

# Namibian Indigenous Communities Reflecting on Their Own Digital Representations

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## ABSTRACT

Indigenous communities' narratives have all too often been created, documented, curated and digitalized by aliens. This digital othering has created widely disseminated images and perceptions of indigenous communities which are neither authentic, nor in line with what the communities consider a valid or worthwhile representation of themselves or their cultural heritage. This has led to misconstrued and stereotypical perspectives by outsiders about indigenous communities. Technological interventions with indigenous communities to promote their sovereignty, while sometimes challenging, have opened critical debates around communities' self-determination of digital representations of their own cultural identities and heritage. We have entered into a dialogue with two Namibian indigenous communities, who have been our design partners on technology projects aimed at safeguarding their own cultural heritage on their own terms. We are reporting from our long-term ovaHimba collaborator who has engaged in a reflection about the preservation of his traditions triggered by our joint digitalization efforts. Moreover, in response to the widespread stereotyping of members of San communities in contemporary Namibia, that directly influences their cultural identity; we have co-constructed a video conversation between Namibians and a rural San community. In this way, the remote community could consider outsiders' perceptions, reflect upon and actively re-construct their digital self-representation. We discuss community reflections, self-representation and digital empowerment in the context of digitalization efforts.

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## CCS CONCEPTS

• Human-centered computing • Collaborative and social computing • Empirical studies in collaborative and social computing

## KEYWORDS

San, Conversation, Perception, Co-Design, Intermedia, Video-Dialogue, Participatory Design, Video Elicitation;

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## 1 Introduction

Namibia is a multi-ethnic country with a number of traditional tribes in its thirteen regions. Each tribe has its own sphere of traditional and cultural values that is derived and adapted through inconceivable generations of knowledge dissemination. Namibia can pride itself of a number of indigenous communities, like ovaHimba and San where the elders still possess vast amounts of traditional and indigenous knowledge (IK). While ovaHimba communities in the rural areas have maintained much of their intangible cultural heritage and practices in everyday life, many San community members have abandoned traditional life styles. Over decades these two tribes have been extensively researched and documented by (mainly foreign) anthropologists. Meanwhile certain traditional aspects have been digitalized and new media are continuously being produced by scientists, tourists, media representatives and others disseminating curated stories to the world.

Our concern has been with the misrepresentations of indigenous communities and their cultural heritage through biased rapporteurs. With digital media and technology, erroneous and stereotypical representations are frequently perpetuated or even amplified. Addressing this has led to our entering into a critical dialogue with two remote indigenous communities in Namibia who are amongst the most affected.

The first community is from the ovaHimba tribe. Their exotic appearance (to western eyes) is overly recorded visually, but little importance is attached to the dissemination of the actual underlying meanings of their appearance. We report on the reflections and worries of ovaHimba community members about cultural inaccuracies and incompleteness which are transferred to the next generation and outsiders through digital means.

San tribes on the other hand, have suffered contrasting digital representations ranging from heroically romanticized to ridiculed pejorative [6]. We worked with San people from the Donkerbos area in Namibia who speak !X'ao-!aen [1] and Naro languages. To prompt community reflection, we staged a mediated digital conversation between the Donkerbos community and outsiders. Learning how their digital representations are perceived allowed the community to shape their construction of a self-representation actively.

From this dialogue, we have identified three themes for discussion, namely community reflections, digital self-representation as well as digital empowerment.

## 2 A Digital Transformation of Community Narratives

### 2.1 Biases of Digital Representations

Any representation whether digital or otherwise is an actively constructed account of a perceived reality from a specific viewpoint [30]. The ultimate goal is to achieve an equilibrium between the perspective of designer and the viewer to maximize the absorption of context between the viewer and the designer. As a result, cultural expressions represented in the digital world need to assume basic contextual “narratives”. This will enable the representation to adapt the viewer’s reality effectively to that of the context portrayed in the representation.

We attempt to see design through the perspective of the locals since we recognize, with Winschiers-Theophilus et al. [30], that the widely claimed universality of technology design is erroneous. In so doing we create new design spaces that result in a new reality where both technical members and community members infuse a common understanding into a digital space.

