CERAH working paper

The contribution of anthropology during the operational response to an Ebola outbreak

An analysis of the West African Ebola epidemic

Valérie Davidoff

CERAH Working Paper 39

2015 – 2016

CERAHGENEVE
Centre d'enseignement et de recherche en action humanitaire de Genève
Geneva Centre for education and research in humanitarian action

a Joint Centre of

THE GRADUATE INSTITUTE GENEVA
INSTITUT DE HAUTES ÉTUDES INTERNATIONALES ET DU DÉVELOPPEMENT
GRADUATE INSTITUTE OF INTERNATIONAL AND DEVELOPMENT STUDIES

UNIVERSITÉ DE GENÈVE

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Dissertation
Master of Advanced Studies in Humanitarian Action

Academic Year 2015-2016

The contribution of anthropology during the operational response to an Ebola outbreak
An analysis of the West African Ebola epidemic

Submitted by
Valérie DAVIDOFF

Examining Board:

Supervisor: Mrs Valérie Gorin
President of the Board: Prof. Isabelle Milbert
Expert: Dr Anne Golaz

September 2016

CERAH
a Joint Centre of
THE GRADUATE INSTITUTE | GENEVA
INSTITUT DE HAUTES ÉTUDES INTERNATIONALES ET DU DÉVELOPPEMENT
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Abstract

This paper analyses the anthropological contributions to the Ebola outbreak response from the 2000s until today. The recent West African Ebola outbreak is used as a case study to see if past findings and recommendations have been taken into account, and how.

The first part of this paper reviews selected literature on the topic, while the second part, which is fed by interviews, questions the findings in the literature to determine the knowledge gaps and/or the limits in anthropology for better responses in the future.

The approach used by pioneering anthropologists in the 2000s was still being used during the last outbreak in West Africa, despite some past criticism. From a positive side, the approach has helped to improve the response while being culturally more appropriate and therefore more efficient. At the same time, taking local knowledge into consideration and integrating the communities might help to reduce misunderstandings and potential resistance towards response teams.

Despite these recommendations, a question remains as to how the humanitarian actors (including MSF and the WHO) have integrated this advice (or not) into their response.

The findings in this paper indicate that anthropologists and humanitarian workers have attempted to collaborate during the last outbreak; however, efforts still need to be done to reach an anthropology that might be "humanitarian friendly" and used as a toolbox.

Keywords

Ebola; anthropology; MSF; WHO; operational response; West African Outbreak; "outbreak anthropology" ; "culturalist approach" ;

Acknowledgements

I am grateful to my supervisor Valérie Gorin for her guidance, her thoughtful comments and insights throughout the process.

I also would like to express my gratitude to all the persons I have interviewed. Their valuable inputs, insights and advice have added to this paper and this research would not have been possible without their contributions.

I also wish to thank Beatrice Frey who helped me with proofreading meticulously the English.

Finally, I am also grateful to my family, husband and daughter for their patience, support and constant encouragement during all the process.

Acronyms:

- CDAC Network: Communicating with Disaster Affected Communities Network
- CDC: Centers for Disease Control and prevention
- DRC: Democratic Republic of Congo
- EHF : Ebola Haemorrhagic Fever
- ERAP: Ebola Response Anthropology Platform
- EVD : Ebola Virus Disease
- GOARN: Global Outbreak Alert Response Network
- IHR: International Health Regulations
- IO: International Organisation
- IRD: Institute of Research for Development
- MHF: Marburg Haemorrhagic Fever
- MoH : Ministry of Health
- MSF: Médecins Sans Frontières
- NGO: Non-Governmental Organization
- PPE: Personal Protective equipment
- UN: United Nations
- UNMEER: United Nations Mission for Ebola Emergency Response
- UREPH: Research Unit on Humanitarian Stakes and Practices
- VHF: Viral Haemorrhagic Fever
- WHO: Wold Health Organisation

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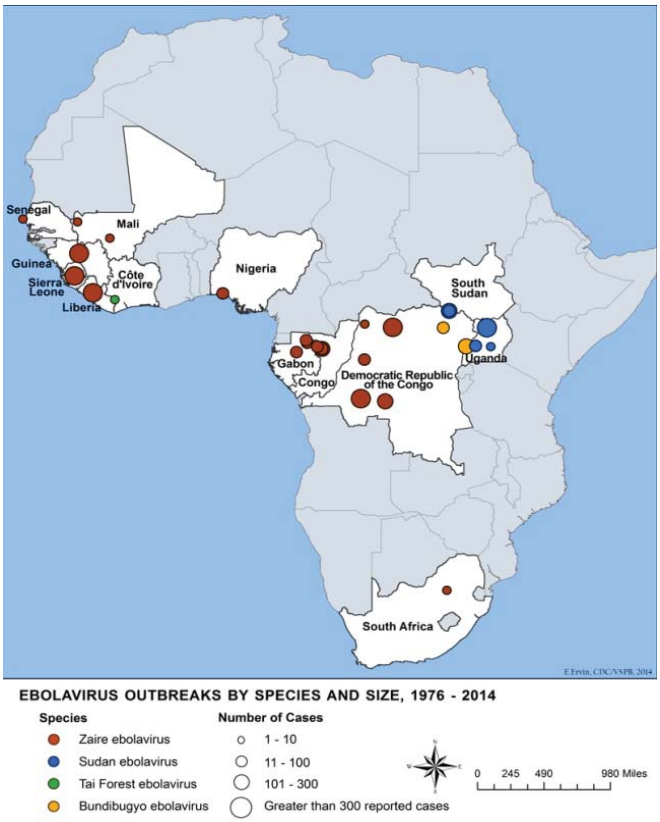
Part One: Literature Review

I. Introduction

Ever since the Ebola virus disease (EVD) was first detected in 1976, the recent outbreak that mainly hit three West African countries (see *Map 1*) – Guinea, Liberia and Sierra Leone – with the first cases identified in March 2014, has had specific characteristics that has made this epidemic unique until today: "It is now commonplace to say that the 2014-2015 epidemic (…) has been 'unprecedented', owing to its magnitude, societal impact, regional dimension and international spread" (Calain and Poncin 2015, 126).



***Map 1:* Ebolavirus outbreaks by species and size, 1976-2014**
http://www.cdc.gov/vhf/ebola/outbreaks/history/distribution-map.html

As can be seen in *Table 1* and as mentioned in the WHO factsheet, "the current outbreak in West Africa is the largest and most complex Ebola outbreak since the Ebola virus was first discovered in 1976. There have been more cases and deaths in this outbreak than all others combined" (WHO 2015). This epidemic was new from different perspectives: it was the first time that an outbreak had occurred in those countries, with very large-scale and widespread coverage,[1] hitting remote villages as well as large cities and capitals with high population densities, important ethnic diversity and mobility of the populations among those three countries (*see Table 1*). Furthermore, these three hardest-hit countries were recovering from conflicts or civil wars and have poor or almost non-existent health systems (Chan 2014). Therefore, facing the epidemic had challenges and enormous needs. Multiple difficulties have been faced, notably resistance and distrustful attitudes towards relief

[1] 28 599 confirmed, probable, and suspected cases have been reported in Guinea, Liberia, and Sierra Leone, with 11 299 deaths since the onset of the Ebola outbreak WHO, Ebola Situation Report, 11 November 2015.

organisations and medical staff, and humanitarian workers have called upon social scientists, *inter allia* anthropologists,[2] to assist with solving those problems.

Country	Town	Cases	Deaths	Species	Year
Multiple countries	**Multiple**	**28635**	**11314**	***Zaire ebolavirus***	**2014**
Dem. Rep. of Congo	Multiple	66	49	*Zaire ebolavirus*	2014
Uganda	Luwero District	6*	3*	*Sudan ebolavirus*	2012
Dem. Rep. of Congo	Isiro Health Zone	36*	13*	*Bundibugyo ebolavirus*	2012
Uganda	Kibaale District	11*	4*	*Sudan ebolavirus*	2012
Uganda	Luwero District	1	1	*Sudan ebolavirus*	2011
Dem. Rep. of Congo	Luebo	32	15	*Zaire ebolavirus*	2008
Uganda	Bundibugyo	149	37	*Bundibugyo ebolavirus*	2007
Dem. Rep. of Congo	Luebo	264	187	*Zaire ebolavirus*	2007
South Sudan	Yambio	17	7	*Zaire ebolavirus*	2004
Republic of Congo	Mbomo	35	29	*Zaire ebolavirus*	2003
Republic of Congo	Mbomo	143	128	*Zaire ebolavirus*	2002
Republic of Congo	Not specified	57	43	*Zaire ebolavirus*	2001
Gabon	Libreville	65	53	*Zaire ebolavirus*	2001
Uganda	Gulu	425	224	*Sudan ebolavirus*	2000
South Africa	Johannesburg	2	1	*Zaire ebolavirus*	1996
Gabon	Booue	60	45	*Zaire ebolavirus*	1996
Gabon	Mayibout	37	21	*Zaire ebolavirus*	1996
Dem. Rep. of Congo	Kikwit	315	250	*Zaire ebolavirus*	1995
Côte d'Ivoire	Tai Forest	1	0	*Taï Forest ebolavirus*	1994
Gabon	Mekouka	52	31	*Zaire ebolavirus*	1994
South Sudan	Nzara	34	22	*Sudan ebolavirus*	1979
Dem. Rep. of Congo	Tandala	1	1	*Zaire ebolavirus*	1977
South Sudan	Nzara	284	151	*Sudan ebolavirus*	1976
Dem. Rep. of Congo	Yambuku	318	280	*Zaire ebolavirus*	1976

***Table 1*: Cases of Ebola Virus Disease in Africa, 1976 – 2014:**
http://www.cdc.gov/vhf/ebola/outbreaks/history/distribution-map.html, 17.11.2015
**Numbers reflect laboratory confirmed cases only*

Among the angles to tackle the epidemics, anthropology has provided an important input in reducing barriers and improving the links between humanitarian actors and local communities. Therefore, this paper specifically focusses on the anthropological contributions to the operational response and the claims by anthropologists themselves, who argued about the added value of their discipline in the EVD outbreak response. This "outbreak anthropology"[3] includes a culturalist[4] perspective that is essential for guiding the operational response to EVD and is valid in three fields: community engagement, mediation and flexibility in applying biomedical models (Calain and Poncin 2015, 127).

From the first outbreak in 1976 until the last epidemic in 2012, some research work and improvements in clinical care have been made in the medical response to EVD. This is especially the case for the 1995 outbreak in Kikwit, (DRC), with regard to areas such as epidemiology, virology, surveillance and medical care.[5] These advancements have also provided the impulse to revise the International Health Regulations (IHR) (Formenty 2006). In

[2] One of the specificities of this last epidemic is that various organisations have hired anthropologists (Faye 2015b, 3). According to Moulin, this is the first time that social sciences have been explicitly called upon to be part of the response (2015, 3).

[3] The Hewletts spoke about "outbreak ethnography" (2008), but for the purposes of this paper, the term "outbreak anthropology", used by Leach (2008, 13), will describe the approach used during EVD outbreak response.

[4] The "culturalist approach" in anthropology is aimed at explaining social phenomena through culture. For the purposes of this paper, culture will be defined "as knowledge and behaviours transmitted and acquired through social learning" (Hewlett and Hewlett 2008, 13).

[5] For further development on medical improvements see Guimard et al. 1999; Roddy et al. 2007; Formenty 2006.

addition, the WHO established the GOARN,[6] a worldwide framework for rapid response, in 2000. Although medical improvements have been made, gaps remain regarding the anthropological perspective.

Starting in the 2000s with Hewletts' initiative, some anthropologists have claimed to be part of the response team, which represent a turning point[7] for medical anthropology regarding EVD contributions, and some of the main concepts and findings belonging to "outbreak anthropology" have been integrated into the responses from this period. While outbreak anthropology has clearly shown its advantages and seems to have proven its efficiency in the response since the Hewletts first used it in Gulu, Uganda, in 2003, this approach shows some limits and has also raised criticism, despite attempts to innovate, invest and improve: "the public-health response to outbreaks of the Ebola and Marburg viruses (…) has essentially remained the same since the first verified occurrence of EVD in 1976" (Calain and Poncin 2015, 126). Despite these critiques against the culturalist perspective of outbreak anthropology, anthropologists played a leading role in the last EVD outbreak in West Africa (Moulin 2015, 10). They "have been hired with the hope that they could suggest ideas in order to avoid reactions linked to ignorance or linked to the humanitarian workers awkwardness" (Calain & Poncin 2015, in Moulin 2015, 3). They were part of the response team, and their ethnographic insights were sought "with the hopes of garnering these community resources" (Almudena, Brown, and Kelly 2014, 1).

