Divisive Discourse on the 2019–2020 Climate Change Effects among Tanzanian Stakeholders

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Abstract

Promoting climate change discourses may potentially create a useful space for addressing the effects of climate change in Tanzania. During disasters such as floods, everyone obfuscates their agency and blames the other for causing climate change effects. This paper examines the discourse of climate change among scientists, government officials, and the non-scientific Tanzanian stakeholders on climate change and adaptation strategies after the 2019-2020 effects. These actors obfuscate responsibilities and attribute blame on the other for accelerating climate change effects. This paper examines how these attributions contribute to enhancing resilience and adaptation strategies. The paper was theoretically guided by the *divided subject* and *positioning* theories. Data for this paper were gathered from YouTube covering the subject. The results suggest that while none of the actors accepts responsibility for accelerating climate change; "what is happening and what should be done" gradually turn into "who is responsible for the mess". Divisive discourse like this is likely to keep Tanzania wobbling to create a resilient society to confront the challenges of climate change. The paper raises the need for the facilitation of a better communication between climate change science and the non-scientific audience.

Keywords: *climate change, discourse analysis, divided subject, positioning, Tanzania.*

1. Introduction
1.1 Background
In 2012 Tanzania wrote its National Climate Change Communication Strategy for 2012–2017 after initiatives such as the "… enactment of the Environmental Management Act, 2004; development of the National Adaptation Programme of Action (NAPA), 2007; MKUKUTA II; National Adaptation Strategy and Action Plan (NASAP), 2009; and the National Climate Change Communication Strategy (NCCCS), 2012" (NCCCS, 2O12: i). Tanzania has been experiencing impacts of climate change including "… severe floods, frequent and prolonged droughts, sea level rise, declining crop yields, loss of livestock, decreased water availability as well as an increase in vector and water-borne diseases" (NCCCS, 2O12: i). The communication strategy was written and brought to operation because, despite the initiatives named above, the level of awareness and understanding of climate change issues among Tanzanians was inadequate

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(ibid.). The strategy is intended "… to enhance climate change awareness in the society" (ibid.). It was envisaged by the Ministry of Environment that "… effective use of [the] communication strategy will ensure a better understanding of the implications of climate change to the Tanzanian community and how best to benefit from the initiatives related to mitigating the impacts of climate change at national level and globally" (ibid.).

One can say that, as it is, the strategy aims at creating a more resilient Tanzanian society ready to confront the challenges of climate change through the facilitation of communication between climate change science and the society, i.e., the non-scientific audience. The need for effective communication and education to increase support for policy and collective action is still pressing as the grave effects of climate change are on the increase. Because climate change is not a fleeting scene, and its impacts have gone from purely economic to spiritual and cultural levels (Mung'ong'o & Moshy, 2019), one would want to see more of the strategy at work to promote adaptation and resilience among Tanzanians through capacity development.

In February 2020, the Ngorongoro Conservation Area Authority (NCAA) announced closing down one of its main tourist routes due to heavy rains, which threatened the tourism industry.[1] At the beginning of March 2020, the Tanzania Electric Supply Company (TANESCO) warned of the likelihood of letting some water off the Mtera electricity dam to follow its natural course when the water reached the highest point (i.e., 698.50mm) above sea level for fear of flooding. The spokesperson said that if TANESCO let off the water it would adversely affect socio-economic activities like fishing, pastoralism, and farming. When issuing the warning, the water was at 698.30mm, and on 21st March 2020 TANESCO let off the water.[2] For the havoc the water was causing, the then Minister for Energy, Hon Dr Kalemani, also said, "…we should pray for God's mercy because this is a big disaster" (ITV on 26/3/2020 at 8:07). On the other side, Lake Victoria had more water, only a few points shy of the highest level that was reached in 1965, and people feared the flooding of shorefront areas. All these continued fears might be due to the fact that climate change is a very challenging subject to communicate (Moser, 2010; Pidgeon & Fischhoff, 2011; Drake et al., 2016).