### 2.2 Community Narratives

Acknowledging the complexity of defining “Community”, we refer to it as a group having shared locale, common ties and social bonds [13]. Community development has been approached from different angles, such as an economic growth perspective, a capability approach, sustainable livelihoods approach, and millennium (sustainable) development goals, often emphasizing the importance of Information and Communications Technology

(ICT) and community empowerment. In this context, we specifically emphasize the community narratives influencing digital design and representations. Often users or communities have been, and still are, represented by “the other”, be it the developer or other stakeholders talking on behalf of the community. In the early phases of including indigenous communities’ voices, counter-narratives were produced in response to mainstream stereotyping, as demonstrated by [22] in her earlier work with the Romani. In a more matured stage harmonious or alternative narratives can be created representing the communities from within rather than as a re-action to pre-conceptions [29]. However, ideally, we are striving for reflected accounts by the community that evolve within a dialogue between the community and the external influences.

### 2.3 Community-based Co-design

Within socio-cultural studies different angles have been elucidated such as cross-cultural, as differences between cultures; inter-cultural as cultures interacting with each other; multi-cultural as co-existence of cultures involved in joint efforts; and transcultural, as maintaining validity across cultures being independent of a singular culture [29]. While culture has distinct definitions, we subscribe to it as being enacted in everyday practice and active in producing everyday experiences [10]. We are promoting a community-based co-design approach [3], with a transcultural lens aiming for the representation and infusion of a reflected narrative by the communities to the design of technologies [29].

“Viewed from a transcultural perspective, all existing cultures get a broader meaning, as any of their elements is no longer imposed as a tradition but is chosen freely, like an artist chooses colors in order to combine them in a new way in a painting...., elements of the same culture acquire new colorings and multiple refractions in the transcultural space” [7].

In our approach we incorporate principles of Afrocentricity and Ubuntu to introduce a fresh perspective, which enhances current research practices [11]. The research philosophy is entwined with the basic principles of community harmony and humanness, as promoted in the African philosophy of Ubuntu, the philosophy promotes practices of immersion rather than distance, community consensus rather than individual decision making which has major implications for HCI design practices [31]. All interactions between researchers and the community are contextualized with numerous unfamiliar and uncontrollable variables promoting mutual learning [17]. However, as a basis of the philosophy these circumstances are mitigated by continuous observation through both quantitative and qualitative measures, governing the components at play [5].

### 3 OvaHimba Community Reflections

Various efforts have been made to integrate modern technology into both rural and urban societies in order to empower communities to safeguard their cultural traditions and beliefs.

A local Namibian research cluster, at the Namibia University of Science and Technology (NUST), is actively collaborating with various rural communities in the design and deployment of different technologies supporting the safeguarding of local knowledge. These technologies enable community members to “narrate” their own cultural heritage. These digital narratives enable any disconnected community members to stay in touch with their cultural heritage. It also empowers community members to contribute to the collective “image” of their cultural integrity by moderating each other’s contribution towards the digitalization of their IK.

Maasz [17] proposes an IK safeguarding framework referred to as the 7C model (Co-design, Conceptualization, Collection, Correction, Curation, Circulation, and Creation of Knowledge). The model offers guidelines for researchers engaging with communities in the digitalization of intangible cultural heritage. Please note that the “Correction” phase was inserted by our collaborating OvaHimba community after reflecting on the model. The “Correction” allows community members to revisit their collected data and restructure any inconsistencies in the representation of the data maximizing the cultural authenticity [17]. Especially concerned with an inter-generational transfer of cultural heritage, the involvement of the Elders in digitization processes provides appropriate content for the next generation.

The NUST research cluster has been actively engaged for several years with an ovaHimba community in Otjisa, a remote village in the northern part of Namibia. Numerous technologies promoting the safeguarding of IK were co-designed [12]. One of the lead contributors from the Otjisa community is Uariaike (Figure 1).



