Amplifying the Griot: Design Fiction for Development as an Inclusivity Lens

Lindah Kotut and D. Scott McCrickard

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Lindah Kotut
Computer Science and Center for Human Computer Interaction
Blacksburg, VA 24060, USA
lkotut@vt.edu

D. Scott McCrickard
Computer Science and Center for Human Computer Interaction
Blacksburg, VA 24060, USA
mccricks@cs.vt.edu

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Abstract

Design fictions are useful tools by which to consider the impact that technology can have in the lives of people in the future. In this work, we consider how design fiction can be used to guide research in the context of a developing country – adding to the existing approaches in Human Computer Interaction for Development (HCI4D) and Information Communication Technology for Development (ICT4D). We term this approach Design Fiction for Development (DF4D). Using a fictional case set in the near future, we showcase the breadth that DF4D forces upon our view of design fiction, so that we consider other consequences of current design approaches: monetary loss, reputation loss, legal liability, embarrassment etc. We then propose a DF4D approach that follows a *Respectful Technology Space* framework and the use of the *Griot* in determining both how the research should be approached/conducted, and with whose voice, towards accounting for often overlooked consequences.

Author Keywords

Postcolonial computing; ICT4D; HCI4D; Design Fiction; Design Fiction for Development (DF4D)

CCS Concepts

•**Human-centered computing** → *Ubiquitous and mobile computing;* •**Applied computing** → *Computers in other domains;*

The *Tu-mbili Project*

Since 2025, the Kanga region in Kenya has had a seasonal problem: the crops have been periodically destroyed by virtue of invasion by clever wild animals, led by families of monkeys. The Kanga case is unusual for various different factors: the cause cannot be attributed to human encroachment to wildlife areas, and no animal habitat has been lost to explain the sudden invasion.

The community members had come up with different approaches with varying success: motorized scarecrows (worked for a few nights, until the animals figured that they were harmless), drones (limited battery life), electrified fences (unsuitable for large acreages), automated sprinklers (the wild animals enjoyed the water too much), motion sensors/trip wires (rodents would trip them, and they are also a hazard to domesticated animals), and automated sms (too many texts received). The only interim solution that worked was an old fashioned hiring of night guards to patrol the areas surrounding the farms (with dogs), and having them chase away the invading wild animals on sight.

HCI Approach

Researchers in the department of computer science at ULA university[1] found this problem to be fascinating, especially with the failure of attempted technological solutions. They wanted to apply HCI approaches towards crafting a custom (and permanent) solution. They followed all the necessary protocols when designing the study: obtaining both the IRB approval their institution and an additional research permit from the Kenyan government. They formally titled the research *Project Tu-mbili* (*"Tumbili"* is Swahili for "monkey", while *"Tu-mbili"* translates to "just two"). The project name served to describe both the problem (monkey invasion) and the approach to finding a simple (two-fold) solution. A local official served as a liaison with the community, a sometimes interpreter and also organized *baraza* (council) with the local community to offer a platform to discuss the partnership.

The researchers followed the postcolonial computing approach [4, 6] favoring iterative co-design with cultural probes [5], think-aloud sessions and follow-up interviews. They were able to recruit over 15 participants (5 women, 10 men) for the co-design phase of the work.

The Tu-Mbili Two-Fold Proposal

The researches together with the participants came up with a design prototype that was coupled with an understanding about the invasive monkey species (especially known for their long-term memory). The approach combined technology (sirens) and people (human patrols with dogs). The researched presented this approach to the large community, and had it approved (negative consequences such as noise pollution were weighed to be of less concern in the face of crop losses). The farms surrounding the area where monkeys would originate from were identified, each farmer agreed to participate, and a trial date was set. The agreed approach was as follows:

1. The selected community members would congregate at 3 a.m. at the identified farms. They would bring their dogs on leashes with them.
2. One person designated as the signaler, would send the alert once a sufficient amount of monkey families had congregated in the farms.
3. The community members would unleash their dogs, the siren would sound, and in the melee, the monkeys would flee, traumatized by the experience. Given their memory, they would never return.

[1] For more about the university and the various departments, see https://tinyurl.com/j5s4uun

The Deployment
The prescribed steps were followed faithfully (there were a lot of spectators due to the novelty of the approach). At the given time, the alert was issued, the farmers released their dogs and gave them the command to attack, and then the siren sounded. Only it did not turn out as expected: the dogs, instead of attacking the monkeys, attacked each other. The siren (even after it was silenced) made it difficult for the owners to order their dogs. The spectators panic added to the melee, and video recordings of the event made it to social media and captured the nation's attention.

The Aftermath
The government released a statement condemning the involvement of the 'foreigners' who wanted to solve a problem without understanding the context and the participation of local researchers (despite prior approval and community and government participation). The researchers were summarily expelled from the country, and the government formed a committee that recommended an added bureaucracy to the process of research approvals. The probes and other prototypes were confiscated.

