Chapter 12
Kenyan eParticipation Ecologies and the Rise of African Techno-Discourses: Methodological and Ethical Challenges in Understanding the Role of ICTs in Kenya

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1 Background

> New ICT in Africa have become hugely popular with international donors, development partners, NGOs, opinion polls organisations and other business actors, and the frontiers of research and academia have become particularly porous. [Sharath Srinivasan (ECAS 2013 panel introduction)]

Many research projects on ICTs in Africa have been developed with or commissioned by organizations that have been previously involved in such projects. Sometimes these organizations are involved as donors only, while in other cases as implementing partners, and in few cases as both.

The Kenya Ushahidi Evaluation Project (Chan and Tully 2012), a 9-month Ushahidi evaluation research, is just an example of how these frontiers between no profit organizations, research and academia have become particularly porous.

In the case of Ushahidi Evaluation Project, the research was sponsored by one of the same organizations that previously funded Ushahidi team, the Knight Foundation and implemented by the Harvard Humanitarian Initiative (Program on Crisis Mapping & Early Warning) of which Patrick Meier, former Ushahidi Director of Crisis Mapping, was the co-founder and co-director.

In this specific case the approach to the study of Ushahidi impact was based on an ethnographic research made through interviews and focus groups. Therefore a series of questions have been asked to the same people who have taken part in such projects as volunteers, developers and administrators.

In the case of Uchaguzi, a monitoring election platform using Ushahidi, the conclusion of the research team is

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> Conclusion
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> Overall Uchaguzi-Kenya project was a success. The collective action of all those involved provided a communication channel for Kenyans to share information about the referendum. It also enabled some organizations to take immediate action based upon the information on the platform. The project was not without its challenges. This case study aims to help bring light to some of them and share the creative solutions of dedicated and passionate participants. But more importantly it aims to help future users learn from the past, to spark fruitful conversations among future Uchaguzi/Ushahidi/Crowdmap deployers and to help others plan future projects.

Questioning this conclusion is not the objective of this chapter, what is important for us is to underline the conflict of interests between researchers and funders in order to understand the possible process behind the raise of a techno-discourse. By defining the Uchaguzi project a success, the researchers are indirectly celebrating their funder ability to invest in this project rather than others. The suspicious is that a famous academic institution has been simply used to legitimize the success of a project rather than challenge it.

Using Castells's analytical framework (Castells 2009), we may define some of the actors involved in this process as "Switchers", actors that thanks to their position within different networks are able to become an interface between two or more networks of power, in this case the ICT4Development and the academic network.

These types of conflicts of interests can emerge anytime that a "Switcher" is trying to use its position within different networks to gain more power. In this specific case, the situation created a lot of concerns among a large number of academics that have been involved in these types of research projects, in particular among academics that have developed a critical approach and are trying to focus on innovation processes, power dynamics and social impacts, rather than technical functionalities.

From a content perspective, using the frame analytical framework (Snow and Benford 1988) this may also be considered as a "frame amplification". Frame amplification simply denotes "the clarification and invigoration of an interpretive frame that bears on a particular issue, problem or set of events". Frame amplification is used to maintain, legitimize, an already existing frame.

The production process behind cyber African techno-discourses seems to be characterized by this peculiar encounter between two very influential lobbies, the aid industry and the ICT ones. Events such as political elections or emergency situations are important opportunities for these lobbies. During such events, they can exercise their power to influence public opinion and policy makers.

In the case of the last Kenya elections, some concerns have been raised about the impact of such influences. The interesting thing is that such complains have been raised by some of the same people who are working in the field of ICT4Development and Democracy.

The 22nd of April 2013 on an ICT4Development blog, a post written by Anahi Ayala Iacucci, a Media NGO worker appeared and raised an interesting discussion. She was trying to demonstrate the dangerous impact that Ushahidi maps duplications could have had in case of a new emergency situation in Kenya, she mentioned Ughacuzi as well as part of the problem.

> DO WE REALLY NEED ALL OF THOSE PROJECTS??? Do we really need 3 maps, 7 phone numbers, and several web-forms? Is that really such a crazy bad idea to have one coordinated number/web-form that could then have in the back-end multiple responders and organizations working together?
>
> I mean, seriously, what the hell should a Kenyan do today when something happens? Send 7 SMSs and compile a bunch of web-forms for each event they see? They should all go around with a list of the specific topics that they should report on and which platform they go to?
>
> This would look like something like this: "If you are in Mathare send a report to 0726300400 and to 3002 and to 108, but only after you have alerted the police at 999 or 112. But if it is something related to human rights violations, and more in particular IDPs, then remember to also text 0800721410. If the issue is related to violations competency of the Independent Electoral and Boundaries Commission then you should text 0711035606/0711035616, but if you get a rumor via mobile phone you probably should send a text to 8762 just in case SiSi Ni Amani is also working in your area. Oh, and by the way, keep safe and keep reporting to us. If you still have any credit in your mobile phone or if by the time you send us a message you did not ended up being killed!" [Anahi Ayala (ICT Works blog post)]

On the first of May Erica Hagen, another media for development expert who has been involved in one of the Ushahidi projects criticized by Ayala Iacucci article answered

> I'm actually surprised there were only 7 numbers for the entire country. I have a lot to say about this topic, see my post today: "Citizen election reporting in Kenya: A failure of technology duplication, or a breakthrough in online-offline collaboration?"

Erica Hagen published another article on her blog trying to explain her own point of view

> … technology was part of the solution, not the problem, during Kenya's elections [Erica Hagen (personal blog post)]

These two positions are not necessarily part of two different techno-discourses who are in conflict between each other, however within the same techno-discourses different positions and opinions can still coexist. In this case Ayala Iacucci is raising a question related to duplication danger and waste of funds; however, she is indirectly raising another question also about legitimacy.

> So, let's be clear here: I am all for more transparency and for multiple channels of communication. Especially in emergencies, the more people are ready to respond, the better it is. Now, the problem is exactly this one: are all of these people really ready to respond? [Anahi Ayala (ICT Works blog post)]

On the other side, African leaders and political journalists have also raised some concerns on NGOs and International Organizations interests in supporting such projects to promote hidden agendas.

They have accused these international organizations of supporting human rights and democracy in order to interfere in their countries political affairs rather than for cooperation and humanitarian purposes. This may be the case of countries like Ethiopia that banned not only human rights organizations using media for advocacy, but also humanitarian organizations accusing them to support hidden agendas.