**Figure 1: Uariaike reviewing technology with co-researcher**

IK is not a static body of knowledge but is continually evolving and being adapted by the knowledge holders. In our research, we have moved from attempting simply to preserve such knowledge to facilitating communities and in particular, the knowledge holders, to reflect on that knowledge, triggered through technology interventions. Our original purpose was not to capture IK on behalf of the knowledge holders (mainly the elders of the community) but to enable its transmission to youthful members

of the community who may no longer be living continually in their original rural setting.

Both these aspects of IK, its evolving nature and the need for onward communication, benefit from reflection upon the knowledge and on its reception by others. Reflection can be by IK holders themselves, their peers in other communities or interested youth, or even outsiders to the community. As far as communication is concerned, the IK holders may be interested in how their wisdom is perceived by others and thus enhance their own understanding and communication skills.

The technology co-design undertaken with indigenous communities for safeguarding cultural heritage triggered an opportunity for the indigenous communities themselves to start reflecting on their own cultures. In this retrospective process, the communities inform the outside communities and the researchers on the crucial aspects of their cultural heritage that are often misinterpreted. The indigenous communities also revitalize the pride and dignity of their cultural heritage.



**Figure 2: Uariaike Discussing the Project with a Co-Researcher**

Uariaike mentioned that he wishes that the “wrong” ovaHimba culture representation would fade away. Uariaike further noted that a major part of their culture is their traditional attire and very often, the youth inaccurately displays their culture, for example, by not wearing the traditional necklace. Since they permit outsiders to take photos of them, it propagates a false representation of their culture in the public domain. The emphasis on accurately representing ovaHimba dress codes was forcefully pointed out by ovaHimba community members when a 3D model of an ovaHimba woman did not include enough dress code details [30]. Uariaike stated that through the technology co-design we learn about the ovaHimba culture to enhance it in a “truthful way” without misrepresenting it.

As a way to promote the digitalization of IK to fellow indigenous communities, Uariaike recorded a video clip about his involvement in the research to be shared on the Otjherero radio and other mass media. During a visit to another ovaHimba community, distant from Otjisa, we played the video to Muhapikua, the daughter of a well-known elder. Muhapikua

remarked that she supported Uariaike’s concerns that their own children often incorrectly represent their culture.

In the capital, cultural appropriation, especially in the fashion industry with their fusion of traditional and modern elements, has provoked heated debates among the Otjiherero speaking community. The defenders of “traditional authenticity” do not tolerate any modifications of their attire and resent that many of the young people have lost a knowledge about the deeper meanings of their traditions. While they are proud of their cultural identity, indigenous urban youth has “modernized” parts of their traditions whether tangible or intangible. Thus involving indigenous elders in the digitalization process of cultural expressions, adds a necessary dimension to the evolution and representation of traditional knowledge and practices.

#### 4 A Staged Media Intervention with the San

Perceptions of the “unknown” are influenced by prior information. When rural communities only have the role of informants and actors of curated media they have little idea about how these representations are perceived elsewhere. To enter into a critical dialogue with a remote San community about digital representations we have conducted a media intervention to provoke re-actions and reflections as a foundation for self-representations. In the age of information especially social media, we experience a new level of reflexive self-representation. However, most of the remote San communities have no access to digital infrastructures to partake in social-media self-representations. The depiction of San in the media is scarce and what there is, is usually told by third parties. There are very few authentic digital representations produced by the San people themselves.

##### 4.1 The San in Contemporary Namibia

Today the San have a somewhat increasing positive image in southern Africa compared to the past [24]. “The San or “Bushmen” are among the region’s most documented peoples. Iconified as an archetypal hunting and gathering society, they are the subject of numerous ethnographic studies, documentaries, feature films, coffee-table books and postcards. In contrast to their popular image, however, few (if any) San still depend primarily on hunting and gathering. They no longer roam the vastness of the “bush” clad in leather and living a life of blissful isolation. The San are one of the most ancient peoples in the world and their knowledge about nature and life is rich and full of ancient wisdom.

Nevertheless, the local Namibian’s image and perception of the San is quite different compared to global perceptions. The San today face many problems concerning their socio-economical standing and their perception by others. According to [8] San are seen as drunkards, childish, incapable of sustaining themselves, and primitive. Such social stigmatization has consigned the San to the margins of Namibian society [8].

