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**Master's degree in
European and Global Studies**

Exploring Community Networks' Contribution to the
Intersectionality of the Internet: Connectivity from a Decolonial
Perspective

Supervisor: Dr. Claudia Padovani

Candidate: Jason Christopher Bonsall

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Abstract

More than 37% of the world's population remains unconnected to the internet, and how the remaining population gets connected lies at the heart of many global dilemmas (International Telecommunication Union, 2021). Through increased EU and US regulations, big tech companies are looking to compensate for their impending loss of profit through restrictive measures on data mining of users' personal information. This leaves countries within the global south with no such regulations particularly vulnerable to connectivity schemes such as Facebook's Free Basics, which has been accused of violating net neutrality in several countries and removed from India (Goel & Issac, 2016).

Africa has been a target for these big tech companies in utilizing their connectivity programs, with Free Basics operating in 65 countries among over 100 million people in 2020 (Nothias, 2020). This has taken attention away from more complex connectivity methods, such as community networks, which the UNHCR has suggested have potential benefits in satisfying key aims in their goals for development within displaced populations. Connecting users from rural communities in the global south becomes even more challenging when factoring in research which has found that Western epistemology present on the internet through popular websites such as Wikipedia, suppresses non-Western epistemology (Kumar, 2021; Sibani, 2018; Sousa Santos, 2007).

This thesis attempts to find a pathway for new users connecting to the internet to enjoy increased development capabilities and encourage the preservation of their non-Western culture and knowledge. By comparing a blog post on a community network regarding the history of the ethnic population of the region to a Wikipedia article concerning the same subject, this thesis attempts to find if the notion of participation or ownership in a network changes how users critically interact with information on the internet.

1. Introduction

1.1 Summary

Every form of connectivity to the internet should not be treated equally. Through examining community network connectivity in rural communities within the global south, I will see if this form of connectivity promotes the intersectionality of non-Western cultures and epistemologies with the dominant Western epistemology currently on the internet. The COVID-19 pandemic has made connecting the rest of the world to the internet a priority. However, few stop to think about how this rush to develop a simple connection can be detrimental to the long-term development of a community with a non-Western culture and epistemology. The Internet has become an irreplaceable tool for information gathering and sharing utilized by everyone from school children to research professionals, provided that they have sufficient access to the Internet. I want the internet to be an open forum of knowledge generation and production (also referred to as epistemology) that allows non-Western cultures to share their history unencumbered by the need to meet Western notions of validity. The general lack of acceptance of oral histories in the field of traditional Western academia translates to a lack of acceptance of other forms of knowledge production.

Despite multiple success stories from community network connectivity where the form of connectivity is inextricably linked to improving a community's growth and development, connectivity through Facebook's Free Basics or Discover programs connects more communities (Rey-Moreno, 2017; UNHCR, 2020). Connectivity to the internet through one of these programs or schemes is, at first, cheaper for the community. However, in the long term, it leads to a loss in potential revenue compared to other community networks (Zenzeleni, 2023). Furthermore, Facebook's Free Basics have been proven to have violated net neutrality. This meant that, as an internet provider, they favored access to one website (Facebook) while restricting access to all others (Goel & Issac, 2016). It has been found that even in Facebook's new Discover platform, meant to fix all of the concerns of violating net neutrality, they still strongly favor access to Western websites, including their own, and were more likely to restrict non-Western information sources (Pei et al., 2021). Therefore, when examining the context of rural African communities, which have been seen as the last stronghold of traditional culture, they would immediately begin their internet connectivity experience by being exposed to an algorithm filtered to produce more

Western content (Sibani, 2018). The problem that arises is the potential loss of traditional culture and knowledge since consistent exposure to Western culture has been seen to separate newer generations and their relationship with their traditional culture (Sibani, 2018; Kumar, 2021). This problem is accentuated due to the dominant presence of Western culture and epistemology on the internet, which has been seen to subvert alternate, non-Western epistemologies (Kumar, 2021; Sousa Santos, 2007). From this understanding, I will explore whether community networks impact how their users perceive and critically interact with the information they see online. I hypothesize that due to the strong communal bond consistent within community networks, the increased digital skills of the population from maintaining their network connection, and the fact that the entire community, not just one generation, is involved in this connectivity, they will be more likely to transition more elements of their epistemology online.

