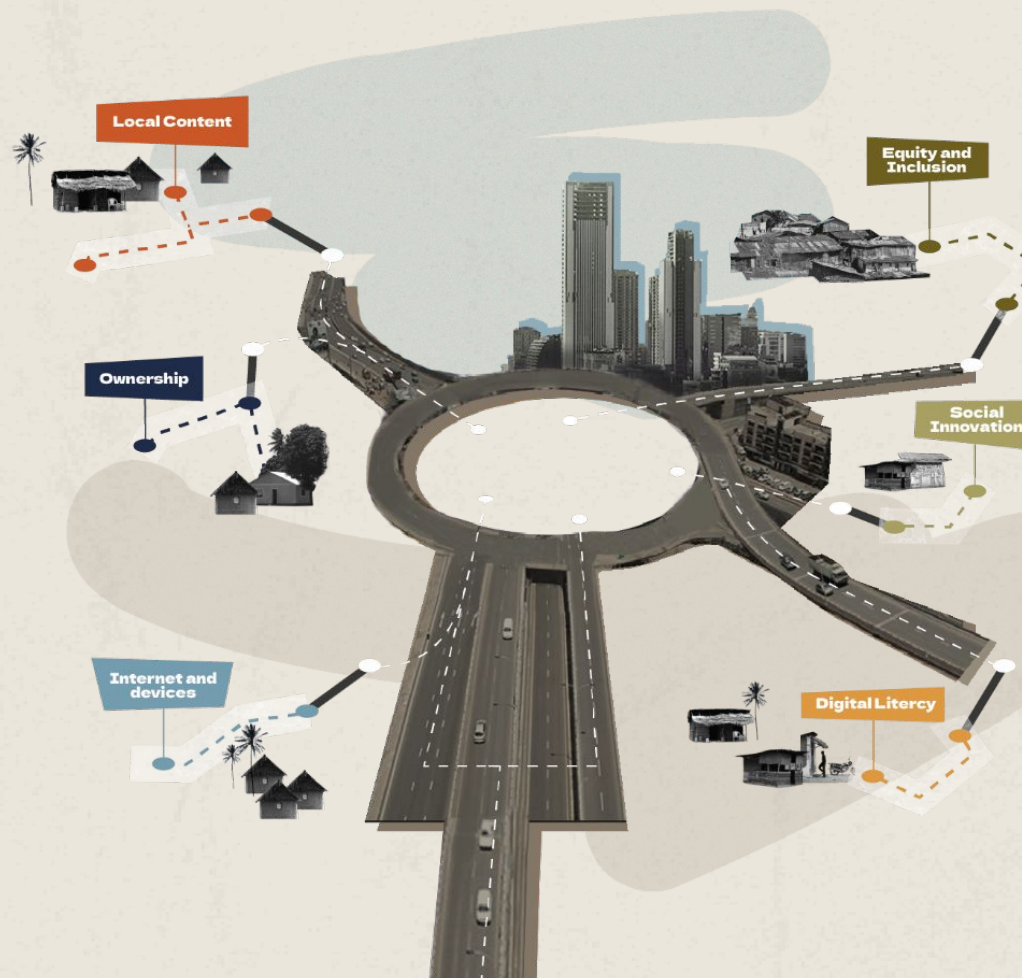# Beyond Access

An empirical exploration of how **Kenyan Community Networks** bring meaningful internet access to remote, marginalized and underserved communities

Ainoa Pubill & Kira Tilcock

Agenda

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Research Reflections & Future Work

1

Journey to Problem Statement

Motivation

- Personal Experience and involvement with CN's during our internship in Fall 2022

- The amount of ethnographic data that was not possible to capture in the internship report