Their political powerlessness has resulted in their lack of land rights, which is further exacerbated by illegal fencing of traditional communal grazing areas. The ownership of land by others forces most San communities to give up their hunting and

gathering lifestyle. The new generations have lost the connection to that lifestyle, moving to cities, following other cultures and bit by bit forgetting more and more about their roots. Today the San are resettled in places where they have almost no access to essential services like health and educations. The majority of southern Africa’s San population are struggling to adapt to a rapidly transforming world in which they lack de jure rights to land. Our study area was within the Omaheke region. “No land in the Omaheke was designated to the San, and so, to make a living, they are required to live and work on land owned by others.” [14] San people are largely dependent on welfare in the form of food aid or extremely poorly paid jobs.” [26]. The author further states that they often lack the skills necessary to compete in the evolving mainstream formal economy and are affected by institutionalized inequities [26].

##### 4.2. Donkerbos Community Collaborators

Our collaboration efforts have been with the San located in Donkerbos, in the Omaheke region close to the Botswana border. The community consists of about 100 to 120 members. Donkerbos has a primary school for San learners and other tribes. It draws children from Donkerbos, Talismanis, Gobabis and nearby farms. The school is about three kilometers from the San community settlements and has a hostel where the children stay during the week. Many of the learners who progress to secondary schools elsewhere in the country often return as school dropouts. This is because of discrimination from teachers and other learners from different tribes, lack of resources and well-being away from home.

The San community in Donkerbos are attributed one meal a day by the government. They live in primitive houses mostly made out of iron, wood and blankets. Water is available at the primary school, which then has to be carried to the village. They keep donkeys, goats, chickens, cattle and horses, also provided by the government. The community has an acute awareness of the effects of alcohol abuse and have therefore instigated a ban on alcohol.

##### 4.3 Video Elicitation Process

In order to provoke reactions to media representations we chose video elicitation as a method. A selection of videos was shown to representatives of Namibian mainstream society in the capital while feedback and reactions were recorded during and after the video presentation. With the almost talk-show character of this interview method, participants tend to speak out more honestly and about more sensitive topics [23]. Those reactions in turn were shown to the rural communities and their reactions were also recorded and then followed by a deeper discussion on self-representation.

###### 4.3.1 Video Productions in Donkerbos

In preparation of videos to be shown to mainstream urban society, we produced ten videos with the Donkerbos community. The following three were subsequently selected:

### *Traditional Dances*

We recorded community members dressed up in traditional clothes and engaged in a typical dance (Figure 3). The community members no longer wear those clothes on a daily basis but keep them for occasional tourist performances, to make a living.



**Figure 3: The women of the San community performing for the video production**

The purpose of this video was to tap into images widely disseminated in the media about San people and their traditions. They are generally seen as living isolated lives in the bushes, practicing their traditional lifestyle and well known for traditional dances, which people would have seen at gatherings and events in the capital. This video was clearly playing into existing stereotypes.

### *San as media producers*

This video showed how community members together with the media crew were producing a video for another project. The purpose of this video was to demonstrate that San people are very capable of being involved in modern technical tasks and embracing media for self-determination (Figure 4). We anticipated reactions referring to the prejudice, that San are primitive and not teachable.



**Figure 4: Scene of the Video clip: San as media producers.**

### *Following other cultural practices*

This video was showing a discussion of the Donkerbos community with the media crew about following another tradition. Influenced

by dominating tribes, community members have changed not only their clothing but also their nutrition, and many other practices. The elders are generally concerned by the youth losing the knowledge and skills transferred over many generations in the past. The video shows an elder, who is reminiscing about their traditions and how they are losing it today:

“we all have our traditions, but unfortunately, most San people were raised with different tribes, working for the people from other cultural backgrounds in Namibia. So, we adapt to their traditions. As we are working for them, we are forced to be underneath them. So, we’re learning from their tribes. They are deleting what we were taught from our parents and grandparents, we can share that. But we will mainly be following the other tribes and not our own tribes.”