1.2 The General Level of Awareness on Climate Change
It is true that the inherent complexity of climate change, its politically charged nature, and the global scope of the problem are just a few of the reasons that make its communication efforts often fail (Moser, 2010; Weber & Stern, 2011). Hirsch Hadorn et al. (2006) say that conventionally trained scientists and societal actors, too, have difficulty in dealing with climate change issues. Tàbara

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[1] http://www.ncaa.go.tz (19/2/2020)
[2] http://wazo-huru.blogspot.com

and Chabay (2013) add that it is hard to understand science mainly because traditional science often delivers only meticulously separated information. Climate scientists are also frustrated by what they see as a failure of the general public to understand and appreciate the seriousness of the climate change issue; and that their efforts have not led to a better-informed public (Moser & Dilling, 2007). Although some researchers have indicated that knowledge about climate change and the level of understanding of climate change in African countries, including Tanzania, is high and increasing, the communication strategy pointed that "… the level of awareness and understanding of climate change issues among stakeholders is still very low at all levels" (NCCCS, 2012: i). So, more is needed to do to enlist the society into climate change issues to promote adaptation strategies to climate change and create resilient livelihoods.

Whenever Tanzania faces severe floods, prolonged droughts, sea level rises, declining crop yields, loss of livestock, decreased water availability, as well as an increase in vector and water-borne diseases, societies are exposed as so naïve in their adaptation strategies. For example, in Lindi Rural and Kilwa districts, where climate change was reported to have inflicted heavy losses in agriculture, lives and a majority of the poor; and intermediate households had been experiencing food shortages for almost half of the year (Misana & Tilumanywa, 2019), some villages from the same districts were flooded in March 2020 and were without food and shelter, seeking state intervention. Around the Lake Zone, the lake flooded shorefront areas and the cries were similar: praying for God's mercy and state intervention. This suggests that when the effects of climate change hit, non-scientific stakeholders are always running behind complaining, suggesting, among others, that they are denied the help and knowledge that they should be getting. The government and scientists, on the other hand, say that they involve the public as much as they should. As such, each group denies responsibility for not doing the right thing; throwing blame on some other party's shoulder. The problem addressed in this paper is how these groups attribute negative characters to each other; and the relevance of these attributions to enhancing resilience and adaptation strategies.

2. Theoretical Consideration

This paper follows Moghaddam and Harre's *positioning* and Lacan's *divided subject* theories. Positioning theorists, on one hand, divide the positioning act into two distinct phases: the attribution of qualities of character, intellect or temperament; and the person being positioned is assigned or refused a cluster of rights and duties to perform certain kinds of acts, thus constraining what someone so positioned can rightly do and say (Moghaddam & Harre, 2010). This distinction between positioning phases is useful in that the discursive procedure by which a person is positioned as having (or not having) certain rights and duties is initiated and grounded/justified by an act of positioning as competent/incompetent, trustworthy/untrustworthy, and so on, with respect to performing the type of act in question.

The attribution of personal qualities can be examined according to two different sets of criteria. First: "Is the attribution true?" Bearing in mind how context-sensitive traits of character and personality actually are, the context in which the subsequent positioning is undertaken gives certain plausibility to the relevance of the traits so attributed. Second: "… how relevant are these attributes to the activities to which the positioning is germane?" (Moghaddam & Harre, 2010: 10). According to Harre and van Langenhove (1999), say Nilsson and Brante (2010: 33), "… there should be rights, duties, and obligations as a cluster of moral imperatives around a position." The preference of the *positioning* theory is due to its emphasis to the process and the dynamics of social engagements.