- Techno-Anthropological Relevance

- Opportunity for cross-cultural learning and exchange

- Meaningful

Journey to Problem Statement

Further points of discussion in our internship report leading to problem statement
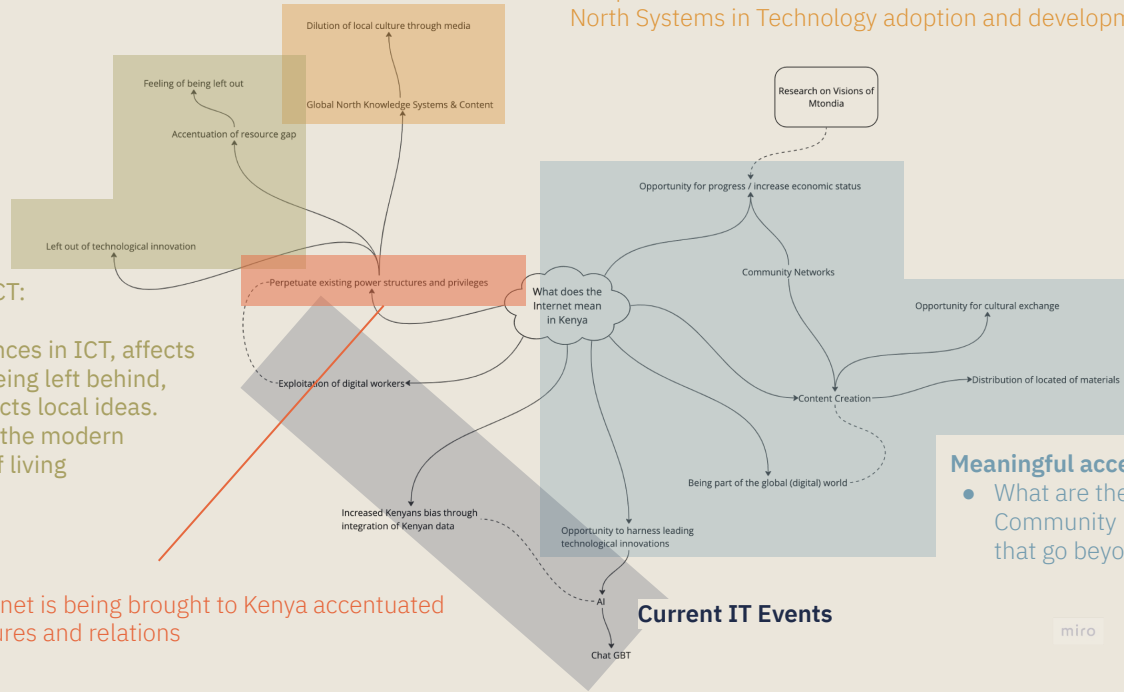
Digital Culture, Cultural and Social Relatability
- The presence of non relatable content due to dominance of Global North Systems in Technology adoption and development

Western Influences on ICT:
Examining the Impact
- How western presences in ICT, affects narratives around being left behind, and negatively impacts local ideas.
- Civilized = adopting the modern technological way of living

Power relations
- How the internet is being brought to Kenya accentuated power structures and relations

Meaningful access?
- What are the components of Community Networks (CNs) that go beyond mere access?

Current IT Events

Dilution of local culture through media

Feeling of being left out

Global North Knowledge Systems & Content

Accentuation of resource gap

Left out of technological innovation

Perpetuate existing power structures and privileges

Exploitation of digital workers

Research on Visions of Mtondia

Opportunity for progress / increase economic status

Community Networks

What does the Internet mean in Kenya

Opportunity for cultural exchange

Content Creation

Distribution of located of materials

Being part of the global (digital) world

Increased Kenyans bias through integration of Kenyan data

Opportunity to harness leading technological innovations

AI

Chat GBT

miro

2

Brief Summary of Research

Problem statement

Internet Access is seen as an opportunity for socio-economic transformation in Kenya; However, not all Kenyans have access it.

Community Networks aim to bring the internet to remote, marginalized communities in a way that is meaningful and relatable to the community.

"There is a lack of connection from the community, perhaps because how it [the internet] was introduced"

Josephine from TANDA (biggest CN in Kenya)

Research Questions

- **How are Kenyan Community Networks addressing the digital divide to promote meaningful digital inclusion and equity?**

- **What are CNs potential role in Kenya's digital transformation?**

A case study across 7 CN

OMOT OGUL
CN: OWNET

HAWI RAPUDO
CN: KIJIJI YEETU

MRS. C
CN: ATHI

JOSIE PHILLIPS
CN: SIAYA

DONATUS ABWAO
CN: SIAYA

TWAHIR HUSSEIN
CN: DUNIA MOJA

ARLEEN RACKITA
CN: OASIS MATHARE

RISPER AROSE
CN: TANDA

KAKUMA REFUGEE CAMP, TURKANA

UGUNJA SUB-COUNTY

SIAYA, SIAYA COUNTY

MAUA, MERU COUNTY

MATHARE, NAIROBI

KIBERA, NAIROBI

NTONDIA, KILIFI

Techno-Anthropological Lens

Multiplicity (De Laet, M., & Mol, A., 2000)
We explore CNs as a fluid technology: by adapting and appropriating themselves and their programs to local settings

Situated knowledge (Haraway, 1988)
How CNs are built on knowledge grounded in specific cultural, social, and geographical contexts and exist in tension with the larger dominant knowledge and social systems that shape them and influence them.