Other African leaders have fully embraced a specific cyber African techno-discourse and used it to attract western investment while at the same time they were oppressing democratic forms of political opposition. This may be the case of Rwanda.

In both cases, ICT projects, especially eDemocracy/eParticipation ones, are seen from these African politicians' perspectives as specific strategies to influence or consolidate power rather than neutral tools to improve citizens' life. For them eParticipation platforms are not neutral tools to be used in order to improve transparency and accountability; therefore, these technological implementations need to be rejected as part of an external threat or by the government.

In the case of Kenya, things are some how different, mainly because power dynamics are much more complex than in Ethiopia and Rwanda, consequently Kenyan techno-discourses may also appear more complex to analyse. In any case they seem to be very influential.

This is probably the reason why during the last election the Kenyan government through the Kenya's IEBC (Independent Electoral and Boundaries Commission) decided to develop and implement an ambitious technology plan to manage the whole electoral process.

The government considered that they had both the technological and organizational capacity to manage this process electronically, despite the huge problems that the country still faces in terms of infrastructures and administrative decentralization. Such self-evaluation may have been influenced by concepts such as the "leapfrogging" (Schumpeter 1942/1994) recently used in the context of developing countries as a theory of development which may accelerate development by skipping inferior, less efficient, more expensive or more polluting technologies and industries and move directly to more advanced ones.

Therefore, when this electoral management system crashed not only caused an enormous damage at national level, almost provoking a new tribal clash between the two main candidate supporters, it also raised new questions at international level on the real status and competence of the ICT sector in Kenya and the recently use of concepts such as the "leapfrogging" within the ICT4Development word.

This is what Erik Hersman, one of the Ushahidi and iHub funders wrote on his blog in March 2013.

> My assumption was that since this was a public service for the national elections, that the companies involved would be publicly known about as well. This wasn't true, it took a while asking around to get an idea of who did what. On top of that, In a country that has been expounding on open data and open information, I was surprised to find that most of the companies didn't want to be known, and that a number of people thought it was a bad idea to go looking for who they were and what they did. I wasn't aware that this information was supposed to be secret, in fact I assumed the opposite, that it would be freely announced and acknowledged which companies were doing what, and how the overall system was supposed to work.
>
> I've spoken directly to a number of people who are very happy that I'm asking questions and putting the facts I find in an open forum, and some that are equally upset about it. Much debate has been had openly on Skunkworks and Kictanet on it this, and when we debate ideas openly we fulfill the deepest promise of democracy. My position remains that this information should be publicly available, and the faster that it's made available, the more credible the IEBC and it's partners are.

In this blog post Erik Hersman is openly stating that he is very surprised about the fact that his own personal assumption on public services for national election has not been shared by the whole tech-community of Kenya. He mentions also the fact that a part of the tech-community shares his own vision while another is totally against it.

Finally this internationally recognized blogger concludes:

> My sense of the IEBC tech-shortcomings is that it had very little to do with the technology, or the companies creating the solution for them. It was a fairly simple technology solution, that had a decent amount of scale, plus many organizations that needed to integrate their portion of the solution. Instead, I think this is a great example of process management failure. The tendering process, project management and realistic timelines don't seem to have been well managed. The fact that the RFP due date for the RTS system was Jan 4, 2013 (2 months exactly before the elections) is a great example of this.
>
> Some are saying that the Kenyan tech-community failed. I disagree. The failure of the IEBC technology system does not condemn, nor qualify, Kenya ICT sector. Though this does give us an opportunity to discuss the gaps we have in the local market, specifically the way that public IT projects are managed and the need for proper testing.

There are several interesting elements that are emerging from this post. The first is that there is a conflict within the tech-community about the concept of democracy and transparency, a "discourse conflict". The second is that this event had a negative impact on the whole Kenyan ICT sector and the emerging discourse on African cyberdemocracy. Thirdly that Mr. Hersman is clearly giving the responsibility of this failure to the public administration process rather than both the "known and unknown" private companies that provided this service.

It is therefore clear that the processes through which all these different Kenyan techno-discourses emerged, developed, clashed and converged/aligned are very complex and are all deeply related to different power dynamics.

For this reason, it is very important to uncover such power dynamics in order to understand them, and I believe it is possible to do so, by analysing eParticipation from a totally different perspective.

Some academics working in the field of ICT4Development and Democracy, influenced also by the latest scepticism trends in the study of the so-called Information Society and its impact on the political and cultural sphere (Morozov 2011), have started to think that there is a strong need to refocus on ICT failures rather than success, in order to better understand how to avoid waste of development funds. This is probably the case for the above article by author Anahi Ayala.

Their attempt to re-establish a critical approach to the study of ICTs for Development is admirable, but even in this case their focus is still on functionalities and appropriation rather than power dynamics and more in general, social and organizational structures.

Despite the fact that a number of scholars have argued against technological determinism and for social constructionist views of ICTs (Zorn 2002), the meaning of failure or success within a specific socio-technological dynamic and political context has not been questioned yet by most of the ICT4Development and Democracy researchers.

Most of them are focusing on how implementation dynamics have or should have occurred in order to support a successful project process/outcome. There are several reasons why their perspective on ICT has not changed yet, in this chapter only three of them will be discussed.

Firstly, these approaches are all based on the assumption that ICTs are just tools.

Secondly, most of the recent developed frameworks used to study ICTs have been based on Indexes, but Indexes are normative tools rather than exploratory ones.

Thirdly, many conflicts of interests between researchers and their donors may have caused serious distortions in the way researches have been conducted their researches in this very specific field of ICTs for Development and Democracy.

Therefore most of these research projects are not properly designed, mainly because it's impossible to apply categories such as successes or failures to these projects without first uncovering the power dynamics behind them.

However such attempts to uncover duplications, waste of funds and legitimacy issues, should be considered as a step forward toward a critical approach to the study of ICT4Development and Democracy. These studies constitute a body of knowledge on which it is possible to build on a new analytical framework.

2 An Introduction to the eParticipation Ecology Framework and the Concept Idea Behind Techno-Discourses

The idea of creating an eParticipation ecology has been developed following the already existing communicative ecology concept (Tacchi et al. 2003) and the application of the latest studies on Game Theory (Camerer 2003).

The idea of considering an Index as an effective tool to be used to analyse and evaluate an eParticipation project should be reconsidered if not totally rejected.