The implication that this thesis can have on future research can be seen through the current advancement of Artificial Intelligence and the speed at which it has been adopted into our society as a testament to the threat posed to non-Western epistemologies. A fundamental problem with AI is the algorithmic bias and improper representation of non-Western populations. The critical dilemma discussed in this thesis is the potential loss of access to non-Western forms of knowledge production and culture due to connectivity methods provided by big tech companies. Alternatively, in attempting to understand the scope of the benefits of community network connectivity, this thesis examines if this form of connectivity would allow for a more ethical transition of rural communities in the global south to the internet, which would entail a more substantial presence of their knowledge and culture online. If these rural communities were to make this knowledge and culture available publicly online, it would provide additional information that AI could train on, increasing the representation of non-Western epistemology and potentially decreasing the algorithmic bias of AI. If this were the case, then connecting rural communities in the global south through community network connectivity would produce long-term benefits for the development of the rural community and for the big tech companies.

1.2 Background

The research in this thesis explores how Community Networks can be a potential pathway toward true net neutrality and the preservation of culture when connecting to the current Digital Landscape, which is dominated by Eurocentric and Western thought. It is well known today that

the internet has enhanced the world's ability to communicate and learn. Nevertheless, it is perhaps less well known that about 37% of the world's population has never used the internet, with "many hundreds of millions" of people who are officially counted as 'internet users' "only get[ting] the chance to go online infrequently" (International Telecommunication Union, 2021). It may be unsurprising that most of the unconnected population, as well as those with an infrequent connection, live in developing countries, and many developed Western countries have had most of their population connected for decades. This means that the new connectees, entering into a new environment they are not experienced in, are immediately confronted with a digital landscape dominated by Western thought (International Telecommunication Union, 2022). Research has shown that connection to the internet has significantly impacted cultures due to how the Western ideologies of capitalism and consumerism promoted through the internet can impact other people's cultures (Kumar, 2021). This problem has only been accentuated with the international push for countries to increasingly digitize to better respond to global threats such as COVID-19.

Connectivity, as referenced in the context of this thesis, refers to the use of the internet by individuals as used by the International Telecommunication Union (ITU) in their report "Achieving Universal and Meaningful Digital Connectivity: Setting a Baseline and Targets" when referring to digital connectivity. I utilize this same report to introduce the concept of "meaningful connectivity" to illustrate the difference in methods of connecting to the internet. Meaningful connectivity is defined as "a level of connectivity that allows users to have a safe, satisfying, enriching and productive online experience at an affordable cost". The ITU established 5 criteria of connectivity enablers that included: infrastructure, affordability, device, skills, and security and safety. In order to be classified at the status of 'meaningful connectivity' a minimum threshold of standards to match each criteria needed to be reached that included:

1. Infrastructure: Fast and reliable availability and quality of mobile and fixed networks
2. Affordability: Affordable access to connection and devices
3. Device: Ownership of an internet-enabled mobile or fixed device
4. Skills: Adequate digital skills
5. Security and Safety: Safe navigation as it relates to connection security and navigation safety

I will utilize these standards to examine how connectivity to a community network differs from alternative methods of connectivity.

As countries and citizens are pushed to connect in any way possible, it is increasingly likely that they will overlook paths they can take that would not require a significant loss of their cultural practices and provide them with more choices on how to embrace their connectivity. For this reason, this thesis is conducting research to see if the alternative pathway of community networks is a choice that rural communities should be making as opposed to other options made available by Western big tech companies such as Google, Meta, and Amazon.

Vast amounts of scholarly research have been conducted on the impact of digital media on existing societies and cultures.

I will specifically be looking at building off of the research Dr. Sangeet Kumar conducted in his book *The Digital Frontier: Infrastructures of Control on the Global Web*. In this book, Dr. Kumar can empirically show how the centralization of digital media and its infrastructure in the West continues to impact other cultures while increasingly promoting Western ideology.

Focusing on the global aspect of the influence on digital media and culture and how digital media infrastructure is making Western ideology universal amidst clashes with local cultural practices provides the foundation of the essential problem that Community Networks might be able to combat. In congruence with the impact of digital media technology against democratic values, scholarly works concerning digital democracy address the hegemony of one culture over all others and how Western ideologies, such as capitalism, challenge many of the humanitarian principles these Western countries claim to promote globally.

A challenge also examined in research done by (Couldry & Mejias 2023; Couldry & Mejias 2019; Pei et al., 2021) will see how the current forms of internet connectivity contribute to 'data colonialism.' Looking at colonialism's overall historical arc, Couldry and Mejias discuss how the modern-day capitalist practice of harvesting users' data contributes to this history. The research conducted by Pei, Olgado, and Crooks (2021) discussed Facebook's launch of their new internet connectivity platform, Discover, which was claimed to be the solution to the net neutrality and 'data colonialism' accusations the company was receiving.

