurement gaps
- DCs have resource constraints and different national priorities

The solution: D4D?

- The Data Revolution!
- What is the Data Revolution?
  - harnessing of new ICTs for data collection and analysis
  - E.g. crowdsourcing, IoT, mobile, Big Data, OGD,
- The problem with the solution
  => Mostly untested with the SDGs
  - Lots of “promise”
  - Quite a few “prototypes” and “architectures”
  - But few demonstrable scalable and sustainable examples
Some key dynamics

- SDGs ↔ National priorities (NDP)
- “Leave no one behind” ↔ macro-economic goals
- Innovation & the data revolution

Innovation & the Data Revolution

- Open Government Data (national/local)
  - Needs meta data & micro-data & open use license
  - Needs tools, infomediaries, culture, quality feedback loop
- Crowdsourcing
  - Mobile is a strategic vector
  - Look at culture/motivation/gamification
Potential Benefits of Open Data

OD4D
Innovation & the Data Revolution

• Big Data
  – E.g. migration, traffic, location, households, social issues
  – Needs datasets (private sector), specialized skills sets; convincing SDG success stories (e.g. traffic)
  – Moral issue: corporate datasets with “public good” potential

Social science research “gap”

• Quantitative: large samples – one model (TAM)
• Qualitative: single case study – rich complexity (ANT)

• What is inbetween?
  Contingency models, case-based models, moderating variables, complex agency-based modelling, patterns, decision trees

• Complex phenomena in heterogeneous society (UC)
  We need better Research Methods to study these
  ➔ Big Data? ... Patterns? ... Complexity Theory? ↔
**“large numbers of groups”**

Marketing: mass ⇒ individual

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**Innovation & the Data Revolution**

- Internet of Things (IoT)
  - Sensors – mobiles –
  - smart appliances/ buildings/cars/ cities/…
  - Use cases: fires in townships; environment; security

- Key vector in DCs = mobile technology
  => M4D + D4D = ….  
  => Mobile-for-Data-for-Development

**M4D4D**

you heard it here first 😊
The dilemmas of an early-career researcher

• Balance career ⇔ personal life / family
• Career track building: teaching AND research (and admin and outreach)
• Number of publications ⇔ quality of publications
• Lack of guidance/mentorship/role models

Some of these are actually OPPORTUNITIES!

Other (IS) trends

• If researching (IT(4)D) in DCs/ECs it’s mobile or nothing

• Does IT matter ⇔ IT is everywhere

• Interdisciplinarity (I17Y – I18N)

....
Heeks’ thoughts on ICT(4)D

• ICT4D 2.0 (Heeks)
  – sustainable
  – scalable
  – systemic evaluation

• 3 Innovation (engagement?) models (Heeks)
  – laboratory (pro-poor)  *on behalf of/top-down*
  – collaborative (para-poor)  *alongside/with*
  – grassroots (per-poor)  *within/bottom-up*