On the other hand, with the *divided subject* theory, Lacan (1966) emphasizes the role of language as a medium in which the subject is constituted as an 'illusion of inner unity'. He says that the subject is split or divided in a fundamental way, and it is through producing a discourse (a 'signifying chain') that the subject tries to overcome ('suture') its constitutive lack. The subject, Lacan argues in *Écrits* (1966), is constituted in the interplay of three registers: the symbolic (language), the imaginary (identifications with the other), and the real (that which resists representation) (Žižek, 1989). Lacan (1966) is of the opinion that the subject is a problem to be explained rather than the solution to a problem (Althusser, 1996). That is to say, if we confront a subject with a problematic issue, chances are that the subject, taking cognizance of the many different factors in our communication, will try to save face and respond in ways deemed appropriate in the situation. In this effort to produce what is outwardly fitting, we see only what the subject allows us to see, and the true feelings of the subject are normally hidden. That is why Lacan (1966) says it is easier to explain the problem to be solved than to explain the subject himself/herself. Now that we have a divisive discourse among climate change scientists, government officials, and non-scientific stakeholders, we are likely to see a lot more of the imaginary and real registers changing places as the subjects position each other.

3. Context and Methods
This study collected and analysed digital data. Bartlett and Milligan (2015) are of the opinion that using digital, web and social networking affords and enhances flexibility in collecting rich data from a wide range of participants. Upon dealing with this kind of data, Thompson (2004) advises keeping the context and environment—e.g., the relationship between the speakers—to help situate the discourse. The study was carried out in Dar es Salaam, Tanzania. The videos used were downloaded following the 2019–2020 heavy rains; and focused on the discourse of climate change scientists, government officials, and the non-scientific stakeholders on adaptation strategies.

The video/clips were gathered from YouTube programmes on flooding. From the 4-hour sessions of the ITV's *Kipima Joto* programme on flooding, two video

clips of 39 minutes from Global TV[3] were downloaded. Others included one 6-minute video clip from Times FM Exclusive,[4] one 6-minute video clip from Times Digital[5] and another 5-minute video clip from AYO TV.[6] All the people in these clips were responding to the diverse effects of climate change in their vicinities. So, the data involved media personalities from different TV stations (as reporters or interviewers), and respondents near or along flooding areas. Some of these respondents had been invited as panel members on the TV programmes. The TV panels comprised a mix of representatives from organs dealing with climate change related projects.

The videos were transcribed and analysed in isolation from concurrent semiotic events in neighbouring areas. This was done on all except the ITV panels that were of studio quality. Then the data were translated from Kiswahili to English. Having done this, anonymity was a primary ethical norm. As discussed by Wray et al. (1998), this practice may extend beyond the modification or removal of individuals' names to the treatment of certain words, phrases or topics that, if traced to a particular participant, may cause him/her harm. Words, phrases or topics were left intact, but individuals' names were removed. The analysis was biased more toward the two *Kipima Joto* debates because these two had participants on the two sides of positioning. The first debate asked: "Recursive flooding for the same reasons and in the same areas every rainy season: Are steps being taken to stop such flooding?"[7] This was hosted by Isaac Mpayo (IM); and sitting on this panel were the Coordinator for the Tanzania Rural and Urban Road Services (TARURA), hereby labelled DK; the Social Analyst, representing the people, libelled BT; and the Town Planning Officer from the Ministry of Lands, Housing and Settlements, labelled KT. The second *Kipima Joto* debate programme asked: "Climate change due to environmental degradation: What should be done to avert society from this catastrophe?"[8] This was hosted by Juliet Robert (JR). Sitting on this panel were the Chief Environmental Officer from the Vice President's Office, hereby labelled FM; the Coordinator of Tanzania Indigenous Peoples' Network on Climate Change (TIPNCC), labelled GS; the Research Manager from the Pastoralist Indigenous Non-Governmental Organizations (PINGO's) Forum, labelled ND; and the Manager of Kuja na Kushoka Manufacturers of Alternative Energy, labelled LK.

Placing these participants in terms of how they fit in the two groups: DM, MK, and KT are for the government and scientific community; while for the non-scientific community are BT, GS, ND, LK, and callers SL (from Arusha), YU

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[3] https://youtube.com/live/75yBxSew01M?feature=share8
[4] https://youtube.com/watch?v=6Bmk9d2cgHE&feature=share8
[5] https://youtube.com/watch?v=WaGZQe9Axrw&feature=share8
[6] https://youtube.com/watch?v=tY2CEaqKYSY&feature=share8
[7] https://youtube.com/live/EfwSNYEVSSc?feature=share8
[8] https://youtube.com/live/ylg5mUYWnng?feature=share8

(from Kigamboni), MB (from Kawe), RM (from Arusha), NC (from Kimara), AS (from Ilala Bungoni) and MN (from Maduka 6 Arusha), ED (from Arusha); and resident MO, GC, SH, SM, HF and KG from Sinza.