Exploratory methods begin from the present, and see where events and trends might take us; normative methods begin from the future, asking what trends and events would take us there.

Therefore, in this chapter Indexes are considered as mere normative tools rather than research frameworks, they should be considered as effective tools to understand how to build a certain type of social structure and mechanism rather than understand what is happening within a certain context. Indexes are political tools used to drive a society in a specific direction.

The eParticipation ecology framework is an analytical tool that should help us to understand the present and try to predict the future.

This is why successes and failures are not considered universal categories that can be applied to the outcomes of a specific project. In this chapter both successes and failures are considered political, cultural and social constructs/discourses used to legitimize or delegitimize the action of a specific group of actors.

The main objective of the eParticipation ecology is to provide a tool to map these different actor trajectories rather than legitimize or delegitimize them. Actors'

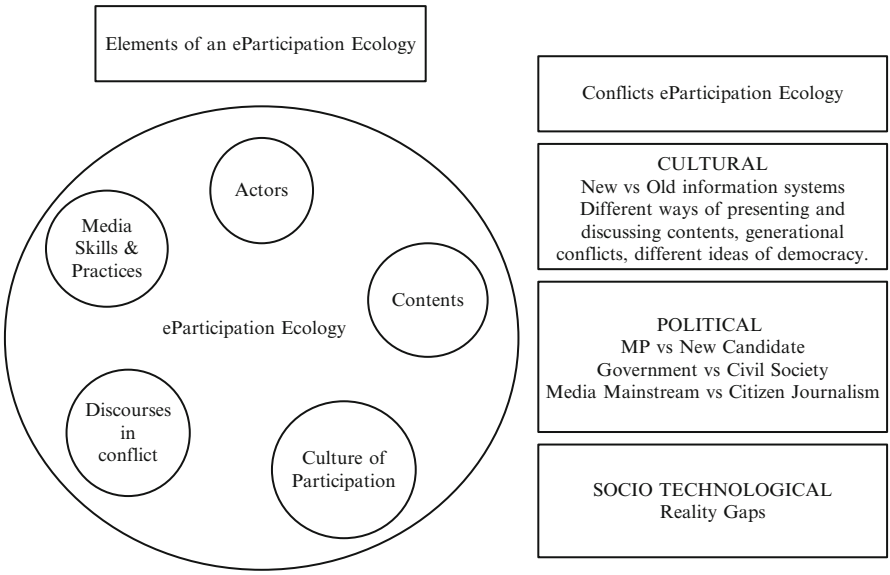

Fig. 12.1 eParticipation ecologies

ethical and ideological positions are studied as part of the influences that are creating these trajectories.

In an eParticipation ecology interactions between actors are seen as "games" in which different rational and irrational moves are taking place. A game consists of a set of players, a set of moves (or strategies) available to those players, and a specification of payoffs for each combination of strategies.

An eParticipation ecology is an analytical framework (see Fig. 12.1) to map a specific network and it's composed of five elements: actors, contents, traditional culture of participation, existing media skills and practices, discourses in conflicts (establishment vs. antagonists) and three macro-dimensions: cultural/traditional, political and socio-technological, in which the five elements are interacting between each other (Cavallo 2010). In these three dynamic dimensions, different actors interact with each other.

In this sense, the eParticipation ecology framework should be a useful analytical tool to think with or through technology rather than think about technology.

In the next paragraph, we will try to explain how to make use of it, in order to understand the process through which these different Kenyan techno-discourses emerged and developed, in order to understand the role of the different actors involved: journalists, experts, researchers, politicians, activists.

Techno-discourses are emerging from different actors who have different visions and different economical cultural and political interests. However, in the last years the visions and techno-discourses of these different groups in Kenya are converging. Using the frame analysis categories, we may also define this process as a frame alignment (Snow and Benford 1988). We are assisting to the raise of one dominant techno-discourse on Kenya as the new ICT innovation Hub of Africa.

This techno-discourse has been recently challenged by events such as the political problem caused by the e-Voting system adopted for the last Kenyan elections and the exponential duplication of Ushahidi platforms developed to monitor such elections. During this specific period, the mainstream media and the ICT4Development experts have questioned the way in which ICTs have been used by both the government and the civil society organizations.

Techno-discourses can be identified by using two approaches:

- Firstly, by analysing production processes, power dynamics and conflicts of interests between different actors/players, applying frameworks coming from the neo Marxist tradition such as the latest Manuel Castells's approach to the study of media (Castells 2009).
- Secondly, by analysing media contents using the latest frame analysis approaches developed by Jim A. Kuypers (Kuypers 2010, 2009).

Therefore we should consider techno-discourses as both, the result of an economical and cultural process that is happening within a specific Media Ecology (McLuhan 1964) and an agent of social change (Snow and Benford 1988) able to influence social movements and political participation. This is the main reason why we consider techno-discourses as important agent of socio-political and cultural change.

3 How the eParticipation Ecology Framework Should Work

The three main stages, origin, development and end, of any eParticipation project are influenced by power dynamics that can be classified in three main categories. Each one of these following categories has an influence on the project cycle, in a different way and at different levels.

The first, category should be able to influence the way social actors structure their knowledge on "eParticipation", "democracy", "participation" and "development".

It's about their system of beliefs; therefore, it is directly connected to their political agenda but it's not necessarily connected to their actions and practices.

This macro-analytical category should be used to investigate the genesis of different eParticipation ontologies used by different social actors and could be named "Discourse-Influences". The system of thoughts composed of ideas, attitudes, courses of action, beliefs and practices that systematically construct the subjects and the worlds (Foucault 1972).

Terms, categories and classifications developed or just used by different actors involved are the main object of investigation. These body of knowledge constitute their tools to access realities. This part of the analysis concerns mainly the study of ontologies.

For the scope of this chapter, it is therefore necessary to consider how power dynamics influence the way in which "Africa" has been studied by the so-called developed countries from which most of the funding for research projects originates. It is during this historical process that eParticipation ontologies originated.

For this reason, it is very important to consider, the influence of dominant western theories of development studies and technological innovation, such as the "modernization theory" model influenced by both the liberal and the Marxist school of economics, or more in specific, the ones created by "ICT for development" experts who did not question the "technological determinism" behind some of the dominant theoretical frameworks, such as the "creative destruction" (Schumpeter 1942/1994) that influenced most of the current analytical framework created to understand innovation in developing countries.