Therefore, this paper is aimed at putting this privileged anthropological approach within the 2014 West African outbreak into perspective, to see its advantages and limits. Even though anthropology appears to be a "key component" in the response today, this paper will analyse, through a literature review, some of the past findings (notably those of MSF and the WHO) of outbreak anthropology to assess how and if they are relevant in the new, complex operational context of 2014. This paper thus seeks to answer the following three questions:

1. What was the anthropological contribution to operational response in the Ebola outbreaks in Africa before 2014?
2. What has anthropology's contribution been to the recent EVD outbreak in West Africa?
3. What are the knowledge gaps to be filled and/or the limits of the outbreak anthropology to better respond to the next Ebola outbreak?

[6] It has the ability "to collect the relevant information on infectious diseases, to detect rapidly new outbreaks and to coordinate the international response" (Formenty 2006, 333).

[7] This turning point refers to the fact that it was the first time anthropologists are part of the response team.

a) The rationale

The common reason for choosing MSF and the WHO is that they are both medical organisations that have been involved in the West African outbreak, although with different roles in the epidemic response. The reasons specific to MSF are: it has been in the frontline[8] since the beginning of this last epidemic, has gained experience while working over the past 20 years on EVD outbreaks (Roddy et al. 2007; MSF 2015) and has worked with anthropologists since the 2000s. MSF also advocates for anthropological studies and reflexions as seen, for example, in the book (Abu-Sada 2012) or in the booklet (Janssens (dir.) 2011). Regarding the WHO, the health organisation has developed and standardised a set of medical and public health strategies to contain the disease since the 1990s (Leach 2008, 9). Indeed, the WHO usually has "a leading role in protecting international public health and it is well known that its expertise lies in its normative work and technical advice to countries worldwide" (MSF 2015, 8). However, even though "its ability to respond to emergencies and outbreaks is less robust, lacking the human resources and emergency preparedness to hit the ground running and care for patients" (*idem*), humanitarian workers from MSF finally recognised that the WHO intervened in the field for the first time in 2014 with the UNMEER and deployed a massive response, although very late (MSF 2015). Finally, the WHO has been the first organisation to include anthropologists in the response team from the 2000s and to consider them as a key pillar in their response.[9]

b) The methodology

The research is based on a qualitative analysis of data collected through a literature review (books, academic articles, anthropological reports, working papers, guidelines and reports from MSF and the WHO) and through interviews. The methodology to identify relevant literature consisted of an initial search on the databases[10] Google Books or Google Scholar using the terms "anthropo & Ebola", "anthropology & Ebola" or "haemorrhagic fever & anthropology". The search has been limited to English and French languages. Articles on other haemorrhagic fevers have not been excluded, hence the use of references to Marburg and Lassa in this paper. In order to find recent literature on the West African Ebola outbreak, the same methodology has been used with the addition of articles on two *Knowledge Sharing Platforms*[11]: the *Réseau*

[8] MSF had to assume a leading role that the organisation was not ready to undertake, because the outbreak was too big, and because this role was one of the states with the WHO but not the role of MSF (MSF 2015, 7).
[9] Interview with the WHO Director of Outbreak Alert and Response Operations (Leach 2008, 15).
[10] The following Databases have been consulted: RERO, Revues.org, AnthroSource, CAIRN and JSTOR.
[11] Those *Knowledge Sharing Platforms* are explained later on in this paper.

Ouest Africain SHS Ebola and the *ERAP*. As new contributions on those *Platforms* are numerous and probably still ongoing at the time this paper is written, articles have been chosen to take into account the new topics studied, their singularity or the recurrence of their quotes. References up to June 2016 have been included. This paper focusses only on anthropological contributions applied to the operational response. The methodology for the interview is explained at the beginning of Part Two.

This short introduction, aimed at setting the research framework, is part of Part One. Section II focusses on the literature review related to the anthropological contribution to the operational response in past Ebola outbreaks, while section III tackles the anthropological contributions to the last EVD outbreak in West Africa. Part Two is fed by interviews and tackles knowledge gaps and new reflections in anthropology to better respond to the next Ebola outbreak.

II. The anthropological contributions to operational response in past Ebola outbreaks: overview of the literature

a) Before the West African outbreak in 2014

Most literature found before 2014 is academic, with peer-reviewed articles and books (19/24). The latter are written by scholars who are also mostly practitioners. Most papers (14/24) are written by anthropologists or by a pluridisciplinary team, whereas the five (05/24) remaining references are from a different perspective, mainly medical. They give important information on the medical response in general as well as its challenges, failures and improvement. 4/24 references do not specifically deal with Ebola; they have been chosen because they explain the link between humanitarian action and anthropology. All references except one (23/24), amongst them two WHO Guidelines, have been written between 2000 and 2014, which shows, as explained under b) hereafter, the emergence of a context favourable to anthropology amongst humanitarian workers just like from the 2000s.

b) From “collaboration” to outbreak anthropology during EVD

In this paper, two spheres of work are tackled: the humanitarian action and the anthropology. The aim of this section is not to explain those two disciplines in detail but rather briefly describe the link between them and understand the reasons why they have shown an interest with each other, while also speaking about the operational response. The interest of development and humanitarian organisations for anthropology began to be shown during the 80s. From this period, the main IOs and NGOs will note an increasing gap between the

humanitarian actors and the beneficiaries' expectations and priorities. In addition, local communities were sometimes making resistance[12] to the external interventions because they omitted the beneficiaries' specific needs. Furthermore, humanitarian actors noted that a *top-down* attitude was not integrating their specific needs. Lastly, the international organisations have thought that a better participation of local communities could be the key to their success. This is the reason why they started the collaboration with anthropologists, in order to get help with the participative approach[13] (Atlani-Duault and Vidal 2013, 23–24). For this reason, anthropologists have been increasingly involved in what has been called the *development anthropology*[14] and thought that new ways of thinking the aid relief system could be applied to aid projects (*idem*, 24). As explained in the following quote, "la question de l'adaptation de l'anthropologie à l'aide humanitaire traverse depuis longtemps ce secteur en quête d'une meilleure approche de ses terrains d'action d'une meilleure compréhension de ses bénéficiaires et d'une meilleure adéquation de ses programmes" (Stratigos 2015, 83). Medical anthropology is also concerned with this new impulse from the 80s onwards because, firstly, the important anthropological theories began to spread and, secondly, because public health actors increasingly felt the need to better understand the targeted populations and communities where they work. Since the 2000s, organisations such as the WHO have been working with dozens of anthropologists, and this discipline became an essential instrument for multidisciplinary teams in organisations dealing with public health; almost all the medical specialities, such as epidemiology, have their own anthropologists (Atlani-Duault and Vidal 2013, 33, 156–60).

c) Applied medical anthropology for operational response

i. *Inventory from 1976 to the 2000s*

According to the literature found, from the first 1976 outbreak identified in Yambuku, DRC until 2000, no anthropologists have been involved in an EVD outbreak response. Anthropologists (Breman et al. 1978 and Close 1995 in Hewlett and Hewlett 2008, 103) have been doing some research work regarding EVD, but they were not part of a response team. The reasons for their absence could be: the rapid nature of the outbreak and the intervention that seems to be in contradiction with the nature of a long-term anthropological study (Desclaux 2006; Hewlett and Hewlett 2008; Brown and Kelly 2014; Faye 2015a; Moulin 2015; Guppy

[12] More details, specifically on resistances to EVD response, are described in Part Two, III b) *iii.*

[13] Participative approaches sustained by anthropologists have raised criticism, particularly the "culturalist" approach. For further development, see (Atlani-Duault and Vidal 2013).

[14] This methodology refers to an anthropology directly involved in the application, thus providing expertise that is usable and especially effective for development agencies seeking to improve the implementation of their projects on field application (Atlani-Duault 2009, 19).

2015); structural reasons such as human resources issues (Hewlett and Hewlett 2008, Chapter 9); or the "perceived" lack of efficiency of anthropology contribution in opposition to "strong science" (Epelboin 2009; Abramowitz 2014). However, other anthropologists and scientists have explained what their collaboration could bring, as exposed in section c) *iii* (Desclaux 2006; Leach 2008; Epelboin 2009; Berliner 2004; S. Abramowitz 2014; Hewlett and Hewlett 2008; Moulin 2015; Brown and Kelly 2014; Faye 2015a).

ii. The 2000s and the outbreak anthropology

From 2000–2001 onwards, the Hewletts are the first academic anthropologists to be invited and sent to the field by the WHO in order to participate in a pluridisciplinary response during an EVD outbreak after strongly insisting to be included, as they thought anthropology was very important in the operational response. The aim of the first field study was 1) to describe local "explanatory models"[15] of EVD; 2) to help the WHO with topics of concern (e.g., the burial practices); and 3) to identify and describe local or international beliefs and practices that were health-lowering or health-enhancing (Hewlett and Amola 2003, 1242). During this decade, these pioneering anthropologists developed a new medical anthropological approach to help in the response that became known as outbreak anthropology. First of all, this approach requires an extensive knowledge of the context, specifically of the disease itself. While responding to an outbreak, anthropologists try to understand how the local population perceives and responds to this specific disease with its own indigenous ways. The Hewletts realised that the practices used by the local population were not all dangerous and that their enhancing practices had to be identified and promoted. Another aspect of this outbreak anthropology has been developed. As Epelboin (doctor- anthropologist who did several field researches during EVD outbreaks) explained through his field work, anthropologists try to help improve the "humanisation" of the intervention throughout the response process (Epelboin et al. 2007; Hewlett and Hewlett 2008). This is the so-called "clinical medical anthropology".[16] In this regard, strong emphasis is placed on respect, empathy and trust and on the importance to gain confidence between the different actors and the local population.

A positive outcome of this anthropological focus in EVD was the development of inclusive and participative approaches combining scientific and local knowledge in order to avoid negative reactions, fear, distrust and even violence (WHO 2010), because outbreak control also depends on the collaboration of the community and its willingness to cooperate with the response team

[15] The "cultural or explanatory model" can shortly be described as the way a population explains, perceives and responds to a disease. See the "Cultural or Explanatory models" in the Annexe for further development.
[16] See the "Clinical Medical Anthropology" Annex for further development.

(Roddy et al. 2007). A *top-down* approach in order to "educate" people and control measures put into place only by external actors can face resistance from the local communities (Leach 2008, 13). For example, the 2005 MSF intervention in Angola had to be modified because they focussed too much on biosafety measures, which caused resistance. They temporarily suspended their activities and reviewed their strategy: they took the WHO protocol, which was culturally more adapted for the burial for instance.

However, even though this approach is recognised as having contributed to the improvement of the response and is still relevant and influential today (Leach 2008, 15), it has also received some criticism,[17] mainly because of its neo-colonialist perspective (Stratigos 2015; Jones 2011; Leach 2008), the difficulty to culturally transfer this approach in a different and new context (Leach, 2008), its disregard of the political and economic dimensions (Jones, 2011) and the reductive role given to anthropologists (Jones 2011; Brown and Kelly 2014, 282).

iii. Reasons put forward to use the outbreak anthropology approach

However, despite the above criticism, this outbreak anthropology was successful and has been the privileged approach used for outbreak control. Firstly, the Hewletts explained that the understanding of the local perception and the interpretation of the disease help in developing the prevention and sensitisation messages (Desclaux 2006, 68) in order to create and adapt the communication strategy (of health education messages for the local communities) and therefore achieve a social mobilisation. Secondly, this understanding of the context enabled less intercultural misunderstandings (Berliner 2004, 2) between humanitarian organisation and beneficiaries: "incompatibilities can arise from the universalistic biomedical model endorsed by outbreak response teams and the local cultural representations of the disease" (Calain et al. 2009, 8), as the biomedical model is only one "explanatory model" among others (Epelboin et al. 2007, 30). Thirdly, this approach tries to improve the acceptability of the response in the community, while also taking into consideration cultural factors (Jeffs et al. 2007, 196). By acting this way, resistances such as violence against humanitarian workers, mistrust towards response teams or refusal to follow biomedical protocols can be avoided or can help to understand the reasons (Leach 2008, 14).