4. Results
Results for this paper are presented in Table 1 to show how the two communities attribute each other with negative qualities.

Table 1: Attribution of Negative Qualities

Government & Scientific Community	Non-scientific Community
Citizens are land trespassers (MK).	You give someone a plot in a valley, the government gives him electricity, the same government gives him water, the same government digs a road for him, and there is a local government functioning in these valleys, how do you come and tell this person to relocate to a safer place? (BT).
Unfortunately in our country citizens do not have the culture to stop anyone trespassing. They are ignorant, when they face trouble they will start complaining (MK).	Sometimes we blame citizens unfairly. If they are given plots blocking water flow, fellow citizens will blame these people but they possess all the legitimate documentations. We don't have to blame these people (BT).
Citizens push the burden to the government instead of doing their duties (MK).	Those guys and their town planning are acting some drama. They will cheat us this way with a bulldozer, widening some parts this way but the truth is that the rivers are blocked. Dealing with flooding is like acting in a drama (Caller: YU from Kigamboni).
We will keep blaming BT despite him trying to defend citizens. Citizens deserve blame. They should say no to anyone trespassing. The right to guard against trespassers is constitutional to every Tanzanian (MK).	Our leaders are very problematic. When citizens need the government, they are nowhere to be seen. Those guys speaking in the studio lay down a lot of plans whose analysis will materialize when all of us are dead (Caller: SL from Arusha).
We involve citizens in the basic management development programmes (BMDP) because they are the ones knowing the ins and outs of what they need. We want them to tell us everything, give us their opinions; they have to own the project, and this way they will stop making rivers dumping places. They should know that the project is theirs from their taxes (MK).	BT, are the people involved? (IM, ITV). To tell you the truth, under this fifth phase of government, the president has tried a little bit to involve the people (BT).
Flooding is a result of hard surfaces, from erecting buildings in many places. Flooding happens especially in lower surfaces. Most rivers have been trespassed (KT).	All the natural waterways were trespassed with unplanned settlements because of graft, public servants sold plots in valleys (BT).

I am not defending myself; we are not defending ourselves; we are telling the truth (MK).	The engineer does not have to do politics here. The engineer and the town planner don't have to play clean (Caller: RM).
Why does land trespassing happen in the presence of the government? (IM, ITV).	All street roads in Kimara are impassable. Ever since the fifth phase of government came to power they have not repaired even a single road (Caller: NC from Kimara).
Just like the engineer said, flooding is a cross-cutting issue. As a ministry, we only oversee principles and laws. Immediate planning authorities are city councils, the lands belong to them (KT).	
The issue of floods cannot be impossible to us. It is but a cross-cutting issue. If citizens are ready they will support the efforts by TARURA and there will be no flooding. If citizens are not ready they will vandalize and flooding will continue (KT).	They promised to dig us a tunnel but they have given us a trench (Caller: AS from Bungoni Ilala).
Town planners, where are you? (IM, ITV). We are always around listening to solve peoples' problems (KT).	Mto Ng'ombe [a river] has been a long-time problem and this bridge at Kamanyola has been a problem for years. This is the real situation: houses are not habitable and businesses are closed down. The government should look at us with both eyes since Mto Ng'ombe is a big problem. The government should cooperate (Sinza, Global TV).
The government's efforts are collaborative, it doesn't work alone, we work with other stakeholders. For example, on planting trees, private individuals plant their trees and the government does so on its own lands, like SAO Hill in Iringa (DM).	The meteorological authority issues forecast when it is about to rain, yes, but where should we go? We have wives and children without money or anything. These forecasts are for other people, not us (MO, Jangwani, Global TV).
	The government must recognize that the situation is getting more chaotic. Life is getting more difficult and people are giving up. They are frustrated. From June last year, this is the fifth flood. Are we really serious? What do we look like on this face of earth? Citizens have to be shown that something is getting done. The government should spare us this shameful spectacle. If there are leaders out there, why does this repeat now and then? We ask them to look at this with a third eye (GC, Jangwani, Global TV).
	The project to stop floods should be hastened. According to schedule, it should have started March last year (SH, local government leader Suna Street, Magomeni, Global TV).
	I have lived in Magomeni for 30 years. We have a lot of learned people here, they have lots of 'degrees' [academic achievements] but they can't use even the little brains they were born with. A long time ago… the river was deep. Now you can walk from here to Kiwalani, everyone knows it is