This video shows the San are actually adopting other tribe’s cultures and losing their own cultural identity in the process.

### **4.3.2 Assembling Video Clips**

The aim was to create a set of videos with varying content and underlying messages and provocations tapping into themes such as traditions, modernity, motivational, provoking, sad and political. The Video clips were short (approximately one minute long). Pilot testing reactions of different videos led to the final selection of videos used for elicitation. All videos were validated and approved by representatives of the San community (Figure 5).



**Figure 5: The Community discussing their traditions while viewing selected video clips for the elicitation.**

Besides three Donkerbos video clips, five others were created:

### *Interracial staged video with urban youth to promote multiculturalism*

The video shows a group of young students, from different tribes: ovaHimba, ovaHerero, Aawambo, San and dual heritage. The message the video carries is “Don’t let the past determine your future!”. The intend was to open the discussion about tribalism, diversity, unity and overcoming differences.

### *San university student giving motivational speech on education*

The video portrays a young female San university student who is motivating and encouraging the audience. She states that women should play an idol role for other fellow San who are going to

school or are about to drop out. The message repeated is, that if you want to achieve something in life, you have to work hard for it.

#### *San youth narrating past struggles*

A young San graduate tells the story of his school life. Amongst other hurts, he describes the discrimination he faced, which he directly relates to his being San. He points out the wide spread discrimination and the bullying a San learner has to experience.

**The following video excerpts are from the Internet and film:**

#### *The Gods Must Be Crazy* [13, 27]

We selected the very first scenes of the movie, where the San community discover the glass Coca-Cola bottle for the first time. While being a comedy genre, it taps straight into a wide spread perception of the San being primitive, naïve and backwards.

#### *Nando's Advertisement*

In 2012 Nando's (a South African fast food chicken restaurant) "Diversity Advertisement" was banned on South African television, the ban was later revoked [19, 20]. The Clip starts with "You all know what's wrong with South Africa ...all you foreigners, must all go back to where you came from..." The narrator lists various nationalities and local tribes who as he speaks are "zapped" from the screen. It ends up with a San person who is speaking in his language: "I'm not going anywhere. You \*\$&!@#\* found us here." This clip re-instates the originality of the San in southern Africa, as a right to land ownership.

#### 4.3.3 Video Elicitation in Urban Area

Clips were shown to 29 people, and 64 reactions were recorded (Figure 6). In each session a participant watched between one and five clips in private and public spaces, such as at a shopping mall.



**Figure 6: Participants of the video-elicitation.**

People started to share their emotions, thoughts, opinions and own experiences. The viewers' reactions were recorded on video with their consent.

Urban viewers praised traditional performances of the San and supporting the idea of equality and respecting each other across different tribes. Viewers felt connected and empathetic stating: "It makes me really happy to see another black person, group of black people dancing together and creating music.", "These are my people, Khoisan, San people, I am from Namasteken... Ja, I come from them I love them.", "It reminds me of our tradition ... Aawambo people also do that...". Many clips evoked encouragement and motivation for the San such as:

"You have to push yourself. It doesn't matter if you are a San or Omwambo, omuHerero ... you have to push yourself. So that especially like the lady said, especially you are from a poor background."

On the other hand, a few discouraging reactions were recorded. Such as when the "reality" did not meet the stereotype of the viewer:

"(...)this is not like real, real, real San, because the one here got a stomach ... it's hanging here, that's like alcohol and bad food, it's not even... San people are like almost like Gazelles";

was a reaction to the traditional dance video of the San women. Another participant reacted to the motivational video clip:

"That was a mediocre shit. I mean they should have use like ...women that actually really, just wannabe great women ... and not like, say that they are San, and that's why it's not".

The clip of the San youth boy, who narrated about his past struggles because being a San, earned another negative reaction:

"Because I am a San person. I've never in my entire life heard something like that, in my entire life!".

Actually the attribution of bullying and suffering to being a San evoked many discussions, as viewers rightfully stated that other children all over the world have also been exposed to bullying without being a San. Thus the San's continuous reference to their discrimination because of being a San evokes mixed feelings among the viewers ranging from empathy to aversion.