Outbreak anthropology has therefore brought benefits and added-value to the operational response and has led to some changes in the response procedures within the WHO (Hewlett and

[17] See Annex b) for further explanation of the criticism towards the "culturalist" approach.

Hewlett 2008). After their field research in Uganda, the Hewletts recommended[18] to the WHO that 1) anthropologists be sent to the field from the beginning of an EVD outbreak and 2) be involved in all the components/stages of the outbreak control. From this moment, the WHO always involved medical anthropologists during EVD outbreak as a practice (Hewlett and Hewlett 2008, 61–63, 157). [19]

III. The anthropological contributions to the EVD outbreak in West Africa

a) Overview of a selected literature after 2014

The amount of anthropological contributions written after 2014 is striking and exceeds what has been written before 2014. As previously seen, epidemics have gained the attention of medical anthropologists, and anthropological contributions during this West African outbreak have flourished very fast for various reasons. First of all, cultural factors are seen as responsible for the spread of the disease, and since anthropologists are perceived by humanitarian actors as the specialists dealing with culture (status that the majority of anthropologists seem to accept!), they are sent to the field, namely by the WHO and MSF. Secondly, it seems that there is a "trend" in anthropology to demonstrate that anthropology can be useful in the response. Finally, some anthropologists, without having been called by humanitarian actors, also took the "advantage" of the last epidemic to launch research and field work on behalf of universities or research centres (such as the University of Sussex, Njala University College or the IRD).

It has not been possible to consider all the existing literature and choices had to be made as explained in the introduction, while focussing mainly on academic and anthropological literature. In total, 26 references have been selected, including 25 articles/papers and one radio podcast. A majority of these articles are not peer-reviewed (14/25): 11/25 are peer-reviewed and 18/26 are written by anthropologists (or social scientists). Only 7/25 contributions are from the "humanitarian medical side" and 1/25 from the "media/communication side". These contributions, peer-reviewed or not, are no longer only published in journals or books. *Blogs*[20] and K*nowledge Sharing Platforms* (see III b) also emerged with many new handouts regarding Ebola. 6/25 articles/working papers have been selected from those *Blogs* and *Knowledge Sharing Platforms*.

[18] Epelboin also made numerous recommendations that go broadly in the same way as Hewlett's one but deeper and more detailed in Annex "Clinical Medical Anthropology" (Epelboin et al. 2007; Epelboin 2012).

[19] At this stage, the differences between the French and the Anglo-Saxon schools are not exacerbated regarding the outbreak anthropology. The anthropologists belonging to this approach share the same "culturalist" approach. However, the anthropologists who are "against" this approach, and for the majority of them belonging to the "structuralist" approach, are from the Anglo-Saxon world (Leach, Jones).

[20] One *Blog* is *Somatosphere*, which produced a specific *series* on Ebola: *The Ebola Fieldnote.*

b) Analysis of a different context and its specificities through new insights

As the 2014–2015 outbreak has hit a region unknown to the outbreak anthropologists, new field research work were needed in order to better understand the context and provide more appropriate advice from the anthropological side. Even though the context and content were new, the approach for itself is not, and continuity in the approach is visible. This means that anthropologists come back to the outbreak anthropology recommendations with, for instance, the advice to involve the local communities, to "humanise" the response, to avoid a top-down approach etc. It does not mean, however, that the humanitarian workers are following those recommendations, as will be discussed in Part Two of this paper. To understand the specificities and challenges of this context, the following sections will expose some of those new insights on the *Kissi* population, such as its "explanatory models".

i. Explanatory models amongst Kissi population in Forest Region

From the beginning of the West African outbreak, anthropologists have conducted research work under the leadership of research centres and universities or mandated by humanitarian organisations (such as MSF) or by the UN (such as the WHO) on different ethnic groups that have settled in the region. Those research works were necessary in order to better comprehend the local perception of the population regarding this new disease and to adapt the response accordingly (following the outbreak anthropology recommendations). Anthropologists gave a specific attention to the *Kissi* population, living in an area at the heart of the outbreak because the few ethnographic data available were old (Epelboin 2014, 18).

Some of their rituals have been described, specifically their "explanatory models". It made it much easier to understand why the Ebola response has been so sensitive (Fairhead 2015, 3). The local population has faced cultural "clashes" because the coexistence of those multiple explanations generated misunderstandings on both sides (J. N. Anoko 2014, 17–18). It is as if the "explanatory models" were in "competition" (Epelboin 2014, 24) with, on one hand, the biomedical model and protocols imposed by humanitarian organisations, which contain restrictions of individual freedom, thus imposing strict management measures, and, on the other hand, the local cultural model that attributes the disease to the "supra-natural" world (J. N. Anoko 2014, 17–18). As a consequence, a "believer" in those "supernatural" forces might not go to the health facilities (supported by humanitarian actors) in order to get his treatment, as he does not trust the biomedical approach. This competition between different "explanatory models" is not new. The challenge during this last epidemic was the diversity of the models

(due to the various ethnic groups), and, as will be explained later in this paper,[21] the rigidity of the protocols that do not allow incorporating local specificities.

ii. Burials and funerals

The topics of burials and funerals in different ethnic groups have been meticulously studied by various anthropologists since the first time anthropologists showed an interest in Ebola (Hewlett and Hewlett 2008, 104–5). Burials and funerals have been considered, not only as being at the heart of the spread of the disease but also a cause of some negative reactions that sometimes lead to violence against the response teams. The negative reactions have often been linked to the fact that the burials following strict quarantine rules did not respect the traditions and human dignity (Faye 2015b, 4, 9–11) and that the medical response has had "little respect for the significance of events around death and burial", while also focussing on security aspects (Fairhead 2015, 7). During the 2014 outbreak, once again, anthropologists were asked by humanitarian organisations to analyse these sensitive topics in order to avoid violence and resistance against the response, as has been the case in the past,[22] and to allow the response to be peaceful. However, it seems that even though some anthropologists have tried to go "beyond" a "culturalist" approach (meaning not to associate with easy cultural factors, such as the funerals/burials to the spread of the disease) or address these issues of burials and funerals from a new perspective, humanitarian workers continue to work with the same restrictive protocols, blaming the traditions as responsible for the spread of the disease as well as the detriment of a better humanisation of the intervention and/or a better involvement of the local population and its knowledge,[23] without following Epelboins' recommendations."

iii. Resistance and reticence[24]: different causes at stake

Resistance by the local population to response measures and teams has often been problematic and has led to some acts of violence, especially in Guinea (Epelboin 2014). It has been a huge challenge during this last outbreak and "catastrophic for the epidemic" (Fairhead 2015, 1). The challenge was not only in terms of the response's impact but also in terms of security. Resistance of the population (Faye 2015b) has, for instance, led villages to be isolated, hide sick people, flee or refuse hospitalisation in a treatment centre. More dramatically, as was the

[21] See Part Two b) *iii.*
[22] In the Annex c), I see examples of recent contributions done on burials that can be consulted.
[23] For further development on this aspect, see Annex c) and, more specifically, the note from Fairhead's article.
[24] This play on words was adopted by local authorities because resistance has a political connotation unlike social reticence (J. N. Anoko 2014, 3) (Calain and Poncin 2015, 127).

case in Guinea, it has led to violence against humanitarian workers and to an extreme situation that resulted in the killing of a response team[25] (*idem*, 2). This phenomenon and those attitudes are not new (*idem*, 2–3), as past researchers[26] already came to the conclusion that the causes of this resistance can be related to different criteria.[27] It appears that "unsurprisingly, West Africa has experienced the same sort of reactions, whereby national and international teams tasked with public-health activities have faced recurrent and widespread hostility from many affected communities" (Calain and Poncin 2015, 127). Even though resistance to response measures was often linked to the lack of consideration of cultural aspects (e.g., during funerals), a lack of empathy and/or the lack of involvement of the local communities in the response by humanitarian workers, some anthropologists and humanitarian workers realised that the difficulties faced in the response were also linked to other factors, such as the political, economic and historical context. It means that the outbreak anthropology, through its "culturalist" approach, might not be the best way to analyse the resistances faced during EVD outbreaks, since political, economic and historical factors are often omitted. A broader approach involving those factors is therefore necessary.

iv. Survivors and stigmatisation

Before this last outbreak, the affected communities and the survivors had not been studied, and little attention had been given to them (Calain 2009), which seems to be a gap, as survivors are perceived as resources in the outbreak (S. A. Abramowitz et al. 2015, 20–21). Survivors have therefore been considered key actors and witnesses in 2014 because they "were seen as being an embodiment of positive messages, suggesting that early treatment could allow one to survive Ebola, and they were often referred to as "ambassadors" of Ebola awareness" (*idem*). For some researchers, however, testimony activities done by survivors could lead to stigmatisation (Epelboin 2014, 26; S. A. Abramowitz et al. 2015; Martineau 2014). Epelboin pointed out that the communication strategies (such as testimony activities) used with the survivors are sensitive and, in the medium or long term, they could be dangerous for them (2014, 26). On the contrary, other researchers suggest that survivors seem to have accepted their "positive role model status" (Abramovitz et al. 2015, 21). The anthropologists present in the *colloque*[28] in Dakar regret not being more involved by humanitarian actors in the transmission channel and contact

[25] The team was composed of people from the MoH, the government, journalists and a pastor.
[26] (Mari Saez and Borchert 2014; J. N. Anoko 2014; Julienne N. Anoko, Ms Epi, Alain.Epelboin et P. Formenty 2014).
[27] See Annex for further development on the different criteria that cause resistance.
[28] The main objective of this *colloque* was to gather anthropological contributions about the epidemic in West Africa in order to identify key research results for a theoretical and/or operational perspective.

tracing strategy, since, according to them, they are specialists in social networks, specifically in kinship studies (*idem*, 2). It seems that the survivors' anthropological point of view was not given enough attention by the humanitarian workers. This approach that involves the survivors, even though not perfect, has been a novelty during this last West African outbreak.

v. Social mediation and communication[29]

Nevertheless, anthropologists have played an important role in the response team, especially in social mediation and communication activities, at the request of humanitarian organisations. First of all, they have been in the frontline regarding the mobilisation of the leaders and partners. Anthropologists have also been entitled to develop communication and health education strategies, and this aspect has been a key component in the outbreak control (France Culture 2014). However, the sensitisation/communication has been a difficult topic; at the beginning of 2014, health education messages were blurred, inappropriate or even stigmatising (Epelboin 2014, 24) and communication mistakes have been done.[30] Despite the good quality of previous recommendations, the emergency situation and the high turnover rate did not allow to apply them, so the same mistakes were repeated (See among others Hewlett and Hewlett 2008; Epelboin 2014; Chandler et al. 2015). These tasks (communication and social mobilisation) are often attributed to anthropologists by humanitarian actors and are largely accepted by them, even if that could mean a reductive role of anthropology. It even led some of them to be active in social mediation activities[31] in order to solve difficulties faced by response teams such as MSF or the WHO.

vi. Resilience of local communities and adaptation to the biomedical models

Interestingly, self-reliance and resilience of a community to face and deal with an outbreak have become subjects of scrutiny during the 2014 outbreak; anthropologists insisted on the fact that humanitarian actors should be more sensitive and take local strategies and adaptation measures into more consideration, following the pioneers of outbreak anthropology. Abramowitz et al. provided insight[32] on how community leaders could implement community-based strategies and tactics for Ebola management. In addition to this resilience, it can be

[29] For further information, specifically on communication with affected communities during a crisis, the CDAC Network provides some analysis done during and after the Ebola outbreak.

[30] The mistakes and the difficulties are linked to various reasons, such as the lack of coordination between the different actors or the fact that anthropologists have been involved too late in this aspect. See Annex c) *iii* for further examples of communication/sensitisation mistakes.

[31] See Annex c) *iii* for further explanation on mediation done by anthropologists.