By the benefit of hindsight, it turns out that while the co-design participants owned the land (or were children of the land owners) with the decision making capability of what happened in it, the people who were tasked with chasing the monkeys were hired hands. Therefore, even though the researchers were careful for the community members especially the ones with farms next to the forest were introduced to each other, they did not introduce the hired hands, and by extension, the dogs were not introduced to each other. Neither the community members nor the researchers had sought to understand from the hired hands perspective, nor were they involved in the co-design phase.

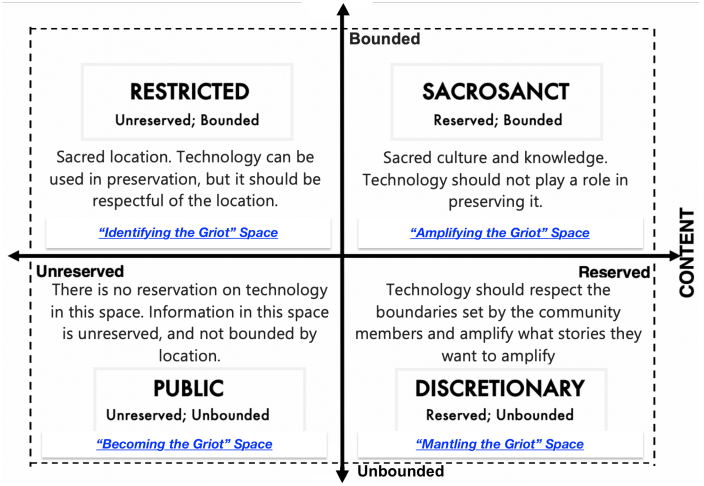

Figure 1: Considering the Griot: Applying design fiction (for development) lens on the proposed respectful space typology [7].

Author's Statement

In this work we ponder the consequences of research conducted in a fictional near-future. We leverage design fiction to ponder other implications beyond ethics [9] and technology consequences [8]. We especially consider impact on researchers reputation and trust. Using postcolonial computing lens that especially guide design approaches especially those affecting developing countries, we highlight the still abiding problem of representativeness in HCI.

We are guided by the *Respective design space* approach [7], and argue for a considered approach towards using design fiction as an approach research involving underrepresented communities and including developing countries (Figure 1). We also combine an *African futurism* approach [2] (not to be confused with *Afro-futurism*), and a West-African narrative approach in our use of the 'Griot'

[3] – a term used to refer to the keeper and teller of community stories, to serve as a standard by which to consider respectful research, especially around the importance of narrative control.

As our research increases focus in developing countries, we need to (re)consider the pros and cons of current accepted approaches. We use design fiction to do this–to highlight potential repercussions. Unsaid local conflicts, internal hierarchies, together with marginalization of certain subset of the population while not a new, can have unforeseen implications that transcends technology and ethical considerations [9]. Design fiction provides a breadth and versatility [10] to also consider the consequences surrounding researchers reputation, cost (penalties), legal, trust etc. Beyond allowing the authors to articulate and confront their positionality and bias, it allows for a dialog about balancing both costs and benefits and adding a dimension to HCI4D, i.e. design fiction for development (DF4D).

Identifying the Griot
The importance of community voices in design approaches is important, especially when balancing the positive impact and possible disruption of technology when introduced to these new contexts [1, 11]. Accepted current norms involve the researchers either partnering with local community and/or immersing themselves in the community establishing trust prior to/while conducting the research. However, as we have highlighted with the *Tu-mbili project*, there are possible gaps. It is important then as a first step to consider whose story it is. Who is the griot? The land owner who decides what is planted but delegates the caring of the crops? Or the hired hand whose job is also to care for the crops?

Amplifying the Griot
Establishing first where the story should not be told by anyone else but the griot is important. These spaces are termed both as *Sacrosanct* and *Restricted* spaces in [7]. In this space, only the griot can tell the story. The approach to designing in this space then is only to serve as an amplifier to the griot's voice, and not of the technology intervention which may serve to amplify inequality [11].

Mantling the Griot
The *Discretionary space* is respectful to the given community's boundaries on what can be shared with others. In this space, it is recommended the researchers first identify the griot, and then negotiating how the story should be told. The hired hand might have wanted the story to be shared with the world, but not interested in telling it themselves. Community consent is as important as ensuring that the right griot is giving the permission.

Becoming the Griot
When identifying the *public space*, anyone can be the griot and tell the story. Both the researchers and the community have a high confidence that the information shared in this space, and technology designed in this space would be of minimal risk to all the stakeholders involved.

Conclusion
Design fiction is good to look at ethical implications and consider the plausible and possible futures. While current approaches such as postcolonial computing offer guidance on how to navigate the doing of research especially regarding developing countries, there are gaps that can be addressed by approaches that leverage Design Fiction for Development (DF4D). Using both the DF4D, the *Griot* metaphor, a *Respectful technology space* typology, and a fictional story, we showcase how this can be achieved, and add our voice to the existing research corpus considering the importance of inclusive voices in HCI research.

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