possible because the river is full of sand. Now you ask yourself, 'Why is it that even the little brains can't be used to scoop the sand?' We have learned people with hundreds of degrees, but they can't use their brains (SM, Magomeni, Global TV).

Journalists in Tanzania get to the scene when the occasion is over, and then there is a miscommunication of the event between journalists and citizens. What do journalists do in Tanzania? (KG, business-person in Kimara, Times FM).

The government should intervene (HF, Jangwani, Global TV).

We should take our experts to Holland, China, and Japan to learn how to fight floods. It is a crying shame for a country surrounded by an ocean to get flooded only 5 kilometres from the ocean. We have to look at the city, it is a shame to tell people that Kawe gets flooded while it is that near the ocean (BT).

The experts nowadays don't do calculations to tell whether there is too much sand down below the surface before erecting a building (Caller: MB from Kawe).

When town planners in other countries want to apportion a plot to someone they have to explain everything, such as whether there are impending dangers. They would even tell you if the place you wanted to take was under sea level. Ours don't do that at all. This cost a lot of people, like the 'mzungu' at Ununio had to abandon his flat, car and everything therein, and a Somali man suffered a similar ordeal. Public servants stashed money and went away peacefully (BT).

Dar es Salaam is as big as the three countries of Rwanda, Burundi and Malawi put together, so you need a bigger budget for it (BT).

BT, is education given about the environment before building? (IM, ITV).

To tell you the truth, no education is ever given (BT).

When the government and other authorities try to fight droughts that is where herders and hunters find themselves in trouble. They are turned into culprits. They are blamed as the ones at the forefront of causing climate change. We at PINGO's Forum elaborate clearly to the citizens that they are not the major reason for climate change. In most places where they operate the environment is not degraded, forests are still intact. For example, the land is still virgin at Yaeda Chini. This negative notion has continued to be embraced by policy makers, that herders and hunters contribute the most to environmental degradation (ND).

I would like to differ with my friend who advocates the use of physical force. In the Soviet era one industry had an order of 50 tons of nails but because of bullying behaviour, workers produced 5 mega nails each weighing 10 tons. These nails were too big to fulfil what was intended. So it is

	good to have discussions and out of these discussions we come out with 'inclusive' policies. For example, when there is draught, it affects herders negatively but when it comes to writing policies, we intend to bully herders (ND).
	Are there any bullying policies? Sorry, slowly, are there policies that are bullying? (JR, ITV).
	There are lot of examples. In 1993 Ruaha river couldn't overflow and this led to panic which led in 2006 to relocation of people from Ihefu. Only later studies came to reveal that herders were not responsible (ND).
	Citizens should be given education on preserving the environment. Another reason for environmental degradation could be life hardship. Inclusive education is needed (Caller: ED from Arusha).
	When the vice president attended the Environmental Debate in Tabora he ordered that all executive directors should start youth groups to produce alternative charcoal. Now, have all the directors received letters? (LK).