[32] For instance, she explains how community leaders "would engage in prevention efforts (…) in treatment and response (…)" (S. A. Abramowitz et al. 2015, 4–5).

shown (as was the case during previous epidemics) how local communities are willing to adapt their practices. For instance, funerary customs could be suspended and families could break apart in order to protect uninfected individuals (2015, 3,5,25). Another example shows how adaptation can be accepted and solutions can be found through a respectful dialogue (Wilkinson and Leach 2014, 11; described in Annex c) *iii*). Indeed, as explained by Dubois et al., "traditions are rarely inflexible; social learning and mutually acceptable solutions can be identified through collaboration between response teams and those with deep knowledge of the context" (2015, 30). It seems that even though examples of resilience and adaptation of local communities have been studied by anthropologists, they have hardly been taken into consideration by humanitarian actors. Despite agreeable recommendations of the inclusive approach, it looks that once again, the field constraints (emergency…) or the willingness (?) did not allow putting them into practice. Participative methods have not been extensively used with WHO and MSF teams. It seems that it is more the humanitarian actors themselves who make resistance to an inclusive approach.

vii. *Clinical research and trials*

With regard to medical improvement, clinical research and trials have also been new topics of concern for anthropologists. In 2006, Formenty mentioned the idea to study the perception of the medical staff regarding the arrival of a vaccine and the acceptance of the treatment, even though neither a simple vaccine nor a treatment had been discovered yet. As of 2014, acceptance studies have been done with different results regarding, for instance, the fear linked to the trials, the understanding of the population regarding the study, the potential social obstacles and the adhesion motif or the denial of participation (Desclaux and Sow 2015, 7). Even though the vaccine trial is not new, it shows that humanitarian actors and researchers have included new reflexion regarding EVD, such as the ethical aspect of the biomedical treatments and "the Western way" of proving "aid", for instance.

c) New tools and networks: the *Knowledge Sharing Platforms*

One of the new features regarding the anthropological contributions is the creation of Internet networks launched and coordinated by researchers and academics (anthropologists and social scientists). They aim at offering information and recommendations for those who are providing the Ebola response on the ground in order to be better adjusted and efficient and to provide a more effective humanitarian response. In order to achieve this, those networks try to connect the anthropology with other social sciences and humanitarian actors. As mentioned in the

Guardian, if researchers "want to secure sustained investment in social science research designed to improved poor people's lives we need to consider some other approaches. (…) ERAP is also seen as a model for future research-based engagement in epidemics and emergencies. This is where it may achieve longer-term impact on the types of cross-sector collaboration (...)" (Georgalakis 2016, 1).

The ERAP mentioned in the article is one of these new networks, mainly created and managed by Western anthropologists. The anthropological contributions not only include peer-reviewed articles but also field notes, for example. In addition, the *ERAP* has an advisory role. Its goal is that recommendations and findings are available to everybody as quickly as possible, thus providing a rapid answer[33] to operational questions. Yet so far there has been little proof that those *Platforms* have been used by the humanitarian actors. However, it seems that "this resource and the subsequent meetings and briefings influenced the UK government's strategy in West Africa helping to shape humanitarian action locally" (Georgalakis 2016, 1). Another network, created in 2014, is the *Réseau Ouest Africain SHS EBOLA* (created and managed mainly by West African anthropologists and other social scientists) that has similar objectives to those of the *ERAP*. Its main achievement has been the organisation of a *colloque* in Dakar (hub of a lot of humanitarian organisations) in 2015, which gathered anthropologists, social scientists and humanitarian actors involved one way or another in the Ebola outbreak response in order to identify key research results for a theoretical and/or operational perspective. This *colloque* was innovative in the sense that it was focussed at a regional level, in contrast to the local researches that have been done so far and also because it provided a voice to African researchers and contributions. However, amongst the new topics of research that have been identified, it seems that none mentioned an analysis of how anthropological contributions are perceived by humanitarian actors, while those findings could help to better understand the collaboration between the two sectors. Both *Platforms* have a diversified content that also goes beyond the "culturalist approach", which has brought innovation in the way of thinking.

d) Conclusion of the literature review

Social science studies have produced various recommendations for humanitarian actors in public health (Desclaux and Sow 2015, 4), showing the dominant approach of outbreak anthropology, since it was introduced in EVD in the 2000s. Consequently, the increase of literature following the 2014–2015 Ebola outbreak not only shows the growing emphasis on

[33] For instance, one advisory brief paper (ERAP 2015) is the summary of some discussions that have been held amongst researchers of the Platform in response to a specific request on clinical trials and blood donation.

medical anthropology but also that outbreak anthropology is still applicable and relevant for specific topics and concerns, such as the understanding of different explanatory models in a community. However, as in previous outbreaks, it has shown its limits in its narrowed and reductive analysis regarding the resistance of communities, for instance. Too much focus on cultural factors took the place of other factors of real importance, such as political, economic and historical ones. In addition, it seems that anthropologists were once again satisfied to be associated with culture, while also being asked to develop communication strategies, whereas anthropology could bring much more. Moreover, the anthropological illustrations produced as an attempt to improve the outbreak control could be developed much more. From this literature, despite the important number of anthropological inputs, little insight has been found (or no research has been found?) from the humanitarian operational side regarding an analysis of those contributions aimed at improving the response. Few feedbacks[34] have been done, firstly, on the use of anthropological contributions in the field; secondly, on the relevance of those contributions; and, thirdly, on the new source of information, both in terms of content and in terms of working tools. The need to fill that gap is therefore explored in the next section with interviews conducted with both anthropologists and practitioners.

Part Two

In Part Two, the main points highlighted in the literature review are discussed with the insights from the interviews in order to assess: if those contributions have been used by humanitarian organisations during the outbreak response; the relevance of this new research work; and the recommendations, tools and possible gaps or limits identified for a better response in a future epidemic.

I. The methodology

a. The interviews[35]

In order to complete the data collected through the literature review or to challenge them, interviews were chosen as the most appropriate method. Those interviews do not pretend to be

[34] This is with the exception of some articles, such as Calain and Poncin (2015), Guppy (2015) and Georgalakis (2016). For HPG, it should be crucial to "widen the humanitarian skills set and involve a more diverse range of actors, including anthropologists and anthropological analysis, into the humanitarian architecture"(Guppy 2015, 42). In addition, anthropologists will need to adapt their recommendations to the humanitarian needs, meaning that they "will need to include actionable solutions and recommendations that foster more culturally acceptable messages and measures" (Guppy 2015, 42).

[35] The interview questionnaire is provided at Annex.

representative but try to enlighten some points raised in this paper. They are semi-structured and carried out with key actors involved in the Ebola outbreak.

The aim of the interviews was to get a general perception of the anthropological approach by the humanitarian actors. Then, more specifically, to assess whether the new anthropological contributions were used by MSF and the WHO during the outbreak response, as well as their relevance, potential improvements, gaps or demands are identified in order to better respond in a future epidemic. In total, five key informants have been chosen. They are humanitarian workers from the operational side and researchers or anthropologists with a strong expertise in the Ebola outbreak. They have been chosen for their deep involvement into the response and/or their long-standing professional experience in that field. Some are working within MSF, while the others are working with the WHO or are attached to a university/research centre. For the operational side, two persons have been identified: Stephan Hugonnet,[36] a senior medical doctor who was one of the first WHO experts sent to Guinea, and Philippe Calain,[37] a senior researcher at the UREPH in MSF Switzerland. For additional insights, and to cross-check the information received from humanitarian actors, the three remaining interviews have been conducted with anthropologists. Alain Epelboin,[38] very often quoted in this paper, worked as a consultant for the WHO-GOARN and was heavily involved in several EVD outbreaks, and he is one of the pioneering outbreak anthropologists. Alice Desclaux[39] was recommended by Calain, worked for IRD and was chosen because she initiated one of the *Knowledge Sharing Platforms*, and she has a different perspective than the anthropologists involved within humanitarian organisations. Finally, an MSF anthropologist[40] who conducted qualitative research within MSF. The interviews, conducted in French and English, have been recorded, and some parts have been transcribed and integrated as quotations in this paper.

Two kinds of difficulties arose when contacting people for the interviews. Some candidates selected initially never responded to the invitation. Was it a lack of time or a lack of interest in the topic? And secondly, certain persons who were approached (from the operational side) did not understand why I wanted to talk to them about anthropology because they were not anthropologists. My conclusion was that either the introduction to the topic was not clear enough or that there was a real lack of interest for this approach or academic research.

[36] Interview with S. Hugonnet done in Geneva, at the WHO office on 26/04/2016.
[37] Interview done in Geneva with P. Calain on 18/04/2016.
[38] Interview done with A. Epelboin through Skype on 18/04/2016.
[39] Interview done with A. Desclaux through Skype on 20/04/2016.
[40] Interview done with her through Skype on 09/05/2016. She asked to keep her name anonymous.

II. MSF and WHO collaboration in the field of anthropology

a) The recognition of anthropology through Ebola: a confirmed growing interest

The history of anthropology, with the pioneers of outbreak anthropology, and the latter's implication in the Ebola response, are well known by the different persons interviewed. It is clear for everybody that the UN system, particularly through the WHO, has been a precursor and a leader since from the 2000s, anthropologists were present in all Ebola outbreaks, as Hugonnet commented (WHO). Anthropologists have been mainly hired by the UN system and not by NGOs. As Desclaux (IRD) mentioned, the WHO has dedicated a systematic space for anthropology, not only in scientific and peer-reviewed articles but also in field notes and reports. For Desclaux, it is really with the Ebola outbreaks that anthropologists began to be accepted (more than with other diseases and epidemics), although the MSF anthropologist noted a growing interest for anthropology over the last few years[41] as well as more support for this "new" approach within MSF. To complement, Desclaux argued that before this outbreak, only a few medical anthropologists had worked on the topic. The five interviewees agreed that a higher number of anthropologists intervened during the last Ebola outbreak in West Africa and that their contributions have been extremely prolific.[42]

b) Advantages and limits of the collaboration

The few outbreak anthropologists who worked in previous outbreaks made some contributions and recommendations, as seen in the first part of this paper, concerning the advantages of the collaboration between anthropologists and humanitarian workers. The information gathered during the interviews seems to show that advantages underlined in the literature are well acquainted in the practice. As explained by the MSF anthropologist, "it makes the work of MSF more relevant, more appropriate when it is more acceptable to local community". As mentioned by Hugonnet and the MSF anthropologist, the anthropologist is the person who takes the time to talk to people because nobody else in the team has time to do so – it is a job per se. Hugonnet said that it would have been difficult to stop the outbreak without anthropologists, as they even helped with the security issue when it became difficult for the medical teams.

Nevertheless, both anthropologists and humanitarian actors have faced difficulties and limits working together, as seen in the first part of this paper.[43] As a reminder, the time dedicated to

[41] She mentioned that anthropologists were working within MSF and other agencies long before Ebola.
[42] Prolific in terms of quantity but not always in terms of quality, as explained later in this paper.
[43] *See Part* II c) *i.*

the anthropological study in the field was already a topic of concern in past outbreaks (as stressed by many authors (Desclaux 2006; Hewlett and Hewlett 2008; Brown and Kelly 2014; Faye 2015a; Moulin 2015; Guppy 2015; as shown in the literature review), not only when speaking about the Ebola outbreak response but also more broadly when speaking about the collaboration between anthropology and humanitarian aid.[44] Other difficulties and limits have been new and/or more specific to this last outbreak (e.g., the amount of scholarly material produced *vs* practical recommendations, the rigidity of the protocols and the security rules that became social barriers, as described below).

i. The constraint of time

The constraint of time is often the first aspect that came out as a difficulty or a misunderstanding, and this has already been the case for so long, as just seen above. However, it seems that it has been even more true during this last outbreak because, despite the duration of the outbreak, methodologies have apparently not really been adapted, if the following comments are considerate. Hugonnet stressed that this "time aspect" can even lead sometimes to confrontation between anthropologists and humanitarian actors. Schematically, this opposition between actors as to the time factor can be seen as a need for immediate action on the humanitarian side and for a long-term research on the anthropological side. For Epelboin (WHO-GOARN consultant), defender of "classical" field research, MSF anthropologists do not spend enough time on the ground in order to understand the specificities of the context. They do sensitisation activities without having a deep understanding of the local environment. According to the MSF anthropologist, it was difficult working as an anthropologist within a humanitarian organisation, especially in emergency conditions, as there was no time (or little) dedicated to the research.

ii. Discursive analysis versus practical recommendations

For Desclaux, the new scholarly material produced during the last outbreak, which is more a discursive analysis than concrete and applicable findings, is also a limit. Even for anthropologists who worked in the field, such as the MSF anthropologist, the difficulties are to translate anthropological findings into something understandable for a wider audience and into something practical (also due to a lack of time in the field): "Humanitarian actors in the field just want three bullet points; they do not want a full report"!