These theories are directly linked to "discourses" embedded in western societies and disseminated during international events such as the World Summit on Information Society (WSIS) or other international meetings organized by western-driven organizations.

Many concepts, values and ideas on which these discourses are based should be deconstructed to understand the "discourses influences" behind eParticipation projects in order to understand what is the real agenda consciously or unconsciously adopted by the different groups that decided to support a specific eParticipation project in Africa or in other developing areas.

History proved that the majority of these discourses have been functional for the ruling elites who produced and used them to expand their power by influencing local/national and international policies before and after colonialism.

However not all the actors involved in such dynamics are aware of which agenda they are pushing for; some of them are so deeply influenced by these discourses that are not even willing to discuss them; other actors are aware of these discourses and their hidden political agenda but are not willing to uncover such dynamics for different reasons related to their personal trajectories.

Both participatory methodologies and ICTs for development projects have been used, and are still used today, to serve specific political agendas.

This implies that a critical approach to study both participation as a way of managing resources and the use of ICTs within an informational system (Castells 1998) is needed in order to understand eParticipation—especially but not exclusively in the context of the so-called developing countries".

This critical approach should be applied to the analysis of eParticipation, not only to uncover these power dynamics, but also to develop a new set of alternative ontologies in order to counterbalance the most influential techno-discourses and dismantle "interpretative monopolies" (Turpel 1990).

A possible solution could be to use the approach proposed by Olivier de Sarden: a "socio-anthropologie du changement social" (an anthropology of social change), in order to overcome the dialectics between the development anthropologist and the anthropologist of development to create an anthropological approach capable of analysing and deconstructing external/oppressive "discourse influences" in order to develop new ones aimed at supporting the uprising of a non-dominant community.

This type of analysis should be done at the very first stage of any research in order to define the macro-trajectories of the different actors involved into the world of a specific eParticipation project. A possible solution would be to classify and map them according to the techno-discourses they believe in and belong to.

The second analytical category does not focus on cognitive activities such as the construction of ontologies in order to create techno-discourses; this category should be used to analyse the past and present behaviour of different group of actors, in order to understand which could be their future decisions. Therefore this analytical category can be used to understand how actors have been able to influence the way projects started, developed and ended.

This category can be named "Actors-influences".

An eParticipation project may be started as a result of a conflict between two or more actors. In other words, it may exist because a specific conflict occurred and one of the actors decided to use eParticipation as a tool to fight against the opponents.

An eParticipation project may end because the conflict from which it was generated has been solved.

In other cases eParticipation projects may be kept alive by citizens and civil society as an act of resistance.

An eParticipation project may also start because an international/national development agency decides to target ICTs and eGovernance as a field of technological assistance through which it is possible to influence a country's policy-making processes, as already mentioned in the introduction.

A social actor or a group of activists may use eParticipation to gain the attention of public opinion and influence civil society at international, national and local levels in order to gain power and authority to build political consensus or/and economic structures.

Whatever is the motivation of the actors involved they will influence the project in each one of the development stages; therefore, it is crucial to understand the real motivation of these actors. It is also important to understand what their real expectations are and what will happen once they meet them, or on the contrary, what will happen when frustration arises.

The third analytical category should be able to help us to understand the influence of semantic technologies on eParticipation projects that are dealing with legislative processes. This macro-category can be named "Techno-Semantic-Influence".

Technocrats behind semantic technologies, especially in the legislative field (the so-called legal semantic web), decide how different concepts and bodies of information are linked to each other, thus influencing the sense of an event and the relationships between different episodes of political relevance. As a result, technocrats are often able to influence the way legislative acts are discussed, approved or rejected. Episodes occurring outside legislative bodies but related to what happens inside them can be easily ignored or manipulated by omitting a link to specific information or by selecting certain types of information while ignoring others. These "techno-semantic-influences" may represent a threat to people who are interested in understanding the genesis and the possible impact of a legislative framework.

For example, a hypothetic minister that is proposing a certain law is in fact guilty of a related crime. However, if the law in question does go through, the crime of which he or she is guilty will no longer be considered a crime. By controlling the way a semantic "mark up" is applied, technocrats influenced by governments may

decide that the criminal record of a minister should not be linked to the laws he or she is proposing and discussing in parliament. In this way, it will become more difficult for journalists, civil society or other members of parliament to discover possible conflicts of interests or other factors that may negatively influence policy making. The importance of using open standards such as XML is directly linked to the right of social movements, journalists and members of parliament or other legislative bodies, to mark up in a participatory manner, important information in order to "democratize" the legislative semantic web. An example of this type of semantic "participatory mark ups" projects is the www.theyworkforyou.com website developed in the UK to monitor the legislative activities of MPs.

These three categories "Discourse Influence, Actor Influence and Techno Semantic Influence" are part of the eParticipation ecology framework (Fig. 12.1).

In the graphic below the eParticipation ecology elements are represented in circles and they include all the above mentioned categories such as the "Actors influences" within the Actors' circle, the "Discourse Influence" within the Discourse in Conflicts' circle and finally the "Techno Semantic influence" that can be potentially allocated inside any of the other remained circles (contents, culture of participation, media skills and practices).

These elements are interacting within three coexisting transverse dimensions: cultural/traditional, political and socio-technological.

These actors are not necessarily sharing the same physical spaces; however, their objective is to influence policy-making processes in specific geographic/administrative areas.

These actors are able to actively influence such policies being involved at local, national or international levels.

During the course of my field research in Kenya (Cavallo 2010), I analysed how these actors are also using social networks such as Facebook to debate about political issues. I discovered that young people living in Nairobi are actively involved in local debates concerning their constituencies of origin.

In the same way, the influence of Kenyans abroad through the use of social networks such as Facebook drastically increased during the 2007 elections and is becoming a new source of opinion, able to influence the decision of a considerable number of Kenyan voters.

The most evident example is Ory Okolloh, a human rights activist behind two of the most relevant eParticipation projects developed in Kenya Ushahidi and Mzalendo.

Okolloh studied and still lives abroad, despite being undoubtedly one of the most influential human rights/political activists in Kenya.

Therefore, eParticipation ecologies are borrowing the concept of field developed by the Network Ethnography (NE). Following this approach the meaning of "field sites" is adapted, and instead of choosing territorial field sites, the researcher has to choose a perceived community and select the important nodes in the social network as field sites.