#### 4.3.4 Community Feedback

Upon the next trip to Donkerbos, the community watched the clips and reactions while their reactions in turn were recorded to create multiple threads of digital conversations (Figure 7). Positive and negative urban reactions allowed the Donkerbos community to reflect upon their media representation and perception by the people out there, which led to much discussion.



**Figure 7: Community viewing video clips and reactions**

For instance, one viewer talked about the xenophobic character of the San and that they don't want to integrate with other tribes. The community defended this as follows:

“You will notice when you arrive, in our community, we don't drink! We are not selling alcohol! Talismanis people sell alcohol and drink! If they would come here, sell alcohol, the kids will stop attending classes and be distracted. So, we don't want them here!”

This demonstrates traits of self-protection from bad outsider influence in order to maintain their integrity. They are trying to protect their children and the community, consequently being isolated from others.

Another community reaction further revealed their mistrust in other tribes upon listening to an urban viewer saying “I come from many tribes, (...) we love each other. Because we stay together, we can do something and together we are one nation, that's all I can say!”, whereupon the community reacted as follows:

“ (...) the other tribes oppressing us. We, the San, but they are saying they have to work together but them, themselves are the ones who are oppressing us. How do we work together when they are oppressing us? It's the work! When we are working for them. We are working but we are not getting paid or underpaid, you will work for a month, then they will just come with one maize meal, a small one, and will pay you this for working for a month (...) That's oppressing. When it comes to land (...) Also, we the San people don't have land, there is nothing set up like a San person have its land, there is nothing we are working under people and don't have land, that's also oppression. Even if you report the case, you will not get assistance, because the other one, that is empower can even pay the other one, so corruption is there.”

The communities' surprising negative reaction to a positive statement from an urban citizen shows a deeper emotion of grievance. They further stated that no one cares about them, no one listens to them and the others are trying to put them down. We observed that the feeling of deprivation and victimization prevailed despite the encouraging and motivating statements about unity and equity from urban viewers. On the other hand, the praise of their traditions, such as the dances, evoked happiness and a realization of pride in their unique cultural assets.

#### 4.3.5 Video Conversation Curation

Finally, an interactive media installation was produced and exhibited at Africhi 2018 on a screen (Figure 8). The videos were arranged by threads in a row: the original clip followed by all recorded reactions and reactions to reactions [25]. The audience had the possibility to go through different threads and to contribute with a new reaction to the video conversation. The audience realized the complexity of the issue at hand with at times simple messages evoking strong emotional reactions on both sides determined by prior experiences and opinions. Thus besides the presented hardship of the San's living conditions, the deeply ingrained feeling of disapproval which could not be overwritten

by light hearted statements of togetherness was shocking for the audience.

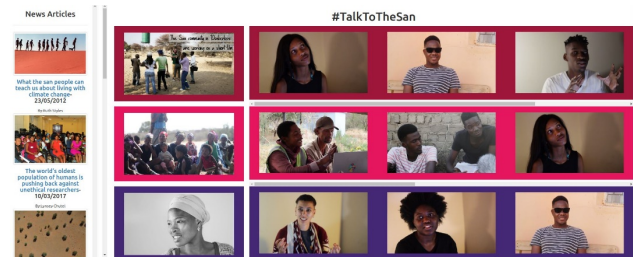


Figure 8: Screenshot of interactive media installation

The web-based platform is available on-line to allow a wider audience to join the conversation. Because of the lack of internet connectivity, we showed an off-line version to the Donkerbos community. We followed the viewing with focus group discussions deconstructing the clips and reactions. We illustrated options for further self-representations with anticipated reactions. The community was trained in media technologies and scripting to produce their own cultural expressions, now knowing about perceptions people have about them and how they react to certain video threads.

While the project is ongoing, the San community continues to reflect on their self-representation and the viewers can learn more about the every-day reality of the San developing a deeper understanding and empathy. Besides the curated media conversation, the platform displays local articles from the media archives about the San. The scarcity of factual reports is of concern and will need to be addressed in near future to avoid further speculations and dissemination of misrepresentations.