The research presented in this article by Pei, Olgado, and Crooks builds on the research by Couldry and Mejias by presenting an additional angle of the exploitation by Facebook and how its focus on profit harms its users. The article tested the altruistic claims of Facebook's Discover

connectivity scheme, and in studying the usage of Discover in Malaysia, the researchers found that Facebook was heavily favoring their content through 46% of the websites presented by Discover owned by entities in the US. Additionally, it found that among the redacted images presented by Discover, 65% of images were redacted from YouTube, a competitor of Facebook, while only 4% were redacted from Facebook (Pei et al., 2021). In discussing the results of this finding, the authors conclude that due to this "profit-driven logic of redaction...coloniz[es] new markets", still connecting Facebook to the act of colonization.

Furthermore, I explore the existent lack of intersectionality on the internet and how research (Sousa Santos, 2007; Sibani, 2018; Kumar, 2021) have discussed how Western epistemology subverts non-Western epistemology. Intersectionality, in the context of this thesis will be based on the definition provided by Menusha De Silva in the *International Encyclopedia of Human Geography*. De Silva states that intersectionality "recognizes that the simultaneity of individuals' multiple social identities, such as gender, race, class, age, etc, may lead to opportunities and oppressions that vary according to a given situation" (De Silva, 2020). I specifically used the definition created by human geographers since they have expanded the intersectionality's use in "drawing attention to lesser-known identity constructions situated in non-Western social, cultural, and political contexts" (De Silva, 2020). In my comparison of the BOSCO Uganda community network and how they are able to represent their own history, further explained in the next section, this specific use of intersectionality fits the best.

In examining the effectiveness of community networks against the problem of the influence of Western ideologies through the digital media infrastructure, this research will produce a clear path towards ethical connectivity of the global south. In exploring the impact of Western epistemology on non-Western cultures, this thesis uses existing research (Sousa de Santos, 2016; Bloch, 1970; Tomba, 2011; Hegel, 1970; Mingolo & Escobar, 2010) that provides a foundation to build upon. Additionally, this thesis explores research (Sibani, 2018; Venkatesh, 2012; Alloy, 2003; Arinze, 2006; Obinna, 2016; Akama, 2012) explicitly done on the Western impact on traditional African society. Both of these sources are linked through the loss of traditional elements of culture and knowledge production due to the proximity to Western culture and how Western culture has historically been unable to allow for the coexistence of other forms of knowledge production. This thesis then presents the dilemma of connectivity to the internet for

rural populations, the areas where elements of traditional African society remain strongest, which would then drastically increase rural populations' proximity to Western epistemology.

Therefore, the research in this thesis searches for a method of connectivity to the internet that gives communities the space and time to negotiate how they will exist in this new digital landscape instead of immediately being swept away by the wave of Western cultural values that dominates the world wide web. The current general assumption in the international community about the internet is that connecting to the internet will bring this utopian future where everyone can become more connected culturally and intellectually. Nevertheless, the research presented above shows that, as of right now, two distinctly different forms of connectivity are being established in the populations of new connectees to the internet.

The connectivity schemes by companies such as Meta propagate and advance a new version of colonialism with a foundation in corporate capitalism and a focus on profit. In examining the history of community networks and how they have operated over the years, this thesis examines the issue of connectivity and preservation of non-Western epistemology through the lens of a community network. In a case study of a community network referred to as the Zenzeleni Network in South Africa, the work in this thesis examines how a community can go from absolutely no knowledge of the internet to being able to set up and maintain its network in a year through a partnership with a university.

In tracking further developments of these community networks, this thesis displays a much broader positive impact than simple connectivity and testimonials from the community members on how this specific form of connectivity has improved their lives. This chapter and case study show the feasibility of community networks in rural populations of the global south. In reading some accounts from this case study, one can see in the Zenzeleni Community Networks the same enthusiastic sense of freedom that the newly connected Western populations saw in the 1980s and 1990s. The actions of Facebook in presenting newly connected individuals with a landscape that is already dominated by Western corporations, which then further regulates how they can interact in this digital environment, is stripping the newly connected individuals of the same opportunities as the newly connected Western populations in the early days of internet access.