Indeed, the field site may not be a socially significant physical place at all (Howards 2002).

For this reason, eParticipation ecologies are not only composed of specific geographic areas, in which policies are discussed and implemented, but also networks of actors, who do not necessarily live in these specific geographic areas, but that are able to use their networks to influence policy-making processes occurring in one or more geographic areas.

3.1 Designing Kenya Media Landscape by Using eParticipation Ecologies

The genesis of Ushahidi—in Swahili witness—can be explained by analysing the five elements of the eParticipation ecologies from which such project originated from (Discourses—Actors—Conflicts—Media Skills and Practices—Culture of Participation).

This open-source software was invented during the 2007 post-election violence. The Kenyan government (Discourse 1—Actor 1) decided to obscure live programs on TV and to limit media coverage of daily episodes of violence (Conflict Y—Media Skills and Practice 1—Culture of Participation 1).

Therefore, a human rights activist, Ory Okolloh; a blogger, Erik Hersman; and a developer, David Kobia (Discourse 2—Actor 2) managed over the course of 3 days, to develop a software that could be used to map in a participatory manner episodes of violence around the country. They created an eParticipation platform/project (Media Skills and Practice 2—Culture of Participation 2).

They achieved this by using existing software: Google Maps and FrontlineSMS, a software allowing to manage SMSs with the help of a simple laptop. The main objective of Actor 2 was to create a platform through which Kenyan citizens could inform each other about what was happening around the country. In this way, citizens who needed to move from one place to another for emergency reasons could be informed about road blocks and other dangers in order to avoid them. This system was providing a service but at the same time was questioning the current government policies and decision on how to manage the post-election violence emergency. The main objective of Actor 1 was to avoid any scene of ethnic violence or police repression on TV in order to calm down the local population and keep their internal affairs less visible as possible to the international public opinion.

Radios and mobile phones are the most accessible media in Africa; therefore, the online platform had to be developed according to the specific needs of Kenyan users. FrontlineSMS was synced to be used with Ushahidi. Once installed, the program enabled users to send and receive text messages with other groups of people through mobile phones while concurrently volunteers and bloggers were mapping information online using Google Maps. Consequently, other media such as CRs began using the Ushahidi platform as one of their main sources to inform citizens. In just a few days, Ushahidi, a newborn eParticipation platform, became a credible source of information for both citizens and mainstream media. The platform had

45,000 users in Kenya during this time of turbulence. Radio deejays read some of the reports on air.

In order to understand the genesis and the conflict between the two main techno-discourses behind Ushahidi genesis, we may use this type of analysis.

$$\text{Actor 1} + \text{Media Skills and Practice 1} + \text{Participation Culture} = \text{Techno Discourse 1}$$
$$\text{Actor 2} + \text{Media Skills and Practice 2} + \text{Participation Culture} = \text{Techno Discourse 2}$$
$$\text{Techno Discourse 1 VS. Techno Discourse 2} = \text{Result of the Conflict}$$

In this case, Ushahidi techno-discourse won, also thanks to the support of different experts and opinion leaders. Almost immediately an academic study of the Harvard Humanitarian Initiative, done by Patrick Meier (Meier and Brodock 2008), concluded that Ushahidi was better at reporting incidents as they started (rather than just the deaths resulting from incidents) and reports covered a broader geographical area than those coming from mainstream media.

Again, the point is not questioning such result, but pointing at the conflict of interests related to it, and the enormous impact that these academic researches have had and are having on other academics, but most importantly on other organizations that are capable of financing such projects.

The discourse influence in this case has been generated and disseminated by the same actors who have started the project. In this way they reinforced their system of belief and their approach to eParticipation; furthermore, they were able to gain respect and authority at national and international level. No matter what their real intention was at the beginning, this group of people, of which Patrick Meier was/is part off, was able to gain power through this action by coordinating and influencing the work of different opinion leaders, among them the academics who did not question the researches already mentioned in this chapter, their assumptions and methodologies until now.

Ushahidi was not only a technological innovation, but it became a new socio-cultural construct with its own political implication, the genesis of a specific techno-discourse.

Thanks mainly to these power dynamics and this capacity of the people behind Ushahidi of influencing the international and national public opinion at different levels, Ushahidi became probably the first and most famous African technological innovation of the world history.

Soon after its initial use in Kenya, the Ushahidi software was used to create a similar site to track anti-immigrant violence in South Africa, to map violence in eastern Congo, to track pharmacy stockouts in Malawi, Uganda and Zambia, to monitor elections in Mexico and India, to collect eyewitness reports during the 2008–2009 Gaza War by Al Jazeera, to develop a crisis information system in support of aid workers during the earthquake in Haiti and Chile, to map blocked roads and other information in USA by the Washington Post during the wake of winter storms and to set up a “map of help” for voluntary workers needed after a wildfire in Russia. This software allowed pro-democracy demonstrators across the Middle

East to organize and communicate what was happening around them in early 2011. It has been used also in Italy, Japan, Australia and in the Balkans.

The new discourse influence that emerged from this experience was linked to the idea that an innovation coming from the "South" of the world is now used to solve problems in the "North", that Kenya was the cradle of African cyberdemocracy. Such discourse became later functional for specific groups who wanted and still want to attract new investments in Africa; therefore, they are not directly interested in promoting the idea that the "North–south" power dynamics is radically changing, but such "discourse" may serve its own purpose.

According to the frame analysis approach, we may define this type of process as a frame bridge. This type of frame alignment constitutes the "linkage of two or more ideologically congruent, but structurally unconnected frames". Media activism and ICT as economic sector are merged into a single techno-discourse "Kenya as ICT hub of Africa".

There are two elements that are coexisting in this discourse, one is merely technological and is related to the dimension of technological innovation in Africa and the other is mainly political and is related to the dimension of democracy and participation. The relations between these two elements is vey important in order to understand, how and if this "techno-discourse" is really part of a wider political and economical change.

In order to understand more about this process, it is important to understand who are the people behind Ushahidi and what is their relationship with the so called "creative class" (Florida 2005), made by both, technical skilled and politically active actors, and finally, how did they meet and started this project.

The three main actors behind this eParticipation innovation are David Kobia, a Kenyan professional software developer, who studied and lived in the USA; Erik Hersman, already introduced in the previous chapter, a US citizen who was born in Sudan and partially raised in Kenya with a B.S. in Business Management; and Ory Okolloh, a lawyer and human rights activist.