[44] See Part II b) from the literature review.

iii. The rigidity of the protocols

One of the limits in the past outbreak management is the rigidity of certain medical protocols, as seen in the first part of this paper. It seems that this rigidity came back. For Hugonnet, for instance, humanitarian actors working for the WHO or MSF have spent too much time trying to explain the biomedical models instead of being more flexible and incorporating some anthropological recommendations. Calain (MSF) made an analysis from an interesting perspective. For him, one of the main problems regarding MSF is that the organisation considers itself an expert in the Ebola management response and does not challenge its medical expertise enough, including its protocols. As a result, the organisation made use of previous tools and guidelines without thinking that it could or should be adapted. According to Calain, the MSF response has therefore lacked flexibility. As seen in the first part of this paper, the rigidity of the response (often lacking respect, empathy and trust) and the lack of contextual adaptation have led to resistances and violence. as seen in Part One. However, even with the previous recommendations, a top-down approach has been applied during the West African Outbreak.

iv. The security rules that became social barriers

As the limits and constraints are rather specific to this last outbreak in West Africa, one can first mention the security rules that became social barriers. The expatriate teams were very distant from the local communities, as seen by Epelboin, which could potentially add a barrier to the participative approach as it reinforces the lack of proximity. The rules, acceptable at the beginning, became too strict, and have apparently been reinforced as time passed. For Calain, the response was no longer provided with a humanitarian medical approach but rather as something technical, almost military. In this sense, the MSF anthropologist mentioned that conducting anthropological research within MSF or other agencies was therefore quite restricted because of their rules. Whether it was a question of inflexibility of the protocols (from MSF or WHO) or of security rules, Hugonnet reached the conclusion that too much prohibition has not led to good results. This specific issue of the security management during Ebola outbreaks brings to question the potential conciliation of those areas (anthropology and humanitarian action) of work in such a context. Is anthropology compatible with Ebola outbreaks? Most of the difficulties echo the ones from the past. However, some of them, (e.g., the security management or the rigidity of the protocols) seem to have been reinforced during this last outbreak. Without having a proper answer to this aspect, it could be that the magnitude, scale and length of the epidemic have played a role. On the contrary, the “perceived lack of

efficiency" often associated to anthropology[45] has almost completely disappeared to be perceived as "a key component" in the response.

III. An attempt of innovation

a) Different schools and approaches

Amongst the anthropologists who showed an interest in the Ebola outbreak, a "classical cleavage" between the French and Anglo-Saxon schools is visible, as this has been pointed out by all the interviewees. Without going into too much detail regarding this split, it is however important to note that those two schools are not tackling things and contributing in the same way. This split was not exacerbated in the same way in previous outbreaks. As mentioned in the first part of this paper,[46] the Hewletts, pioneers of outbreak anthropology, and coming from the Anglo-Saxon academic world, have really produced practical recommendations from their field research. From the literature selected for the first part of this paper, it can be seen that the Anglo-Saxon anthropologists (Jones, Leach) are tackling the epidemic in a more structural way, criticising the "culturalist" approach that is assimilated to the outbreak anthropology, but their contributions are not so practical. However, as there was little research before the last outbreak, it is less easy to clearly see this cleavage.

Anthropologists from the French movement,[47] who were called with emergence at the beginning of the Ebola outbreak in 2014, have come first to the field (in Guinea). It is most probably because Guinea is a French-speaking country that those anthropologists (from the French movement) have been called first. They were hired by the UN and had already been engaged in previous outbreaks. They did nearly the same job with the same approach as in the past. These pioneers of outbreak anthropology (such as Epelboin) and their "disciples" tried to make the link between the past and the present, building on what was already known. In this sense, they advised the teams on the importance and the necessity to involve the local population in the response, to have a participative approach etc. in order to avoid resistances and to be able to respond properly. At the very beginning of the outbreak, anthropologists have indeed come to provide "applicable" recommendations.[48] However, it was not very reflective or conceptualised, according to Desclaux. The latter, although recognising the work of those

[45] See part II c *ii*.
[46] See part II c *ii*.
[47] This French movement was itself composed of different approaches, according to Epelboin. The first one was an anthropology that aimed at accompanying the NGO-IO's teams; the second one, also aimed at helping the response teams, was much more focussed on political aspects; and the third one, as explained later, was an ethno-African anthropology (sometimes against the institutions).
[48] Recommendations were made in order to reflect on the context and the different "cultural/explanatory models", including the local population in the response…

outbreak anthropologists, seems to be somewhat in opposition with the rapid feedback and recommendations on the spot, which tends to lead to a lack of structure and retreat from an analytical perspective. This critique seems to be more problematic for the anthropologists themselves than for the humanitarian actors, as it appears to be an intra-disciplinary quarrel. Regarding the French movement, Epelboin pointed out a novelty in terms of approach, specific to this recent outbreak, which is described as "black-Africanist" anthropology. Those anthropologists, some of them[49] contradictorily hired by the UN system (WHO), were almost "against" humanitarian actors and spent their time only in the communities – they did not follow the teams or provide them feedback about their findings. Even though this topic is very important, as it is one of the first times that local/regional anthropologists are hired in order to work for this specific cause, there is still very little literature written on it. Here there is a broad field to be studied in order to understand how anthropologists have worked and collaborated and if this collaboration would have helped to avoid or decrease a top-down approach, for instance. It seems that before the last EVD outbreak, few relationships were established with "black-Africanist". Unfortunately, it appears as a detail during an interview, whereas it is of importance and opens the door to a lot of questions.

After this first wave of anthropologists belonging to the French movement that covered the first weeks/months, Desclaux noted that the anthropological approach had been different from that in the past, and for the following reasons. Firstly, new anthropologists got involved in the topic and were not necessarily hired by the UN anymore. Some had been hired by other agencies or NGOs and others had just taken the opportunity to join, while being attached to a university or research centre. Secondly, some had never been in the field, but their production was prolific. Thirdly, this recent outbreak has generated a new phenomenon with some anthropologists belonging to the Anglo-Saxon school: numerous theoretical materials have been produced outside of Africa, with little field research, in opposition to the previous field research work done by outbreak anthropologists. Desclaux noticed that the American perspective[50] consisted of more debates and conceptual reflexion than the field work, which is good for the discipline but was not really useful during the response. In addition to producing scholarly materials, this Anglo-Saxon movement was more engaged in the ecological aspects.[51] This movement came to the field (Liberia and Sierra Leone) a few weeks/months after the beginning of the outbreak, probably because it has followed the logic of the languages spoken in the different hit countries

[49] Epelboin provided the example of the socio-anthropologist Cheick Ibrahima Niang.

[50] With the exception of Abramovitz, who, according to Desclaux, wrote concrete recommendations (S. Abramowitz 2014).

[51] This focus on ecological aspects already existed in the past for some Anglo-Saxon researchers (Leach 2008).

and that the first cases notified in these two English-speaking countries appeared later on. Finally, as underlined by the MSF anthropologist, because of the huge scale of the epidemic, it was difficult to make research work in the same way as in previous outbreaks.

b) Continuity versus re-invention

Despite the fact that some innovations appeared during the last outbreak, it seems that the previous recommendations have not been taken into account, according to Epelboin. The latter is strongly convinced that, from the humanitarian perspective, the previous recommendations were known and had been disclosed.[52] To incorporate them and put them into practice depends to a greater extent on who is leading the response and who has the decisional power to apply them. On the other hand, the main problem lies in the fact that anthropologists themselves do not take previous findings and recommendations into account. Would it mean that there is a total rejection of previous research work by the anthropologists' community? For Epelboin, it seems that, within this community, there is a need to re-invent everything and pretend to be the precursor. The MSF anthropologist mentioned that previous research works (such as the one from the Hewletts and Epelboin) were circulated amongst anthropologists who had a look at them but apparently did not integrate them as such. Calain was also going in this direction when he mentioned that "in anthropology we have the impression that everything is new, as it misses a historical perspective". For him, too, recommendations had already been identified in the past. In light of these arguments, it appears that the problem is a corporatist one, amongst anthropologists themselves, before being a problem shared with the humanitarian actors. From a different perspective, Hugonnet saw a kind of continuity in the sense that from the beginning of the recent outbreak, the aim was to involve the local community and specifically the religious leaders, as was already the case and the strategy in previous outbreaks. For him, continuity means applying the same strategy, but not necessarily building from previous findings. The MSF anthropologist also saw continuity in the themes examined by anthropologists but looked at in a much deeper way than before.

c) New tools and new contributions

Besides old topics and themes that have been studied again, and sometimes re-invented, the recent outbreak has generated new contributions that deserve consideration.

[52] Some recommendations are in the WHO Guideline, as seen in the first part of this paper (Epelboin, Odugleh-Kolev, and Formenty 2012). For the others, he did not specifically mention the channels of communication.

i. The ERAP

As seen in the first part of this paper, new tools have been created, such as *Knowledge Sharing Platforms*. If the *ERAP* is taken as an example, it is interesting to note that not all interviewees were aware of it.[53] All those who knew about it agreed that the idea to create a new tool was good and innovative. However, it has been criticised for the following reasons.

Firstly, the level of the texts was generally weak (both in terms of content and style), as asserted by Desclaux. As described in the first part of the paper, the *Platform* was supplied by a wide audience from different academic backgrounds, which was detrimental to the quality of the *Platform.* Secondly, the level of the translation was low. It is important to say that the *ERAP* is an Anglo-Saxon *Platform* with very few French contributions, while the French were the first in the field and were doing much more applied anthropology than their Anglo-Saxon colleagues. Thirdly, it seems that the *Platform* was much more academic than practical, which is not surprising given that, as just mentioned above, it was led by anthropologists who were not systematically going to the field. This *Platform* has increased the tensions and differences between anthropologists seated in universities and those in the field. To summarise Desclaux's words, even though the initiative was great, in the end, the *Platform* has been disappointing. The MSF anthropologist is the only person who was much more positive regarding this new *Platform*, putting forward elements such as the availability of short texts (as opposed to long reports) and the advisory role of the *Platform*. However, when asked who was using this new tool, she said it was used amongst anthropologists, although this was not its only aim. According to her, humanitarian actors were keeping an eye on it, but it was definitely more for anthropologists and academics. However, on a positive side, it has reinforced the visibility of anthropologists.

IV. Knowledge gaps in anthropology

The following section describes some knowledge gaps and potential limits in anthropology, identified by the interviewees that could be improved.

a) Topics to be studied

As previously said, many anthropologists have produced material during this last outbreak, and, according to all interviewees; almost all topics have been covered. During the epidemic, the MSF anthropologist identified some trends regarding the topics: at the beginning, classical topics such as funerals, burials and the perception of the disease have been studied, and towards

[53] Hugonnet, for instance, never heard of this *Platform*.

the end of the outbreak, a shift to survivors and clinical essays is to be noted. However, even though many topics have been tackled by different researchers, some still deserve a deeper analysis. For instance, Calain mentioned an ongoing research work on the interpretation of the scientific knowledge. It is interesting to note that anthropologists are involved in all those researches made by humanitarian organisations or research centres and universities. Calain further mentioned a study on humanitarian perception that should include the perception of MSF. According to Epelboin, MSF seemed not to have been positively observed from the outside, and this negative perception has had an impact on the humanitarian response to Ebola. For Calain, the MSF perception might vary from "the heroic" image it has in the Western world to a more negative perception in the countries that responded during the Ebola outbreak. He further raised the need to study MSF (as an institution) when a future outbreak will occur. Another aspect that, according to Desclaux, has not yet been studied and would deserve some time is the sanitarian messages that encompass all the prevention messages. Finally, as noted by the MSF anthropologist, the "post-Ebola" timeframe will need additional development and studies.

b) The role of anthropologists

Firstly, when speaking about the limits of anthropology in the context of a humanitarian response to Ebola, the role given to the anthropologists or the role taken by them must be mentioned, as clearly stated during the interviews. According to Calain, the mandate of the anthropologists has never been clear during this last outbreak. This already happened in the past[54] and could be a recurrent problem if not tackled. Desclaux says that anthropologists are almost considered social workers. Hugonnet perceives anthropologists as the tool to help engage with the communities and make mediation between the organisation and the community. For the MSF anthropologist, the confusion lies in the fact that, in some organisations such as MSF, there is a real overlap between anthropology, health promotion and advocacy. She says that there is still a misunderstanding about the role of anthropology in humanitarian aid as well as a huge willingness to support this discipline at the same time, particularly after the Ebola outbreak. Calain sees a real problem in how humanitarian actors perceive anthropologists because they are used as an "instrument of penetration amongst communities"[55] rather than as a tool to make mediation. According to him, real mediations have hardly been made. In addition, the role of the above instrument is ethically problematic