1.3 Research Problem

To find the root of the misinformation that has impacted many non-Western populations in the global south that has subsequently been spreading across the internet, we must examine the dark history of colonization. Many soldiers, missionaries, and explorers wrote accounts of their time in different parts of the world, and this information was then published and has been continuously used and referred to in order to paint a picture of the history and culture of different nations and regions of the world (Dickmans, 2022). There are many occasions where these historical accounts got much of these people's history and culture wrong. However, since the Western form of knowledge production favors published content and peer reviewed content, indigenous populations did not have the tools to correct these accounts, the false information within them was given the space to spread (Kumar, 2021). Ultimately, the history told from the colonists' perspective became viewed as fact among the international community, who would then put this information into textbooks that would educate future generations (Cooper, 1994). When the internet came and presented itself as a tool that we could learn from, it was a natural transition for this information provided by textbooks, then made its way to online encyclopedias and other sites that provided history or information for a given region. The internet has made this tainted version of history far more global and accessible.

The research in this thesis will attempt to find a path towards connectivity that would enable the communities and tribes who have been victims of historic misrepresentation to present their accounts of their history alongside the history presented by the colonizers. It is hypothesized that this form of connectivity can create a space for non-Western accounts of history to exist alongside the Western-dominated forums of information exchange on the internet. This thesis will test this hypothesis using a retrospective causal-comparative research model to analyze if connectivity through a community network promotes a different form of interaction with the internet. A retrospective causal-comparative research model examines why a relationship between two variables leads to a certain outcome and how the different variables affect the outcome. In my case, I am trying to understand if connectivity to the internet could lead to the difference in content. Therefore, the results of the analysis will find if a community network produced a unique form of information or knowledge that would otherwise not be shown on Wikipedia. The research will include the comparison of a blog post on the history of the Acholi

ethnic group on the BOSCO Uganda community network run by people belonging to the Acholi ethnicity against a Wikipedia article published about the Acholi people.

As discussed in research introducing Western epistemology's subversion of non-Western epistemology (Sousa Santos, 2007; Sibani, 2018; Kumar, 2021), some non-Western ethnicities and cultures become diminished as they increase their interaction with Western cultures. The Acholi ethnic group is located in a region in Northern Uganda and crosses over into part of Southern Sudan, Kenya, Tanzania and the Democratic Republic of Congo (Apwonyokwe, 2022; Ortega, 2023). Members of this ethnic group in the Northern Uganda region are an example of a non-Western population who have had many elements of their traditional culture diminished. However, it was not through proximity and increased interaction with Western culture but rather, violence from a Civil War within the country that led to almost the entire Acholi population forced to live in internal displacement camps (Okot, 2013).

In 2007, the BOSCO Uganda community network was created due to a significant amount of Western assistance that continues to this day connected to further development and expansion of the community network. According to the research presented by (Sousa Santos, 2007; Sibani, 2018; Kumar, 2021) the two factors of the Acholi traditional culture and knowledge being diminished due to violence and the increased interaction with the West in relation to the internet would lead to further erasure of the Acholi non-Western epistemology. The circumstances around the creation of the BOSCO Uganda community network make it a perfect case study to examine the portrayal of how community network connectivity impacts how the users critically interact with information on the internet. The research will include the comparison of a blog post on the history of the Acholi people on the BOSCO Uganda community network website located in the region of people belonging to the Acholi ethnicity against a Wikipedia article published about the Acholi people.

This work will build upon a foundation of existing research that speaks to the benefits of community networks for rural communities in the global south, existing methods of connecting rural communities in the global south that lead to neo-colonization, and finally, the lack of intersectionality of information being displayed on the internet. The research in this thesis will work to advance each of these research areas further while also functioning to view community networks as a potential solution that could work towards mitigating all three areas of research. Furthermore, by providing historically suppressed communities and cultures a voice and the

platform to tell their side of the story to the worldwide community, there is the potential for a much deeper dialogue that can flourish between the Global North and the Global South toward addressing the systemic inequalities that persist to this day.

The early promise of the internet was that you could connect with people from around the world who could communicate and share more accurate information about themselves. This early promise made it seem as if people could then use the internet to fact-check textbooks and other sources of information. Nevertheless, since most of the early adopters of the internet were from the global north, the internet became an environment where Eurocentric ideas could become ever more prevalent. The hard truth is that most of the global south is still not connected to the internet, which means that many rural communities and tribes still have not been given the tools or understanding to correct the false information that has been spreading about them. In 2021 alone, 37% of the world was still unconnected from the internet. Of the connected people in the global south, a significant number did not have a secure or constant internet connection (International Telecommunication Union, 2021). This is precisely where the crux of the problem lies: without the ability to connect to the internet, the sharing of knowledge about a tribe or community cannot go beyond the oral histories that get passed down within the same community over the years.