Ory Okolloh was the person who started Mzalendo in 2005, an eParticipation project that already contained most of the "eParticipation ecologies elements" that will subsequently become the core part of the Ushahidi idea. Furthermore the eParticipation ecology in which Mzalendo emerged had also some important similarities in terms of conflict dynamics (cultural—political—socio-technological).

The slogan of Mzalendo is "keep an eye on the Kenyan Parliament" (Discourse 1), and this came about after the website for Kenya's parliament was shut down (Conflict) following protests by some MPs (Actor 2) who were embarrassed about their CVs being published online (Discourse 2).

The initial goal of Mzalendo, then, was to provide the basic information that otherwise would have been available on the official parliamentary website.

Kenya's parliament website is now back online—and much improved since its former 2005 incarnation—but the activists behind this eParticipation project continue to feel that they still have an important role to play in using online tools to hold Kenyan MPs more accountable.

Therefore the Mzalendo project is still going on following the model of the British "TheyWorkForYou" project.

If we look at this event from a different perspective, keeping also in mind the "assumptions" stated by Erick Hersman in his blog post, this could also be seen as an act of African "discourse appropriation" on democracy, technology and development performed by the emerging African and African-based "creative class" (Florida 2005), a process strongly supported by a group of western actors that are interested in pushing this appropriation process in a certain direction.

The eParticipation project Mzalendo, ("patriot" in Swahili), just like any other eParticipation project can be analysed in terms of "Discourses—Actors—Culture of Participation—Media Skills and Practices—Contents" and the conflicts that these elements are generating between different rational and irrational players. The model based on the eParticipation ecologies framework can be very useful to trace the discourses, the conflicts and the actors behind eParticipation projects and ideas.

The Kenyan eParticipation ecology, for instance, is strongly influenced by all the actors mentioned above. They support antagonist discourses that are generating conflicts, themselves generating eParticipation projects.

Kenyan politicians believe that the media should not be totally free to report about sensitive issues, especially during internal crisis, such as tribal clashes, but also that MPs' CVs should not be public.

Kenyan human rights activists believe that crowd-sourcing can be a strategic resource to face all types of emergencies and that the Kenyan Parliament, like the British one, should provide citizens open access to all types of data.

Different values, interests and ideologies are embedded in both discourses; this is the reason why both actors involved in this conflict will try to generate as much information as possible to legitimize their different actions.

Mazlendo generated and raised a political discourse among opinion leaders rather than a technological discourse. The main issue was the value of transparency within democracy; nobody was even questioning the fact that ICTs should have been a driven force behind development in Africa.

In the specific case of Kenya, the general idea that ICTs would have improved the quality of life of the common citizens has also been reinforced and turned into an assumption by the conjunction of different factors.

One of these factors may have been the economical success that the service M-Pesa obtained at national level, in the same period of time.

The eParticipation ecology framework can also be used to analyse the genesis of these types of technological innovations that are not directly linked to the political sphere but may have had an important impact on it, as both, techno-discourses and appropriation practices.

M-Pesa ("M" for mobile, "Pesa" Swahili slang-word for money) is the product name of a mobile phone-based money transfer service for Safaricom, which is a Vodafone affiliate. Therefore it is the result of a partnership between different organizations that represent a significant example of how mobile low-cost technologies can be used in creative ways to improve the life conditions of the populations of developing countries.

This innovation started as a "development project" (Discourse 1) financed by the Vodafone Foundation and the UK-based Department for International Development

(DFID) (Actor 1) trying to solve a problem that most Kenyans (Actor 2) have to face: credit.

The initial concept of M-Pesa was to create a service that allowed micro-finance borrowers to conveniently receive and repay loans using the network of Safaricom airtime resellers. This would enable micro-finance institutions (MFIs) to offer more competitive loan rates to their users, as there is a reduced cost of dealing in cash.

The users of the service would gain by being able to track their finances more easily (Discourse 1 made by Actor 1 having a specific objective). However when the service was eventually set up for user trials, it was discovered that customers adopted the service for a variety of alternative uses (Discourse 2 made by Actor 2 having a specific need). This was seen from both sides as part of a series of complications between the donor, the partner and the implementation process (Conflict caused by different discourse objectives needs practices).

M-Pesa was refocused and launched with a different value proposition: sending remittances home across the country and making payments. This conflict of interests between the vision of Actor 1 and Actor 2 generated a new "media practice" from which both Actors (1 and 2) could benefit from, while Faulu decided to leave when the project lost the micro-finance component (this actor has a very specific mandate, therefore cannot work within another framework and therefore has to leave the project).

M-Pesa is now a branchless banking service, meaning that it is designed to enable users to complete basic banking transactions without the need to visit a bank branch. The continuing success of M-Pesa in Kenya is due to the creation of a highly popular, affordable payment service with only limited involvement of a bank.

The system was developed and run by Sagentia (UK-based company) from initial development to the six million customer mark. The service has now been transitioned to be operationally run by IBM Global Services on behalf of Vodafone (UK- based company).

The initial three markets (Kenya, Tanzania and Afghanistan) are hosted between Rackspace and Vodafone.

In conclusion what began as a "development project", partially financed by international aid public funds and implemented by a "western private company", thanks to the conflict between the initial objectives and the users' needs and consequently the users' "re-appropriation" of the mobile media practice, was transformed/redesigned into one of the most profitable business ever invented for the African market, considering that by 2012 mobile financial systems in developing countries created a market of about five million US dollars (CGAP and GSMA, 2009).

The appropriation is an ongoing transformation of use continuously brought about by interactions with other users and by interactivity with equipment and software.

Appropriation is a concept that helps us get out of a naïve prediction, built exclusively on technical possibilities. To think in terms of appropriation necessarily entails introducing social representations/perceptions of the potential users in their contexts/networks (Flichy 1995). In other words, appropriation happens within specific eParticipation ecologies in which power dynamics is able to generate

techno-discourses that may in some cases alter the pre-existing power relations between the actors who are interacting within these eParticipation ecologies.

Therefore the appropriation process that caused the rise and success of the M-Pesa case in Kenya may continue and provoke other changes also. For example in the political context, systems such as M-Pesa are changing the ways political fundraising campaigns are organized by candidates running for presidential and local elections.