[54] Epelboin was already partly tackling the issue in his article (Epelboin 2009).
[55] Anthropologists are called when problems occur (resistance...).

for him. Very few anthropologists have positioned themselves regarding the humanitarian actors' approach to local communities. For Calain, the main problem comes from the anthropologists themselves whom he accuses of culturalism. These abovementioned examples show that if a common agreement does not exist among the anthropologists themselves, it is quite obvious that the problem will remain in the future and that the same frustrations and difficulties will arise from this blurred situation and this lack of clarity.

c) The rapidity of the feedback

As seen in the second part of this paper,[56] one of the main challenges mentioned several times is this alleged opposition between the need for a rapid intervention *vs* a long anthropological analysis. The constraint of time has been a limitation for anthropologists working in the humanitarian field, specifically during an EVD. However, there is a real need to find a way to improve the rapidity of the feedback for anthropologists in the field. The rapidity does not only concern the recommendations and feedback that should be given on the spot but also the process leading to the ethical review before publication. As the MSF anthropologist commented, the anthropological contributions had to pass through ethical review, which took time. A way to speed up the review process should be thought of.

d) The applicability of findings

Another point raised is the applicability, the concrete practice of the anthropological findings, which comes back to a point already mentioned in the second part[57] of this paper, with the creation of a *Platform*. For instance, Hugonnet had the impression that anthropology was often very theoretical and extremely conceptual and that the humanitarian actors did not see how to transform all of this theory into something practical. He took the WHO Guideline[58] as an example, specifically the anthropological part. It should be reviewed and include applicable and practical examples and recommendations. While speaking about the difficulty to put theory into practice, Desclaux mentioned the lack of a specific domain – the science of implementation – which represents a real gap.

e) The link between anthropology and humanitarian aid

For Hugonnet, it seems quite obvious that the link between anthropology and humanitarian actors (*i.e.,* a close collaboration in the field with a common language and understanding of the

[56] See part part 2, I.b).*i*.
[57] See part 2, II.c.*i*.
[58] Hugonnet said that the WHO Guideline, with its anthropological contributions and recommendations, has been used by most organisations responding for the first time in the last EVD outbreak in West Africa.

findings) is missing. For instance, this has been proven with the use of the *Platform*. The MSF anthropologist mentioned that the (written) contributions of anthropologists have been circulated amongst anthropologists only. However, in the field, the teams were apparently quite curious to listen to what anthropologists had discovered during the day, as with their strong security rules, they were not allowed to go out and were therefore cut off from the local communities. Here again, according to her, the opportunity has not been taken and the way to transmit this information was not optimal.

V. Conclusion

This paper shows that the Hewletts (Hewlett and Hewlett 2008), pioneers of the outbreak anthropology in the Anglo-Saxon school, brought something new and useful to the improvement of an EVD response. When integrating the anthropological approach during the response, it can be expected to reduce barriers with local communities, to better understand their specificities and to improve the links between humanitarian actors and the population. Since the 2000s, this approach has been integrated, since the pioneers showed how important it was to take cultural factors into consideration. Since then anthropologists have been part of the WHO response team during each Ebola outbreak. From its first contribution until the 2014 West African epidemic, this outbreak anthropology has remained the dominant approach during the crisis phase, and very few other approaches have been used to feed the response. The analysis of the "explanatory models" and the "clinical medical anthropology" are still relevant, and this culturalist approach continues to be applicable today. This is why it has been used again by the first wave of anthropologists who joined the field in 2014.

Despite this success, outbreak anthropology has been criticised since past epidemics and these critics have been emphasised in 2014, despite the fact that this approach is finally quite "adaptable to new contexts", as shown throughout the epidemic. This paper shows briefly[59] that it is not possible to omit the politico-economic context from the analysis. However, it is true that to bring inputs (on the politico-economic and historical context) could take time, and those humanitarian actors who work during the crisis phase do not have this time. Anthropologists should be able to adapt to the different phases of the outbreak. They should be able to incorporate the necessary elements of analysis, in the time given, without falling in a "culturalist vicious circle" that only attributes to the spread of the disease to cultural factors. The "neo-colonialism" criticism often associated to this approach returned quite strongly during the last outbreak. Even though this outbreak anthropology focusses on an inclusive and

[59] See the Annex on the Criticism to the "culturalist approach" for further development.

participative approach, and since numerous anthropologists recommended avoiding top-down management, it seems that the participation of the local community in the response was not sufficient and/or came too late.

In this regard, the paper highlights that it is mainly the humanitarian actors themselves who were resistant to a participative approach, since it might be in opposition with strong and rigid protocols. In addition, local beliefs and practices are pointed out once again as being responsible for the spread of the disease, thus reinforcing the "neo-colonialism" aspect of this approach. The last critic linked to the outbreak anthropology, extremely striking during the recent outbreak, is the reductive role given to anthropologists (also accepted by them as such). As was already the case in the past, this culturalist approach reduces their role when considering them "only" as culture specialists in charge of developing sensitisation activities with the local communities, whereas they could bring much more, even though anthropologists themselves are unclear about their role and responsibilities during the outbreak responses. The research also shows that the recent outbreak has generated an infatuation for outbreak anthropology, not only from medical organisations such as MSF and the WHO but also from anthropologists themselves who belonged to universities or research centres. The new anthropologists have shown their interest for the EVD but not necessarily for the operational response. They have been much more distant from the field and have produced more scholarly material than the pioneers. Of course a scholarly approach also has some benefits; however, there is a time for everything. Anthropology should adapt itself to the "humanitarian aid calendar", following different phases (such as the Prevention, the Crisis and the Post-Crisis-Recovery). In the crisis phase, anthropology should appear as a toolbox more than a very reflexive approach.

However, even though the humanitarian actors and anthropologists show an interest in each other, it seems, from the discussion in this paper that both still face difficulties in collaborating together. The difficulties faced recently are not always new, and some, such as the speed of the research work *vs* the emergency of the EVD response, almost seem inherent to the disciplines themselves. New difficulties arose when attempting to collaborate. This paper shows, first of all, that there is a corporatist issue within the anthropologists' community itself. It appears that the competition among the academic world is quite strong and that the interest among anthropologists themselves is not always the same. Different schools and anthropological approaches have been used to tackle this epidemic, which is fine and should even be rewarding. However, some anthropologists took the opportunity of this last outbreak to favour academic purposes and not directly help the response, thus creating tensions among themselves. It seems

that each anthropologist is looking after his/her own interests. It gives the impression that past recommendations were not known or not transmitted and that everything has been reinvented again during this recent outbreak. However, it is not that anthropologists reject past recommendations; the question is whether they want to have better visibility. In addition, anthropologists did not agree on the role of an anthropologist during an EVD response (or did not even take the time to clarify). This led to real confusion and to overlaps of professions (communication/advocacy/anthropology...), as often came out during the interviews. The anthropologists' community is not homogeneous; this is normal and even beneficial. However, the specific role of the anthropologist within his/her own community is not recognised, and this is problematic. Anthropologists should definitely sit together in order to define their role and responsibilities during an Ebola outbreak. The "practicability" of the innovative tools can be mentioned as a new difficulty. New tools have indeed been thought of, mainly by academic anthropologists. It appears that this new attempt, notably with the creation of the *ERAP,* was a worthwhile and laudable idea. However, it has not worked for the various reasons mentioned in this paper. On the academic side, it seems that the willingness to collaborate with humanitarian actors does exist. On the other hand, it is less clear, as the literature found and the interviews completed did not address this issue in detail. What appears to be certain is that there is still a need for adaptation in order to reach a "practicable anthropology" that is "humanitarian friendly".

These interviews and material that have emerged do not pretend to be representative. They raise the broad question of how anthropologists and humanitarian actors could better work together during an EVD response. The changes to improve the collaboration remain and will not disappear if no discussions or reflexions are undertaken. Future researches should probably focus and question how anthropologists could adopt a more "applicable practice" and how anthropology could be considered as a toolbox.

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Annexes

a. Definition of terms and concepts

In order to go deeper in the understanding of the methodology developed and used by anthropologists during the Ebola outbreak response, some additional information and details are given below. As previously mentioned, this outbreak anthropology uses two complementary components: the first one is the "cultural or explanatory models" and the second one, the "clinical medical anthropology". Both of them are described in more details below.

i. *"Cultural or Explanatory Models"*

This terminology comes originally from Kleinman, a physician and anthropologist. He explains that everybody, within a culture, can have variable models for the same illness, and that the model that will be chosen will influence the treatment, the person who will treat this illness and so on (Hewlett and Hewlett 2008, 27).

According to Hewletts, it "refers to people's knowledge and feelings about a particular domain (…) to a local person's explanations and predictions regarding the disease" (2008, 26). For the purpose of this paper, the "cultural or explanatory models" are defined and summarized as the way a population explains, perceives and responds to a disease.

Two examples of "cultural or explanatory models" are shown below in order to better understand the concept.

Diagnostic procedures.
Procedures de diagnostic.

english gloss	sorcery	Religious Sect	illness	epidemic	EHF (biomedical)
term	ekundu/ezanga	La Rose Croix	ekono/ihaba	opepe	Ebola
basic description	sorcerer sends spiritual objects into victims	Christian sect devoted to study of mystical aspects of life	illness	illness that comes rapidly with the air/wind and effects many people	EHF biomedical model
signs and symptoms	rapid death, fever, pain and inflammation of stomach	many deaths within the family	fever, vomiting, diarrhea with blood	many people sick or die at same time	fever, vomiting, diarrhea with blood
cause	conflict in the family, lack of sharing, accumulation	family member wants wealth, power, sacrifices family members	"dirty" items (puss, feces, etc.); sexual contact with sick	dirty items, but comes with the wind	filovirus
transmission	powerful object with spirit sent into body	manipulating objects from victim (hair, picture)	contact with dirty items or infected person	air, close contact with infected	contact with bodily fluids of patients
risk group	usually adults, people who argue, do not share, economically successful family members	family members close to person seeking power, wealth	anyone in contact with dirty items or infected person	anyone	anyone in contact with bodily fluids of victim
patho-physiology	eats vital organs. Can attack any part of the body	can attack any part if the body	damage to major bodily organs	varies by specific epidemic	damage to major bodily organs
treatment	traditional healer identifies person who sent object; locate and destroy object with sorcerer; go to church to pray for God's assistance	traditional healer identifies persons ending illness; praying at church	traditional healer treats with herb, bark; biomedical person treats with drugs	traditional healer treats with bark, herbs, etc.; bioimedical person treats with drugs	none, hydrate, control vomiting
prognosis	good if objects destroyed, otherwise death	not good unless person causing can be identified and stopped	varies by illness; very poor with Ebola as new for traditional healers and biomedicine	often not good as makes many sick	death is common
prevention	cords, vaccination from traditional healer, drinks, secret society to prevent attack, special dances	powerful protection objects (fetish)	Aavoid contact with polluted substances or people	move away from air movements in forest, field camp; hunt or chase away	avoid contact with infected individuals

Tab 1: Example of Cultural or Explanatory models

Table 1 represents five different cultural or explanatory models described by individuals. This example is taken from Hewlett et.al (2005). Each column represents a different "ethnic" group. It can be seen for instance, that they all have their own way to give a name to the disease, their own terminology, that the causes of the diseases always differ or that the ways of prevention vary from one group to another. The last column represents the biomedical cultural model for the EVD.

Another example of "cultural or explanatory models" amongst Acholi, in Uganda, where Hewlett and Amola did their field research, is given below.