Due to a lack of access to the internet, along with many other modern tools, these more remote regions of the global south have not been presented with the chance to find ways to adapt their history to the online environment. If these remote communities elected to stay without an internet connection and preferred to preserve their more traditional methods of information sharing, they could continue with these traditional methods, and their history would remain strong within their community. However, big tech companies such as Meta, Amazon, and Microsoft are advertising their unique forms of connectivity to the internet at no cost to the user. It is a system of connectivity that seems beneficial for the new connectees of the global south. Yet, when looked at further, it is revealed to be a predatory scheme by these companies to provide a severely restricted version of the internet geared towards profits for these big tech companies. This restricted form of connectivity allows users to consume Western-oriented content without being allowed to interact with the information the same way as someone with full connectivity to the internet. This leads to implicit and unconscious negative impacts on how the newer generations view, interpret, and value the information they receive (Sibani, 2018;

Kumar, 2021). Research has already shown real impacts on how different communities can view, interact, and share information on the internet (Kumar, 2021). Suppose new generations from rural communities within the global south were to value Western epistemology more than their traditional epistemology. Would they still see value in continuing their tradition of oral histories? Furthermore, if not, will this history be lost forever, forcing new generations to rely only on colonial history written and published by the enemy of their ancestors?

1.4 Objective of the Research

This study set out to answer the following question: Does the notion of participation and ownership in a network have any influence on how you critically engage on the information that comes across the web. Through this question I will examine the problems laid out above and test to see if connecting the rural communities of the global south to community networks is a potential solution to address a lack of inclusion of rural communities in the sharing of knowledge through the internet. It was hypothesized that the strong communal bond within community networks, the increased digital skills of the population from maintaining their own network, and that the entire community present in this connectivity, they will transition more elements of their epistemology online.

1.5 Structure of the Thesis

This thesis will present a literature mainly composed of establishing an understanding of the three main components of research I will be building off of with the findings in my thesis. These three overarching points that connect to this research are connectivity to the internet through a big tech company, connectivity to the internet through a community network, and finally, knowledge production on the internet. Within the category of connectivity through a big tech company, I explore how it is associated with the continuity of colonization by analyzing claims of predatory business practices by Facebook through their Free Basics scheme and how media has primarily framed it as charity work (Kumar, 2021; Couldry & Mejias, 2019; Nothias, 2020). Then, in presenting the category of connectivity through a community network, the goal of the section was to highlight how community networks differ from traditional forms of connectivity. Importantly, it shows that not all forms of connecting to the internet lead to equal results. This is done by presenting research that displays the positive aspects of community networks with rural

communities in the global south and contrasting it with Facebook's connectivity schemes (Rey-Moreno, 2017; UNHCR, 2020; Pei et al., 2021). In utilizing the case example of the Zenzeleni Community Networks in South Africa, I will also display how feasible it is for a rural community to go from having no digital literacy to maintaining its network with the proper support (Zenzeleni, 2023). The Final category of the literature review, knowledge production on the internet, introduces the concept of the abyssal line within the context of the lack of intersectionality on the internet. This section builds off the research of Boaventura de Sousa Santos, Dr. Clifford Meesua Sibani, and Dr. Sangeet Kumar in their assessment of the impact of Western epistemology on non-Western epistemologies and how it translates to sharing information online.

Following the literature review, I present the methodology and explain how I will conduct the research. Within this chapter, I present the data collection methods, which outline why and how I chose the sources used to carry out the research and why it was necessary to present the research in the literature review. Then, I will justify why I chose the BOSCO Uganda community network and Wikipedia as the variables to compare in this analysis. Finally, I explain the retrospective causal comparative model and why it fits with this research question. In this section, I also detail the specific metrics used in comparing the two articles, including why they are essential for my analysis.

In the Analysis and Findings chapter, I present background information on the Acholi people, providing more context for the analysis and displaying why they work well for this thesis.

Additionally, within this section, I focus my analysis on the content and the sources referenced in both the blog post and Wikipedia article. In examining the content and sources, I present background metrics and charts to visualize the difference between the article and blog post.

Following the Analysis and Findings, I include the discussion chapter where I present my interpretation of the findings in the previous chapter, explain how it builds upon the research presented in the literature review, present the limitations of these findings, and finally discuss how the results of this thesis can be utilized for future research.