It is also important to underline the complexity of the process to deconstruct the techno-discourse that this is an African innovation; in reality this innovation, just like Ushahidi, is the result of a process that cannot be narrowed to Africa, as already explained above.

However, despite the fact that this was not entirely an African innovation and that M-Pesa did not have a direct implication/influence on the political and democratic sphere, its success contributed to portrait Kenya as the new ICT hub of East Africa and consequently reinforced the techno-discourse about African cyberdemocracies especially among a certain group of actors, mainly media activists and people working in the development sector.

However, the recent events connected to the latest Kenyan National 2013 elections discredited such techno-discourses and the group of people behind them.

On the other side, before these 2013 elections, M-Pesa may also have contributed to shift the focus of the general public opinion from the political implication of technology to the economical implication of it, influencing the long-term strategies of the groups working in the ICTs for Democracy sector.

For example, after some years Ory Okolloh decided to leave the Ushahidi team to continue her activity as a lawyer and human rights activist, while Ushahidi became a company and turned its success into a long-term project, the iHub, with a much broader and business-oriented vision.

The iHub vision is to transform Kenya into the main technological HUB of Africa and the relation between this objective and the development of a transparent democratic model is not direct anymore, as mentioned also by the same funder Erick Hersman.

At a certain stage both groups of actors, the people behind Ushahidi and the people in the government were able to use the new Kenyan techno-discourse in order to develop new trajectories/strategies that converged in their new common purposes, to make Kenya a technological hub.

Because their trajectories and interests started to converge, the conflict dimension became less predominant; this convergence had an important impact on the future decisions that were made by both actors and the emerging of other forms of political activism and antagonist actors within the Kenyan eParticipation ecology.

For example, the latest technological innovation from the Ushahidi team is not another "watch dog" application, it's a hardware that provides Internet connection everywhere where there is a possibility to access a mobile phone network; this innovation is basically a backup generator for the Internet named BRCK.

In the iHub other applications for mobile phones have also been developed and defined as M-Governance applications; the idea behind these new applications is

mainly to provide information to improve public services such as water for example, rather than challenge the government on issues such as transparency and open data.

The iHub became not only a place where technologies are produced, thanks to the support of profit and non-profit-oriented organizations/investors, private and public funds, it's also a place where researches are developed and disseminated in order to legitimize, or in same case delegitimize tech-innovations. There is a specific department named the iHub Research created to interpret and evaluate ICT trends and the same projects that are coming out of the iHub.

That same strategic model that made Ushahidi an international case, thanks also to the work of academics, has been applied again to the iHub project on a different scale and with different purposes.

3.2 Cultural and Socio-Psychological Dimensions of an eParticipation Ecology Framework

One of the elements that form part of an eParticipation ecology is the "Culture of Participation". This element is able to influence both social practices and perceptions; in other words, techno-discourses are deeply related to these two spheres.

Within this element, the cultural and the socio-psychological dimension coexist and they both influence the way technologies are appropriate and used to influence decision making.

For example in the case of Kenya, there are several traditional forms of political participation that deserve to be studied in order to understand the current practices and draw possible future scenarios. These forms of participation are very important to understand the current situation and the media practices.

The future scenarios that could be drawn starting from the study of such practices may be used not only to understand the possible future implications of certain technological appropriations but also to develop new eParticipation projects that can really fit into the context and serve a specific group of actors.

At the same time, it is also interesting and very useful to understand the socio-psychological implication of certain eParticipation practices, especially if such practices are related to a collective emotional moment like an election or a political crisis.

Different social actors have developed during the course of the years and centuries different "cultures of participation"; these differences are determined by their political history, their traditional practices and their socio-psychological way of managing collective emotions such as anxiety, fear, anger and happiness.

Both these two dimensions have a very strong impact on how electronic forms of political activism develop in a certain context.

3.2.1 The Traditional and Cultural Dimension of an eParticipation Ecology

There are different possible approaches to the study of this dimension. One of the possible approaches is to develop an ethnographic research in order to understand how politicians and citizens usually communicate with each other, and what their perceptions are about the effectiveness of these different communication channels.

The results should give us a clear picture of how the culture of participation developed in a certain culture and what should be the possible future scenarios.

The following field research was developed between 2008 and 2009 (Cavallo 2010).

The field research consisted of 16 interviews with personal assistants (PAs) of Kenyan members of parliament (MPs), eight constituency officers (COs) and two community radio journalists (CRJs).

The main research focus areas were:

- The use of different media to communicate between (PAs, MPs, COs and CRJs) citizens, civil society and journalists.
- The use of the media mix: new and old media, strategies and tools to inform and engage citizens in public debates.
- Perceptions and prioritization of different technologies usage and finally socio-technological ideas and scenarios for the future.

The main results of this research are summarized as follow:

Traditional forums such as mabaraza can constitute the main source of information to understand citizens' problems and opinions about political issues.

The baraza (pl. mabaraza) is a feature of Zanzibar's "public sphere". In organizational terms, a baraza may represent different degrees of formality and informality, institutionalization and abstractness.

A baraza might be a simple (informal) "meeting" of people, but it could also be a "council", or in historical times, the "audience" of the Sultan of Zanzibar. Finally, it could refer to a vast range of clubs, unions or associations. In spatial terms, a Baraza is a public or semi-public space where people meet to chat, communicate, quarrel, sit, similar to a "Piazza" in Italy "Agorà" in Greece or the "Majlis" in Arabia (Loimeier 2005).

The "baraza" appears to be at the same time: a place, an event and a forum; therefore, it is "an essential node in the social network" (Cavallo 2009, p. 9).

On 16 PAs interviewed 13 define baraza as the most used way to communicate with the citizens, furthermore in the perception of most of the PAs and COs baraza is also the most effective way of communication with the constituents.

From a transcription of the interviews:

> Our policies? We use a lot of ways to communicate. The most effective is a baraza. We also have printouts of vision… (Wajir East Constituency).

Usage/Media mix: mobile phones and community radios are used to organize mabaraza and communicate their contents to a vast audience; the Internet is used to send information from Nairobi to the constituencies, once in the constituencies they are distributed in different formats: radio and print.

Radios and mobile phones are mostly used to mobilize people while the Internet is seen mostly as a fundraising and a business-to-business tool rather than a media to communicate directly with citizens by most of the constituency officers.

From a transcription of the interviews:

> We have a representative per village, so this representative has a mobile phone, so when the MP wants to communicate with them he calls the representatives, they organize the meeting, then they speak… we also use posters then we put it in the markets and churches (Rarieda Constituency).