Source: Field data, 2021**.**

5. Discussion
The discussion for this paper starts with a synthesis of the two groups attributing negative qualities to each other. The synthesis is followed by the discussion in line with the two criteria of the *positioning* theory: first, whether the attributions are true; and second, how relevant are these attributes to enhancing resilience and adaptation strategies. The *divided subject* is used throughout the discussion of the attributions. Here we look at how these interlocutors produce a discourse trying to overcome their constitutive lack. We begin with the government and science community attributing negative characteristics to citizens: the non-scientific community.

5.1 The Government and Scientific Community
The government and scientific community say that the non-scientific community is an unwitting and obfuscating agency (lazy and pushing everything to the government), and that it is the major accelerator of climate change effects. They claim that citizens are unwitting because the government and science group 'work so hard to involve them' for them to stop vandalizing climate change related projects. These citizens, they add, "do not have the culture to stop anyone from trespassing. They are *ignorant"* (MK). The scientists and government insist that citizens deserve blame because they do not enforce "their constitutional right to guard land from trespassers" (MK). They add that, when citizens do not take responsibility and the land is trespassed, they blame it on the government.

The scientists and government also argue that flood control is a cross-cutting issue that involves a number of actors; however, the only group they find hard to handle is that of citizens. They say, for example, that "if citizens are ready

to cooperate, they will support the efforts by TARURA and there will be no flooding. If citizens are not ready, as they are not now, they will vandalize and flooding will always continue" (KT).

5.2 The Non-scientific Community

The non-scientific community say that, first, the learned community lays down a lot of plans whose realization is not guaranteed (SL). They cannot do calculations before work begins (MB), and their plans lack reality "just like they are acting some drama" (YU). Also, a lot of them have gone to school but one cannot see how this schooling helps society (SM). When they come to a meeting for serious issues they try to play clean (RM). Some in the non-scientific community think that these 'learned' people need to be sent away to some western countries for exposure on flood control (BT).

Second, they say that the government is evasive. For example, it allocates plots where it should not, "the government gives people electricity, the same government gives them water, builds a road for them, and there is a local government functioning in these valleys…," hence, it is *illogical* to blame such persons as trespassers. These blames are misdirected because the so-called 'trespassers' possess all the legitimate documents (BT).

Third, they say that the government has not been involving its people. BT sees the fifth phase government as the one that had *tried a little* to involve citizens. The governments in the phases before did not involve people at all. That is why one of them says: "… the government *must recognize* that the situation is getting more *chaotic*. Life is getting *more difficult* and people *are giving up*. The people are *frustrated*" (GC). Similarly, they point out that, a certain river in Sinza has been *a problem for a long time;* and a bridge *has been a problem for years*. Also, according to the HF (from Magomeni) the project to stop floods that should have started in March of the previous year was taking too long to start. The citizens further question: "… if there are leaders out there, why does this repeat now and then? We ask them to look at this *with a third eye*" (GC). Too, people in Kimara are complaining that since the coming to power of the fifth-phase government all street roads in Kimara are impassable because not a single road has been repaired (NC). The public suggests having discussions that will come out with 'inclusive' policies. An example of non-inclusive action includes the case when *Mto Ruaha* did not overflow in 1993, this led to the eviction of people blamed for this from Ihefu in 2006; only for later studies to reveal that herders had not been responsible for the mishap (ND).

Fourth, the non-scientific community says that despite the government's effort to fight droughts, no education is given to the people on climate change and adaptation strategies. This is why the PINGO Forum took the responsibility to

"… elaborate to the citizens that they are not the major reason for climate change." Asked by the TV host if citizens are given education on climate change, BT responds "… to tell you the truth, no education is ever given." Calling in, ED says: "Citizens should be given education on preserving the environment."

Lastly, the citizens say that the government is corrupt. Citing an example of this, Asha says: "They promised to dig us a tunnel but they have given us a trench." BT also says, "All the natural waterways were trespassed with unplanned settlements because of graft, public servants knowingly sold plots in valleys" (BT). Through corrupt practices, these officials gave a '*mzungu*' (white man) and a Somali man land plots below sea level at Ununio, which in the end cost these foreigners for they abandoned their cars and houses, running away from floods.