Table 1. Explanatory models for Ebola hemorrhagic fever (EHF) among the Acholi

Terms	*Yat*	*Gemo*	Disease of contact; Ebola
Description	"Medicine" or substance that enters the body and causes illness	Bad spirit that comes suddenly and rapidly and effects many people	EHF, biomedical description
Signs and symptoms	Starts with pain inflammation but can have many other signs in later stages	Mental confusion, rapid death, high fever	High fever, vomiting, headache
Causes	Bad "medicine" (poison) goes into body	Lack of respect for *jok*, sometimes no reason	Filovirus, but host reservoir unknown
Transmission	Step on it, eat it, catching it, somebody sends, just looking at a person	Physical proximity, easy for *gemo* to catch you	Physical contact with bodily fluids of patients
Pathophysiology	Inflammation and pain in area touched by or location of *yat*	Attacks all of body	Damage to major organs
Treatment	*Tak*—techniques of healers who use their *jok* to identify and remove *yat* from body or environment	Talk to *jok* via traditional healer, give whatever wants, gifts of food to *jok*	None, hydrate (ORS), control vomiting
Prevention and control	Protective bracelets	See protocol in text, *chani labolo, ryemo gemo*	Do not touch patients, barrier nursing
Prognosis	Good if removed from body; otherwise death	Not good, no cure	Not good, no cure
Risk groups	Very smart, successful, salaried people; anybody	Caregivers close to patients (women), families that do not respect *jok*, families that do not follow protocol	Unprotected healthcare workers, caregivers of patients, people that wash or touch dead victims
Political	Infected troops returning from DRC sent to Gulu	Infected troops returning from DRC sent to Gulu	Infected troops returning from DRC sent to Gulu

[a]ORS, oral rehydration salts; DRC, Democratic Republic of Congo

Table 2: example of Acholi Explanatory models (Hewlett and Amola 2003, 1244)

Table 2 shows three "explanatory models" identified by the Acholi, three different ways to perceive, interpret, and understand the EVD and to respond to the outbreak. The last column in this table represents the "biomedical model" (of Ebola) whereas the first one, related to the *Yat*, considered as the "substance" which enters the body and causes illness and can be transmitted when stepping on it, eating it or sometimes just looking at a person.

It is indeed through their investigations in the field that the Hewletts discovered that local people have indigenous knowledge and protocols to contain epidemic diseases. This is the reason why they decided to incorporate the framework devised by Dunn, a physician and anthropologist, which is explained below.

Dunn's Framework (1985):

Dunn (Hewlett and Hewlett 2008, 111–12) developed a framework in order to incorporate the anthropological research into the disease-control effort. In this framework, the beliefs, behaviours and factors that contribute to the control of the infectious or parasitic diseases therefore perceived as positive and health-enhancing, should be identified and encouraged, while those that are harmful, health-lowering, should be targeted for change. The framework concerns not only the local and national aspects but also the international component. According to Dunn the health-enhancing or health-lowering practices and beliefs existing in a local community are as important as the ones brought from outside, by international response teams.

For the outbreak anthropology pioneers, what is important is that local beliefs and practices can assist and be part of control efforts, so that a local population does not have only harmful and negative effects on the response. As Hewlett and Amola have noticed, sociocultural studies tend to focus to a large extent on local practices and/or beliefs that amplify the disease, *inter alia* the burial practices (2003, 1246).

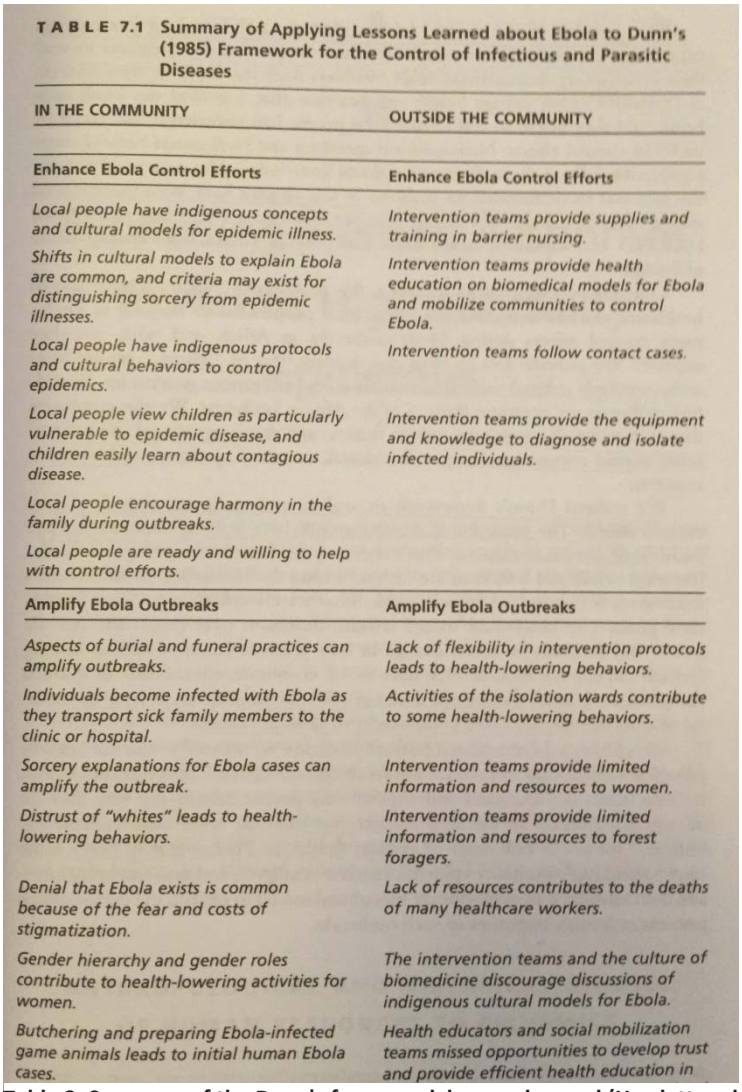

TABLE 7.1 Summary of Applying Lessons Learned about Ebola to Dunn's (1985) Framework for the Control of Infectious and Parasitic Diseases

IN THE COMMUNITY	OUTSIDE THE COMMUNITY
Enhance Ebola Control Efforts	**Enhance Ebola Control Efforts**
Local people have indigenous concepts and cultural models for epidemic illness.	*Intervention teams provide supplies and training in barrier nursing.*
Shifts in cultural models to explain Ebola are common, and criteria may exist for distinguishing sorcery from epidemic illnesses.	*Intervention teams provide health education on biomedical models for Ebola and mobilize communities to control Ebola.*
Local people have indigenous protocols and cultural behaviors to control epidemics.	*Intervention teams follow contact cases.*
Local people view children as particularly vulnerable to epidemic disease, and children easily learn about contagious disease.	*Intervention teams provide the equipment and knowledge to diagnose and isolate infected individuals.*
Local people encourage harmony in the family during outbreaks.	
Local people are ready and willing to help with control efforts.	
Amplify Ebola Outbreaks	**Amplify Ebola Outbreaks**
Aspects of burial and funeral practices can amplify outbreaks.	*Lack of flexibility in intervention protocols leads to health-lowering behaviors.*
Individuals become infected with Ebola as they transport sick family members to the clinic or hospital.	*Activities of the isolation wards contribute to some health-lowering behaviors.*
Sorcery explanations for Ebola cases can amplify the outbreak.	*Intervention teams provide limited information and resources to women.*
Distrust of "whites" leads to health-lowering behaviors.	*Intervention teams provide limited information and resources to forest foragers.*
Denial that Ebola exists is common because of the fear and costs of stigmatization.	*Lack of resources contributes to the deaths of many healthcare workers.*
Gender hierarchy and gender roles contribute to health-lowering activities for women.	*The intervention teams and the culture of biomedicine discourage discussions of indigenous cultural models for Ebola.*
Butchering and preparing Ebola-infected game animals leads to initial human Ebola cases.	*Health educators and social mobilization teams missed opportunities to develop trust and provide efficient health education in*

Table 3: Summary of the Dunn's framework lessons learned (Hewlett and Hewlett 2008, 129)

Table 3 aside gives a summary of the lessons learned from Dunn's framework. It shows the health-enhancing practices/believes from inside and outside the community, and the health-lowering ones have to be targeted with a view to reducing or changing them. For instance, the Hewletts explain that in Yambuku, local people have their own "protocol" to control epidemic diseases which consists of the following: local people deserting health facilities and movements between the villages are controlled, and sick persons are isolated. This information could be introduced in the Dunn's framework at the top-

left side, as a practice that should be taken into consideration when responding to the outbreak.

ii. *"Clinical Medical Anthropology"*

The other theory or method that is part of the outbreak anthropology is a concept that was first applied by Epelboin and can be called "clinical medical anthropology". Its main objective is to improve the humanisation during an intervention by "providing culturally sensitive and appropriate care in hospital or clinic setting (…) the technological and behaviour aspects of culture" (Hewlett and Hewlett 2008, 28). This approach tries to consider how to modify or adapt the biomedical clinical settings during an outbreak so that local cultural practices and beliefs be integrated into the biomedical system. For the precursor of this new approach, all the staff (national and international) involved in an EVD outbreak response has to be briefed about the specificities of the local culture. Epelboin also insists on the strong empathy and solidarity that have to be shown and shared with the families and the community members. The results of his various fieldworks on Ebola have led him to develop some recommendations: actions to be taken or attitudes to be changed in order to get a more humanised intervention. Examples of these recommendations (Epelboin et al. 2007, 34–38; Hewlett and Hewlett 2008, 78–79, 130) could be divided into different categories according to:

- *response team movement*: teams should drive slowly, greet people (in the adapted cultural way), take time to explain to everybody their actions, engage as often as possible with people who might show hostility, avoid to be in the PPE suit when it is not necessary
- *follow-up and interventions at home*: teams should avoid whenever possible to arrive in the field with the PPE but should wear it on the spot. They should sensitize local population while activities are done in the field, explain what will be done before starting any activity, distribute gloves, propose to one family member to wear the PPE and accompany the team, obtain the family consent before taking a biological sample, have all the time someone to play the role of "mediator" between the person wearing the PPE with disinfection kit and the family/community, avoid having too many interlocutors with the families, accept home hospitalization (with protection material) in case a patient refuses the treatment center, be aware of local customs during home disinfection.
- *isolation unit:* teams should replace the opaque plastic barrier in the isolation unit by a small fence in order for the families/relatives to see what is going on inside, improve the road signs, improve the lighting at night, inform regularly the families regarding the patient and the treatment, organise visits of families to see their sick relatives, give local food,

accept (on a case by case basis) to have traditional healers or religious leaders coming for visits (with some limitation on what they can give or do), respect the patient Charter.

- *burial and funerals*: the teams should attend funerals, systematically express condolences to families in order to establish trust, inform families about the process of the funerals/burials, accept local way of showing sadness (cries, lamentations..), wear the PPE dress on the spot in the presence of a family member, try as often as possible to put the dead body inside a coffin, put the personal belongings of the deceased inside the coffin instead of burning them, burn only the stuff unwanted by the family and disinfect the rest, try to have all those actions done by the same team, involve the families in the funerals/burials with the adequate protective material and with systematic disinfection, be sure that the family is present throughout the process, pay attention to the position of the body inside the coffin, systematically identify the graves, offer to take pictures and to give them to the families and finally give a death certificate signed by a local authority.
- *sensitization and social mobilization:* the teams should put all the documentation (articles, pictures…) from previous outbreaks useful for the sensitization on DVD/CD, and give it to all actors interested, make a good stakeholders analysis without forgetting marginalized groups, prevent stigmatization. To transmit the messages, they should use local languages and different means (radio, songs, videos...). Regarding the messages themselves, they should focus on the danger to touch or eat dead meat rather than on the prohibition to hunt, avoid mixing EVD messages with public health messages, insist on the importance of respecting the "no touch" policy, explain what to do in case chlorine or gloves are not available…
- *sensitization to leaders*: the teams should sensitize the leaders and give them didactical tools and ideally gloves and bleach, try to make sure the leaders do not have ambiguous or wrong ideas, as they will have influence in their community.

Epelboin, when comparing two outbreak responses done by MSF, one in 2003 and the other one in 2012, noticed huge improvements linked to those recommendations. For instance, he outlined that hygiene teams did not arrive anymore in the field already dressed in PPE suits but wore them while on the spot. The opaque plastic sheetings that were used inside the treatment centers have been replaced by orange fence (for the visibility). Spots were provided in the middle of the care unit for families and visitors in order to improve the hospitality. Translators were provided. Greater focus has been given to the psychological component. The intimacy of the patients inside the tents has been secured with mobile screens; culturally appropriate food

has been given,…(Epelboin 2012). However, during his field visit in Guinea, he concluded that a lot of efforts remained to be done, regarding mainly the capacity of listening and the capacity of adapting the response to local specificities. Another element to improve was the harmonisation between the different actors protocols (Epelboin 2014, 25).