Key Findings

FLUIDITY

LOCALITY

COLLABORATION

· CN's embody multiple identities which reflect the complexities of the digital divide

·Their adaptable nature will enable them to evolve in new pathways even if kenya archives widespread internet

· CNs are a local social innovation and hold the potential to foster local social innovation

· Meaningful innovation arises from the community. Technology that is brought from abroad might not be relatable and lead to further social imbalances and a bigger digital gap.

· Collaboration in CN has the potential to challenge universalising notions of technology by involving diverse social groups and including their unique perspectives.
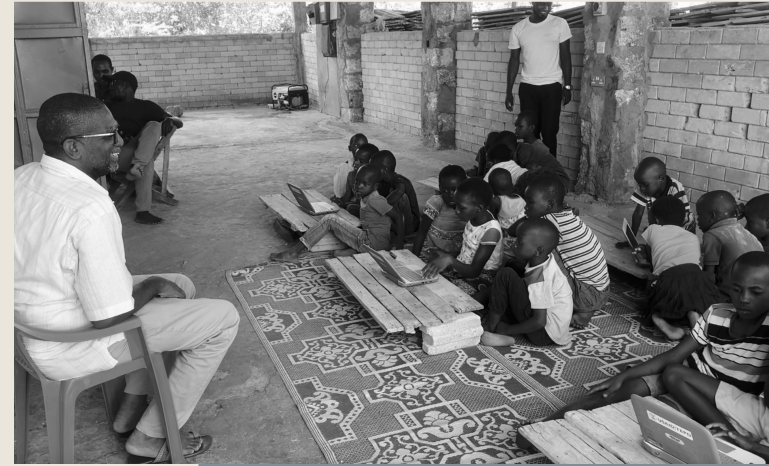
The findings contribute to larger STS conversations around the multiplicity of technology, the critique of dominant knowledge systems in technology development and the importance of cross-cultural collaboration and participation in designing more inclusive and equitable digital solutions.

Conclusions

CNs empower and bring meaningful digital impact to their communities because of their **fluid, local and collaborative** approaches.

By providing internet, they become entangled in tensions that exist in Kenya's digital transformation, and have a potential role in addressing historical and present inequalities.

3

Research Reflections & Future Work

Methodological Reflections

Ethnographic Reflexivity

- Learning through the discomforts: "Thinking occurs when things are uncertain or doubtful or problematic'' (Dewey, 1916, p. 148)

- Adapting to a new place and culture with respect

- Coming to situations with an open mind and aware that the current situation we are grasping it is just the partial truth.

Is our "whiteness" being used to sell the internet services to the schools while giving credibility to the organisation?

Why is Mr.Twahir asking us to do a website if most parents do not have access to internet? Are we doing something good or bad for them?

Why would this school pay for internet if they can't even afford to pay food? Also most of the time they are out of power. This does not make sense.

Methodological Reflections

Interviews to expand our ethnographic experience

- Existing relationships allowed us to have rich interviews, but were not the ideal setting.

- Being there in person would of been preferred

- Thematic coding allowed us elicit the key themes from our interviews interpreted through our ethnographic experience

- Ethical considerations:

  - Who is at the table?

  - Who are we to represent them?

Reflections on Theoretical Choice

Multiplicity/Fluidity:

- Intuitive choice: the concept of fluidity resonated with our experiences in the field and our understanding of CN aligned with Mol and De Laet's perspective of fluid technology.

- Familiarity: A theory which was introduced to us in the first semester and we have experience with

- It served us to highlight the positive aspects of CNs and showcase how they 'work'

Feminist theory/Situated Knowledge:

- Discovered through thorough desk research: In our previous report, we realized that the theory we used lacked a critical component. This semester, we sought a lens that would enable us to discuss and explain tensions in more insightful ways

- Feminist theory of technology (represented by Haraway) how marginalised groups have been historically excluded or oppressed by the impact of dominant social structures, thus influencing the design, technical content and use of artefacts.
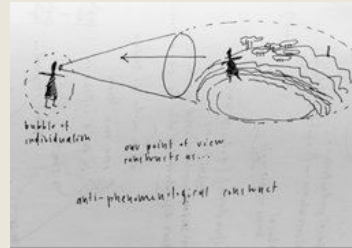
Reflections on theory

Advantages

- Multiple Perspectives
- Complementary nature

Potential Disadvantages

- Western Theory in non-western context: may pose limitations and potential biases in understanding the local realities.