5.2 Positioning and the Divided Subject
Moghaddam and Harre (2010) want us to answer two questions: (i) "Are these attributions true?" and (ii) "How relevant are these attributes to the activities to which the positioning is germane?" Answering the first question does not benefit this paper, in a sense that the purpose here is to determine whether the subjects in their groups accept the blame of accelerating climate change effects than whether the attributions are true. This is where Lacan (1966) comes in with the *divided subject* theory. We need to see here how some speakers are constituted as an 'illusion of inner unity' to explain why it is difficult for us to say whether these attributes are true. To see and understand the interlocutors (subjects) producing discourse (the symbolic register) to support the imaginary, which identifies with the other, and the real register, this paper borrows the concept of context (Halliday & Hassan, 1990) to explain the spheres these groups inhabit. Halliday and Hassan (ibid.) divide context into two: context of situation (CS); and context of culture (CC).

The *context of situation* is further divided into *field of discourse* (e.g., discussion of climate change effects in Tanzania), *tenor of discourse* (e.g., the scientific and non-scientific communities), and *mode of discourse* (i.e., what these subjects use language to accomplish). Now, with regard to the *context of culture*, all the participants for this study share the *context of culture* as Tanzanian stakeholders with more or less the same members' resources. It is with the *context of situation* that we see differences, especially at the *tenor of discourse* and *mode of discourse*. How participants relate (scientists and government vs the non-scientific Tanzanians) affect the kind of discourse between these two groups. They even differ in manipulating the *mode of discourse*, especially when it comes to positioning and switching places between the real and imaginary registers.

Despite being the ones beseeching, the non-scientific group is freer with their choice of words, and positions the scientific and government group as being

corrupt, incompetent, bullying, and the one obfuscating responsibilities. This might be due to the fact that some of the members in the non-scientific group air their views through the phone, thus enjoying the privilege of distance and anonymity. Some of the speakers talk through the journalists and therefore their positioning might be easy to produce. The scientific group talks more formally, explains things more, and positions less. They represent the government. This group is confined in the studio and before the camera. This sensitivity may have affected what the interlocutors say; but it is still difficult to say that what the subjects say here, being more of the imaginary, is anywhere closer to the real register. Sometimes, however, there is a vivid mixture of the imaginary and real registers.

An example of the mixture of the imaginary and the real register would be BT hesitating in two separate occasions, and prefacing his response with '*kusema ukweli'* (to tell the truth) when he needs to open up about the government not providing education about climate change; and again, to respond that the government does not involve the people. He endeavours to say that the citizens are not to blame. He uses the exclusive 'we' in"

> "Sometimes *we* blame citizens unfairly. If they are given plots blocking the water flow, fellow citizens will blame these people; but they possess all the legitimate papers. *We* don't have to blame these people" (BT).

At this stage one sees some effort to produce the discourse that supports the imaginary register: the need to identify with the government and science community. On the other hand, Asha says "*they* promised us a tunnel but *they* have given us a trench," instead of mentioning the *government*. Here, the *they* versus *us* polarity is clear. This is an example of the real register: that which resists representation.

We see purer cases of the real register from the government and science community when announcing their resistance as they say "We will keep blaming BT despite him trying to defend citizens. Citizens deserve blame" (MK). The non-scientific community is less apologetic with the real register. Resisting identification with the scientific community, we hear "Those guys and their town planning are acting some drama. They will cheat us this way with a bulldozer… Dealing with flooding is like acting in a drama" (YU). Regarding the scientific community's education, we hear:

> "We have a lot of learned people here, they have so many degrees [academic achievements] but they can't use even the little brains they were born with … Now you ask yourself, why the little brains cannot be used to scoop the sand? We have learned people with hundreds of degrees, but they can't use their brains (SM).

According to BT, it maybe because of such above 'incompetence' that we "… should take our experts to Holland, China and Japan to learn how to fight

floods." Most of the positioning has happened in the real register, and as mentioned before, more by the non-scientific community. Again, the truthfulness of attributions either way cannot be ascertained; but we can say for certain that there is no love lost between these two groups, and this might be a motivator to this kind of discourse.