> We also have this public address system mounted on vehicles, so we prefer announcing our meetings… We also have Musii FM which we also use to communicate our meetings. (Kibwezi Constituency).

> For projects that we are trying to start, we take photos then we put them in those newsletters, is about projects that have not been completed by the former MP, so after we evaluate the situation then we send the information. The objectives of the newsletter is to inform the constituents about projects we intend to initiate and we urge them to prioritize every village should prioritize which projects are fundamental, the newsletter is sent from Nairobi to the constituency office by email, then they photo copy it and they distribute an hard copy version of it in local churches, schools and different public spaces. (Kitutu Chache Constituency).

Already existing data: radios have an enormous amount of information about citizens' opinions and polls in their online database; constituency staff members are video recording mabaraza and store the videos off-line.

Based on these findings, the recommendations for implementing an eParticipation project in Kenya should be the following ones:

- Inform citizens about incoming mabaraza, using mobile phones and radios.
- Record mabaraza contents using video and audio.
- Distribute contents and generate debates using radio browsing.
- Get feedback from citizens using mobile phones and store it online to record and keep track of citizens' opinions using relational database systems.
- Connect different radio databases between each others to have a clear picture of citizens' opinions and their trends at local and national levels.
- MPs should allow their staff to upload all the contents about mabaraza online so that radio stations, TV and single citizens could have access to them. Policy makers should use the data gathered to understand priorities and needs of the citizens.

However these recommendations don't have any scientific relevance if not properly contextualized within an eParticipation ecology.

Decision-making processes are not based on rational thinking; power dynamics and socio-psychological factors are decisive driven forces behind innovations (Ted Zorn 2002).

3.2.2 The Socio-Psychological Dimension of an eParticipation Ecology

Crowd-sourcing platforms such as Ushahidi are also able to respond to a collective psychological need by giving citizens a chance to overcome their sense of

impotence by actively engaging in an event of social and political relevance and at the same time being able to disclose and share the realities ignored by mainstream media. This is probably why these technologies have been used so much and in so many different places of the world.

It is the first step to overcome a psychosocial sense of impotence against the establishment power. Users can share information and connect places by mapping them, creating in this way a cognitive map of the problems that is able to delegitimize the mainstream media version of reality.

In this sense Ushahidi maps can be defined as Heterotopia, a concept elaborated to describe places and spaces that function in non-hegemonic conditions. A parallel space that contains undesirable bodies to make a real utopian space possible.

Ushahidi's capacity of generating this techno-discourse about African cyberdemocracy and the power of crowd-sourcing is also related to this new possibility to respond to this socio-psychological need and the fact that this sense of impotence and fatalism is very strong in Africa probably is not a coincidence.

This techno-discourse can also be seen as the main African contribution to the development of a new idea of political activism based on the capacity of independent users of reprogramming networks and generate data in a collective manner.

Two concepts, the "multitude" formulated by Hardt and Negri (2004) and the "informational society" further developed by Manuel Castells in "Communication and Power" (2009), fit into this techno-antagonist actor discourse.

The "informational-multitude" may therefore represent the emerging techno-discourse that will be able to influence the next generation of media activists living in both the developed and the developing countries.

Groups of users, producers, bloggers, human rights activists and common citizens may start to consider themselves as a whole of singularities, always productive and always in motion.

Participatory social mapping for these actors may start to represent a sort of constitutional process "momentum" through which the "informational-multitude" appears/manifest itself like a sort of techno-spirit, to disclose and publicly display problems in order to discredit the mainstream media. A new cyber ritual that can be performed by different actors during a crisis such as the already mentioned post-election violence in Kenya.

Other examples such as the participatory social mapping events in occasion of the 2010 Kenya constitutional referendum and the 2013 elections, during which hundreds of Ushahidi volunteers physically met to map data, may demonstrate the emerging of these new socio-techno-rituals.

However to assume that these techno-rituals are the result of a conflict may be very wrong also, because they may also turn into socio-psychological strategies to reduce tension rather than form part of a serious antagonist movement agenda, especially if the interests of the tech-communities behind these projects and the governments start to converge.

Ushahidi has been used to map spaces in which negative episodes/events occurred, in order to destroy utopias and impose heterotopias using an online/offline mobilization. At the same time, Ushahidi has been used to display utopian

spaces by mapping areas in which positive episodes/events have occurred, in order to balance a negative image created by mainstream media.

In conclusion, mapping is directly connected to the need of social movements and group of individuals to counterbalance both heterotopias and utopias, a collective act that may be used to reduce or to increase a political conflict.

4 Conclusion

In this brief chapter, the eParticipation ecology framework has been used to analyse different cases and to demonstrate how different projects were generated and developed from/around specific conflicts and convergences.

These conflicts and convergences influenced by these different actors' discourses (Foucault 1972), power dynamics, traditional practices and socio-psychological processes.

Even in the case of M-Pesa, that should not be considered as an eParticipation project, analytical frameworks such as the eParticipation ecology and the frame analysis can be useful to understand why and how a tech-innovation emerged from a specific context, contributed to reinforce specific techno-discourses, and finally can be "appropriate" by users to be implemented in totally different sectors.

The Kenya-techno discourse on "Africa Cyberdemocracy" has been challenged and discredited by the latest 2013 elections monitoring system failure and its impact on the political situation. This may have contributed to shift the focus from the democracy to the economical development dimension of ICTs and their potential impact on the future of Africa.

Finally by applying an exploratory approach such as the eParticipation ecology, rather than a normative approach based on an Index, it should be possible to analyse and understand the present dynamics and in some cases also be able to predict future scenarios about the impact of ICT projects on political cultural and economical contexts.

In this sense, the eParticipation ecology framework should be a useful analytical tool to think with or through technology rather than think about technology.

But in order to do so, we need to uncover power dynamics and conflicts of interests such as the ones described in this chapter, furthermore we need to abandon normative approaches to the study of techno-realities.

Donors, who have to choose among different projects/actors, what/who to support and why, could use this eParticipation ecology framework approach in order to ensure that their funds will be spent to support actions in line with their political and cultural values/visions.

Whatever is the case, and the possible application of this model, the main idea of this chapter is to demonstrate why there is a real need to shift the current research approach to the study of ICTs for Democracy and Development in Africa and how such shift may occur.

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