A more balanced point of view is the one from Anoko regarding the 2014-2016 outbreak. She said that MSF has incorporated in its outbreak approach and management a cultural dimension, humanising the intervention, and involving as much as possible the local population (France Culture 2014).

b) Criticism towards the outbreak anthropology and its "culturalist roots"[60]: valorization of the "structural violence" in the discourse

The outbreak anthropology with its "culturalist" roots has been criticized. The main criticism of the Hewletts and their defenders is developed below.

As seen above, even though this approach marked a shift in the anthropological operational research on EVD and showed its contributions; it is recognized as having contributed to improving the response and its contributions were and still are relevant and influential today (Leach 2008, 15). It has also received some criticism for different reasons mentioned below.

Firstly, it is criticized mainly because of its neo-colonialism (Stratigos 2015; Jones 2011; Leach 2008). For Leach it gives a narrow and reductive perception and vision of anthropology, rather "colonialist" and "old-style" while dealing with the "primitive" and "the other" (2008, 15). Jones added that in this regard and through this "culturalist" approach, "Ebola has been exotized, associated with "traditional" practices, local customs, and cultural "beliefs" and insinuated to be the result of African ignorance and backwardness" (Jones 2011, 1). "These "beliefs" are sometimes even considered as motivating cultural behaviours or "customs" that are responsible for the initial outbreak of the disease and the latter's spread (Jones 2011, 2). This culturalist anthropology enclosed societies in a fixed and tight representation and under the influence of traditions (Braumann) in (Faye 2015b, 12). Those stereotype images of the "other" also "feed paternalism, and the view that Africans lack agency and hence are unable to

[60] For more details on the general tensions between the "culturalist" approach in anthropology and the humanitarian aid, the Stratigos's article can be consulted. As is explained in his article, it is essential for humanitarian actors to "contextualize" the aid, without falling into an unchanged traditional culture (Stratigos 2015, 87). The pitfall of the culturalist approach is that the culture itself is represented as static and under the influence of "over determining traditions". The "local knowledge" explains in this sense all the behaviours and actions (*idem*, 88). Even though trying to adapt the action to local specificities is laudable, this culturalist approach, as Stratigos indicates, is not so far from the colonialist power approach, that was using anthropology in order to better manage the local population (*idem*, 90).

help themselves and require foreign assistance (Baker, 2015)" (Guppy 2015, 30). On the contrary, an anthropology that is « dynamique, qui intègre l'histoire, la politique, qui voit les sociétés ouvertes et en mouvement, et qui nous aide à mieux nous situer » is to be valorised, said Brauman (Atlani-Duault and Vidal 2013, 33–34)

Secondly, it is difficult to transfer the methodology to a different and new context. Certainly, as Leach suggested, this classical anthropological methodology might not be applicable in another context, specifically in a urban context or in more globalised urban and peri-urban settings, with migration processes, and a multi-ethnic context amongst new components because «it is suggested that in urban areas "tradition" has broken down and cultures are fragmented" (2008, 15).

Thirdly, the criticism concerns the reductive role given to the anthropological science itself. It reduces the role of the anthropologist to a "culture" specialist, who has to deal with "cultural" problems in outbreak control, to the study of the culture or the "exotic", and has mainly to design "culturally sensitive" communication strategy for the communities, instead of having a broader mandate as a contextualizing discipline and pointing out the different structural forces that reinforce the emergence and the spread of the disease. As Faye explained regarding the last epidemic, it is less the anthropology that has drowned upon, than the idea humanitarian workers have about it, namely, a "social or cultural mediator". This discipline has been reduced to a "social accompaniment epidemiology" and reified as THE science of the "culturally different". However, as he continued, anthropology could go beyond the "culturalisation" of the epidemic, and could and should also take the response plan as a topic to study, meaning to study the attitudes and practices of the different actors, through a symmetric approach (2015b, 3). As Moulin described it, the first anthropologists were more "cultural translators" who were going to the field in order to do mediation, rather than a "full participant", but in 2014, the anthropologist goes beyond its ordinary position, at the opposite of the traditional ethnography (2015, 3).

Lastly, this approach has been criticized because it omits the political and economic dimensions of an event or a crisis in which an Ebola outbreak can occur, putting therefore all the responsibility on the cultural factors. Believers in the "structural violence" [61] theory are

[61] The precursor of this "structural violence" terminology is Paul Farmer. He developed his theory in the book, *Pathologies of Power: Health, Human Rights and the New War on the Poor* (2005) in (Hewlett and Hewlett 2008, 29). For him, the "structural violence" refers to how politico-economic and other national and international structural forces induce poverty, suffering and inequality and might impoverish or reduce access to health care facilities. Overcrowded, dirty, ill-constructed facilities, basic medicines and infrastructures or "the inequality and the inadequate provision of healthcare entrenched and exacerbated by a legacy of colonialism, the superpower geopolitics, a developmental neoliberalism" (Jones 2011, 1),… could also in this regard have a part of

amongst the most opposed to this "culturalist approach". For them and particularly for Jones (Jones 2011, 1), the absence of structural forces is more responsible for the Ebola spread than anything else, even though culture matters too. When the emphasis is put on the culture at the expense of the structure, it gives a wrong idea and depiction of the Ebola victims. As already seen, it reinforces the stereotype of the African living in a remote place with its old fashion beliefs and traditions, while many people affected by the disease are not living in such conditions any more, and are willing to change and accept the biomedical model in order to recover and fight against the disease (Jones 2011).

Nevertheless, the criticism emerging from the "culturalist approach" remains mainly in the discourse, in the literature and at a theoretical level (Jones, Leach). Moreover, the "structuralist approach" has itself been criticized because it was omitting certain elements[62]. It is recognized that, during outbreaks, including that last one in West Africa, structural forces have had a clear impact on the outbreak and its response, but the main methodology described and suggested for application is the outbreak anthropology with the models developed by the pioneers in the 2000s'. Those two approaches are therefore complementary, one being more for anthropological application in the field, and the other one for feeding a general reflection and the understanding of an event. Culture matters, and at the same time, cultural issues cannot be responsible for the spread of Ebola. It is simply not appropriate to apply "a label of "culture" to what involves a sharp inequality of power between the international aid community and the recipient of aid, who find themselves in a crisis because of other types of inequitable power relationships"(Guppy 2015, 31).

For instance, Fairhead concludes his paper, when speaking about resistance in Guinea, by saying that from earlier outbreaks, it is known that Ebola "is a social phenomenon, not just a virus" (2015, 14–15).

c) Additional information regarding Part One III c) on:

i. burials and funerals

The role tradition can have in the spread of the disease has been questioned and has been tackled from a new perspective, putting less emphasis on it. Richard argued that too much attention has been given to "the alleged role of funerals in spreading Ebola (…). This has "led to attempts to control funerals, causing both distress and active resistance (2014, 1). However,

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responsibility in the spread of the disease. Those factors can be called "structural forces" that participate in the creation of the "structural violence". "Structural violence refers to the way institutions and practices inflict avoidable harm by impairing basic human needs" (Wilkinson and Leach 2014, 1–2).

[62] For more details on the criticism of the « structuralist approach » and on the method suggested in the « Hotspot Theory », c.f. (Brown and Kelly 2014).

as the author explained, the funerals are not separable from the assistance and the care given to the sick person; the attention should therefore, focus more on the disease transmission risk reduction than on the funeral practices as a ritual in itself (*idem*). It means that if Richard's recommendation is followed, much greater emphasis should be placed on the prevention of infection of the person who takes care of the sick than on the funeral itself.

Regarding the lack of focus on cultural sensitiveness to the detriment of security, Fairhead explained that "the logics driving practices around illness, death, burial and the afterlife are rooted in core local values that, if not respected, generate stand-offs and flash points. Cultural sensitivity in this region must go far beyond the lip-service paid to them in "safe and dignified burials"" (2014, 14). Anthropologists can assist in reminding the role of "ancestralization" [63] needed in order to secure a smooth transition from the living world to the death and that calm down dead's and survivors (Moulin 2015, 7).

ii. Resistance and reticence

The five criteria identified by past researchers are: rumors[64], fear, mistrust and lack of confidence in the local authorities, denial of the biomedical discourse[65] and "the desire to be autonomous and avoid what they understand to be exogenous contamination "(J. N. Anoko 2014, 3). The other factors that can create resistance and reticence are linked to the political, economic and historical context. For example Wilkinson & Leach examined "responses to the outbreak and offer different set of explanations, rooted in the history of the region and the political economy of global health and development" (2014, 1). Fairhead on his side insisted on the fact that "the politicization has to be grasped to understand resistance" as shown very evidently in Guinea. And as this resistance has a strong link with the distrust of political institutions in the country, the response measures should be completely dissociated from national politics (2015, 7). This point of view is also shared by Anoko et al. when they say that credulity is not given to the one (government) who is bringing the information on Ebola in Guinea (J. Anoko, Epelboin, and Formenty 2014), because "resistances and "reticences" are reactions to daily difficulties and a traumatic past" (Moulin 2015, 9).

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[63] The "ancestralisation" means the smooth transition between life and death which appease the relationship between the dead and the living.

[64] Rumors have been analysed, regarding the disease itself, or the treatment center. For instance, in order to reduce the rumors around the CTU, anthropologists recommended to MSF to produce small videos showing the inside of a treatment center (Faye 2015b, 5–6).

[65] Wilkinson & Leach gave as example" the problematic assumption that public health experts and scientists possess the knowledge needed to stop the epidemic and that local populations do not" (Wilkinson and Leach 2014, 11).

iii. Social mediation and communication

Examples of communication/sensitization mistakes have been done during the last outbreak such as to mention the absence of treatment and specific vaccines at the beginning of the outbreak, while good care was given in treatment centres (Epelboin 2014, 26). As the scientific paper from the *colloque* argued, there was a critical consensus regarding messages delivered at the beginning of the outbreak (stigmatisation of the sick person, lethal character of the disease, and absence of treatment). As mentioned by the HPG working paper, the "research reaffirms what other studies and news media have reported: particularly in the early stages of the intervention, much communication intended to fight Ebola had in fact the opposite effect. Some messages were inaccurate, while others created inaccurate perceptions" (Dubois et al. 2015, 29).

Regarding the examples of mediation anthropologists have done, Anoko did for instance a field work in Forest Guinea in order to contribute to a conflict resolution between rebellious villages. She had to regain trust from the community, identify leaders and credible intermediaries, listen to the complaints and grievances from the community, mobilize and sensitize taking into consideration the local culture and customs (2014, 17–18). Another « famous » example of mediation has been done by her, again in Guinea, after the death of a pregnant *kissi* woman. Anoko finally found a way to "repair a fault" through an "alleviation ritual" with leaders of the community (Fairhead 2015, 6).

d) Interviews guide

1. What can you tell me about the collaboration between MSF/WHO and medical anthropologists (in general)?
    a. Are you sending medical anthropologists to the field?
    b. For which purpose?
    c. Since when do you collaborate with medical anthropologists?

2. What could be the advantages/limits to collaborate between medical anthropologists and operational actors during an EVD outbreak?
    a. For which reasons would you like (or not) to collaborate with medical anthropologists?
    b. Which difficulties do you perceive in associating medical anthropologists during an EVD outbreak? (Emergency, security…?)

3. According to you, to what extent medical anthropologists contributed to the Ebola West African outbreak response?
    a. If yes: how? What was their added value? (Tools, guideline recommendations….?). How was their contribution used by operational teams in the field?
    b. If no: why?

4. In your view, how much did you integrate the anthropological approach used in past epidemics?
    a. Which lessons from past epidemics have been applied in the current outbreak and how?
    b. How do you see continuity between past and present recommendations in anthropology? (Impact studies done?)

5. In your view what are the knowledge gaps/limits of medical anthropology in order to be able to better help to respond in an EVD outbreak?
    a. If these were addressed, how could they allow helping the operations and better responding in the future?
    b. Which new area/field of research has not been tackled yet?
    c. How do you imagine an efficient integration of medical anthropology during the next EVD operational response?

6. What can you tell me regarding new research work/reflections/contributions/tools (Platforms) in (medical) anthropology that have been generated during the EVD in West Africa?
    a. What do you think of these new research/reflections/contributions/tools?
    b. How do you use them?