Now, moving to the second question: how relevant are these attributions to enhancing resilience and adaptation strategies? Tanzania, like other poor countries, needs to create a more inclusive and productive conversation to develop a fundamental understanding of climate change. There is need to gather the community for knowledge generation process, to manage the boundary between knowledge and action, and to cogenerate usable knowledge (Dilling & Lemos, 2011; Gibbons et al., 1994; Hessels & van Lente, 2008; Hirsch Hadorn et al., 2006). The country needs to open up the communication process in which participants own the process and content of communication. Such communication will shift it away from mere persuasion and notions of information transfer as we have seen in the data.

The non-scientific stakeholders need to be part and parcel of this communication, following closely their understanding and needs that are particular in their context. On the question of climate change, the community is divided between those with knowledge and those without it; and the attributions show that this education does not cross the line as it should. This is despite the fact that a good number of Tanzanian scholars (e.g., Misana & Tilumanywa, 2019; Andrea & Kangalawe, 2018; Hassan & Othman, 2019; Kangalawe, 2012; and Kihila, 2018) indicating good levels of awareness on climate change and various adaptation strategies in different parts of the country. The scientific community should ask itself questions such as: How does the non-scientific community understand climate change? How do we promote adaptation strategies to people that do not trust us? How do we decide on the adaptation and resilience strategies with people who understand us as two-faced, incompetent and bullying?

On the other hand, the government needs to offer more training to climate change scientists knowing that even conventionally trained scientists and societal actors have difficulty in dealing with climate change issues (Hirsch Hadorn et al., 2006). Tàbara and Chabay (2013) add that it is hard to understand science mainly because traditional science often delivers only meticulously separated information. The frustration seen as a failure of the general public to understand and appreciate the seriousness of the climate change issue might be the reason for the attribution of negative qualities by either side, and the government should always strive for a better-informed public. Of concern, for example, is the fact that in the four-and-half hours of

debate, not a single participant (scientific or non-scientific) drew on the ample literature and government's directives on climate change, like the National Climate Change Communication Strategy for 2012–2017.

From the above attribution of negative qualities back and forth, we can either question the level of awareness on climate change resilience and adaptation issues, or decide that the interlocutors were producing discourse in an attempt to overcome their constitutive lack. If we go with the second part, then we agree with Tanzanian scholars (e.g., Misana & Tilumanywa, 2019; Andrea & Kangalawe, 2018; Hassan & Othman, 2019; Kangalawe, 2012; and Kihila, 2018) that the level of awareness is up; but hastily add that these attributions are relevant to enhancing resilience and adaptation strategies because they call us to listen. If such attributions go unheeded, they are likely to keep Tanzania wobbling to create a resilient society. There is a need for facilitation of communication between climate change science and the society (i.e., the non-scientific audience), otherwise fighting effects of climate change and the promotion of adaptation strategies will end up in vain. The state needs to remember, in line with what Lacan (1966) says, the interlocutors in this paper are likely to be more of a problem than climate change itself; so, a closer look at the issue of climate change, adaptation strategies and the actors' communicative capacity is necessary.

6. Conclusion

This paper examined the discourse of climate change scientists, government officials, and the non-scientific Tanzanian stakeholders on climate change effects and adaptation strategies after the 2019–2020 heavy rains. This discourse ended up being divisive as the science and non-scientific groups attributed negative characters to each other for accelerating climate change in Tanzania. These attributions have shown the scepticism between the government-scientific community and the non-scientific community; and also, the need for the government to step in with communicative efforts to get the two groups working together otherwise fighting the effects of climate change and the promotion of adaptation strategies will not succeed. The National Climate Change Communication Strategy for 2012–2017, or any such document, has not had any impact in the discussion. The shifts between real and imaginary discourse, decorated with attributions of characters, stands as the possible eye opener to what is going on about the climate change issue. It shows us that the scientific and non-scientific communities need a real conversation if a resilient society for confronting challenges of climate change is to be built.

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