Other theories considered

- Ubuntu (Mokgoro, Y, 2002)

DONNA HARAWAY
Situated Knowledges:
The Science Question
in Feminism and the
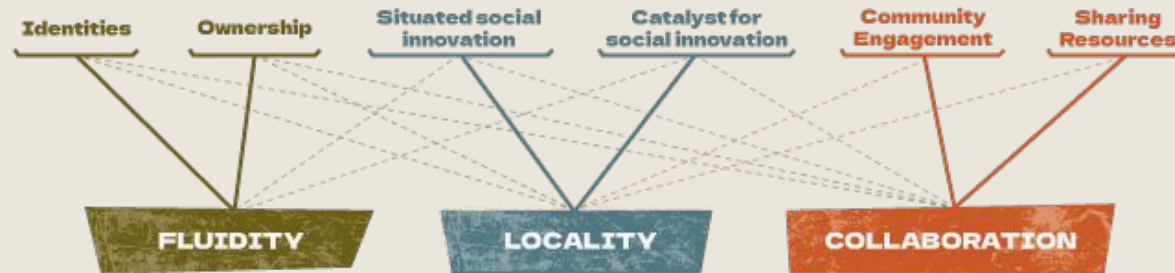Privilege of
Partial Perspective

Reflections on Analysis

When went well:

- Highlights a lot of examples
- Coherence between quote and past observations
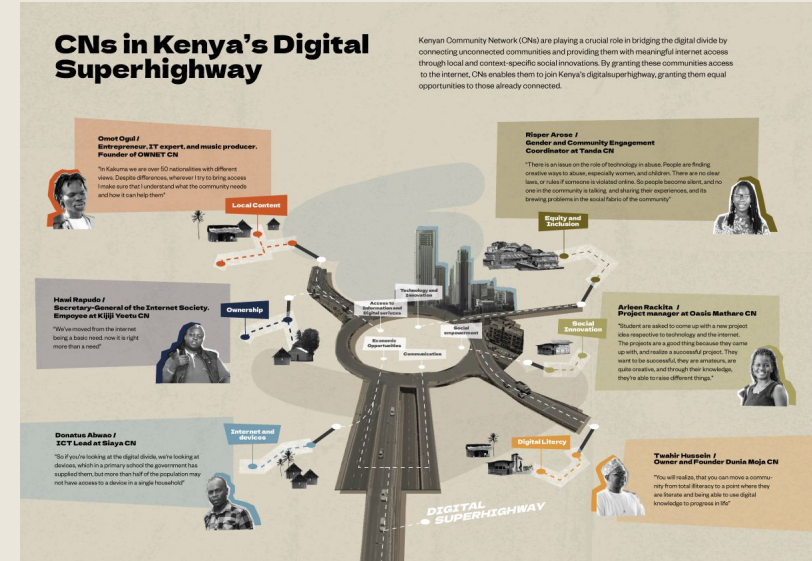- "We don't know that our stories are powerful enough"
  - Josephine

Challenges:

- So much data and interesting points of departure, needed to ensure one specific narrative.
- Overlapping themes

Graphically Representing Research

- Based on positive feedback on previous graphics work CNs, we feel we could help with graphics

- Wanted to highlight the people and their messages behind CNs, making public aware of CNs as alternative tech spaces & as a cultural movements

- Important to make the research accessible

- A jumping off point to conuinte collaborating with CNs after thesis

Further Points for Discussion

- Academic research reinforcing systemic inequality

- What are similar challenges in other CNs globally: Uganda, Brazil, Spain. What can be learnt from one another.

- How to conduct researching cross-culturally

- Data for Transformation

  - Data creates visibility of what is going on and helps change policies that can help the people - Ndemo

  - "A government cannot plan without statistics" - Catherine

  - Quantitative data can help legitimize CNs impact, for funding and to help inform programs

  - Co-creating a system for collect reliable statistics in underserved areas

Unleashing Data for Digital Transformation

Bitange Ndemo
University of Nairobi

Theoretical Recommendations for CNs

From brief but somewhat found understanding the challenges and societal and cultural considerations, we could have the following suggestions:

- **Programs targeted to working adults**
  - Office suite programs, SoMe, website builders. Understand what is relatable to them socially and culturally and how technology can fit in their daily lives.

- **Relatable Role models**
  - Bring people in from the community who use computers in their jobs, give a lesson about a tool or advice

- **Internal funning system**
  - Future promoting the ability to create innovations with CNs could be a potential avenue for income for both the organization and the locals

THANK YOU!

Ainoa Pubill & Kira Tilcock

Methodological Reflections

Previous Ethnographic Endeavours

Our data was largely interpreted through massive amount of thick cultural contextual data that was gather in our ethnographically informed approach during our internship.

"Within a few weeks, the girls had fitted into the society so much that the "fear of the unknown" was totally erased. We believe this to be one of the greatest lessons they had, a first hand experience in rural settings."
-Mr. Twahir