## 5 Discussion: Transforming communities

### 5.1 Reflexivity

Digital technology and mobile devices and their attendant social media applications have enabled many forms of reflexive self-presentation. The effects of this have been extensively analyzed for developed countries, for a brief review focusing on Facebook see [28]. In developing countries, the mere access to ICTs has been seen as aspirational and empowering by users and development advocates both [21]. He argues “citizenship itself is defined by one's incorporation within a technological frame of being”. This is an example of the well-known digital divide narrative, [18] presents a recent survey in the context of mobile devices, arguably the most relevant device for our context.

The reflective use and effects of ICT on self and community image has received much less attention. In much of ICT4D research “reflexivity” is understood to mean the reflection of the researchers on their own stances in the work. Of course, this aspect, derived from social science research, is critically important (see [16] for a recent account). However, in this paper we look at another form of reflection: that of the participants from the

communities themselves on themselves and on other people's perception of them.

As we have seen, ICT and social media lend themselves to a kind of image making that has become commonplace for urbanized youth. While such reflexive image creation is not inherent in ICT, it certainly provides platforms to facilitate such activities.

The speed and comprehensiveness of digital media communication allows for quick and useful feedback on the images we present to others.

However, remote communities with intermittent connectivity are excluded from the cycles of feedback. Thus, only through continuous participation in technology interventions can remote communities enter into a reflection process. Kapuire *et al.* [11], have documented the spontaneous reflection of indigenous knowledge holders on their cultural heritage. This reflection revitalizes the communities' dignity and pride in their cultural heritage.

## 5.2. Self-representation

Caneba et al. [4] address the misrepresentation of American Indian and Alaska Native (AIAN) community in the United States. They point to the power of "image-heavy social media" and provide a study of how some individuals have sought to use such platforms change the perceptions of their communities.

Digital self-representation can lead to a people being heard by others and gaining understanding and support. Reflection, in turn, can also help to improve the overall sense of community and communal development.

Our media intervention worked on self-representation and allowed the San community members to express how they want to be seen by others. Using feedback from others, they could correct any false impressions. In this way, the community can enter into a conversation with the rest of society to give the other side a better picture of them. With such increased sophistication and understanding, they would have more support in the political sector and in addressing the marginalized position of the San today.

Through working with media and tools like smartphones, the community is in a better position to represent themselves. With feedback from outside the people of Donkerbos were able to experiment with their self-representation in digital media. This may facilitate an improvement of their social position and alter the others perceptions. They are learning how to work with media to reach other people. This case of digital empowerment creates the possibility for those people to shift the perception in a more positive way or at least to present a more correct picture of themselves.

## 5.3 Digital Empowerment

Harrilal et al. [9] argue that digital media production provides marginalized communities with a voice and inclusion in global dialogues. Modernity the advent of globalization along with modernity of technological advancement has changed the way in which most indigenous communities in Australia operate [15].

With more interaction with remote communities, one becomes to realize that there are multiple factors that contribute technology interventions in rural communities. The strongest force would be that of the youth who have migrated to urban areas and have been exposed to the "luxuries" of modern life. At some point, they will return to their origins and some of their modernity would rub off on their elders in the community.

The second factor is the researchers handing the opportunities of a digital world over to the communities empowering them with their own self-representation in the virtual world.

## 6 Conclusion

As Steve Biko, the murdered leader of the South African black consciousness movement [2](p 29) pointed out the first step in transformation is "is to make the black man come to himself". This "inward-looking process ... is the definition of 'Black Consciousness'". Biko wanted a schooling where the African child does not learn to hate his heritage but rather to obtain positive virtues from indigenous culture. He asked that a "sincere attempt should be made at emphasizing the authentic cultural aspects of the African people by Africans themselves" [2](p 40).

Our contribution should be seen in the light of this statement of the aims of liberation and transformation.

Our approach to minimize problems of inappropriate technology and misrepresentations has throughout been to involve indigenous communities as equal partners in the design of the technologies supporting the safeguarding of their own cultural heritage.

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