2. Literature Review

The book that was a key inspirational source for this research was written by Dr. Sangeet Kumar and is titled *The Digital Frontier: Infrastructures of Control on the Global Web*. In this book, Dr. Kumar uses the term *Digital Frontier* to denote the demarcating line that separates the digitized from the undigitized populations of the world and to show that the undigitized individuals are presented the same as the "undiscovered lands" in the "age of discovery" (Kumar, 2021). When explaining the metaphor further, Dr. Kumar described that colonial America saw the frontier as a seemingly limitless, expansive, unconquered, and uninhabited West. Individuals and societies were appropriating new lands and starting a new signifying rebirth (Kumar, 2021). To settlers, there was a possibility to free themselves from the entrenched structures of power and get a new chance to reach a new social standing in these "unexplored lands." The author here is saying that people historically seen as the lower caste of society had this new chance to start a new life where they would not feel lesser. Dr. Sangeet Kumar further identifies the ways in which Big Tech companies have taken the form of colonizers and have successfully collaborated with local governments and media outlets, which frames their actions of connecting the population for free as charity despite the clear long-term profit they are set to make from the arrangement. In the literature review below, I build off this metaphor by forming the foundation to examine community networks as a potential pathway for rural indigenous communities in the global south to preserve their epistemology in this period of technological transition.

Therefore, where Dr. Kumar presents the metaphor of the environment of *The Digital Frontier* and the broad characteristics of the actors, this thesis attempts to parallel more closely to the actions of the Cherokee leader Sequoyah. This leader is credited for creating the Cherokee Syllabary, or the written form of the Cherokee language, which can be attributed to helping to unite the scattered Cherokee Nation after forced displacement (Georgia Historical Society, 2023). Furthermore, the establishment of a newspaper called the *Cherokee Phoenix*, which utilized one column of English and one column of Cherokee, led to a forum where the grievances of the Cherokee were able to be expressed and shared with the whole Cherokee Nation (Georgia Historical Society, 2023). In an additional parallel that will be seen in the Analysis and Findings chapter, the printing office for the Cherokee Phoenix was established in collaboration with a Christian missionary named Samuel Worcester (Pulley, 2002). This historical parallel represented the work of one man and his ability to transition vital elements of his native language

and subsequent epistemology before an even greater displacement of his nation and demand from the US government to integrate with Western society. Sequoyah ultimately used Western technology, the printing press, to transition elements of his non-Western epistemology to a new format that was more adept at preserving information and subsequently made his nation stronger. This thesis will analyze if transitioning to the internet through a specific method of connectivity is more adept at preserving non-Western epistemology, specifically testing the description of an ethnicity's history being published by a rural non-Western community against the standard Western framework of the internet. What is included in this literature review will provide an academic foundation that displays challenges that non-Western rural communities in the global south face as they transition to life on the internet.

The literature review structure comprises three main themes representing the significant challenges and opportunities that rural communities in the global south face. The first theme is connectivity through a big tech company and examines research that suggests a continuity of colonization through this form of connectivity. In primarily examining Facebook's Free Basics and Discover connectivity schemes, I will present the current race to connect the unconnected and how local media have supported Facebook and framed their actions as charity work. The second theme concerns connectivity through a community network and displays how community network connectivity differs from traditional forms of connectivity. I present research from international organizations such as the UNHCR and publications from various advocates that state the numerous benefits of community networks. I then present the Zenzeleni Community Networks as an example. The final theme concerns the knowledge production on the internet and how Western epistemology that dominates the internet acts to subvert an alternate epistemology and make it less significant.

2.1 Continuity of Colonization Through Connectivity

2.1.1 The Race to Connect the Unconnected

Since the 1980s and 1990s, the Internet was seen as a radical new way of communication that would revolutionize society, and in many ways, a lot of society has changed due to the Internet. However, what has failed to be effectively introduced to the developing countries that are newly connecting to the Internet is that it is a space that has become hyper-capitalistic and dominated by five Big Tech companies (Google, Apple, Facebook, Amazon, and Microsoft). The newly

connected individuals, instead of being presented with this vast space of open dialogue and free thinking that was seen in the vision of the 1980s and 1990s, see a space that has been primarily commoditized and built to reflect the Western values of the companies that were the first to stake their claim in the development of the new "Digital Frontier."

It should be noted that China is also pursuing connectivity campaigns to establish internet access to developing countries through a program associated with its Belt and Road Initiative called the Digital Silk Road (Council on Foreign Relations, 2023). An article published by the Council on Foreign Relations titled "Assessing China's Digital Silk Road Initiative: A Transformative Approach to Technology Financing or a Danger to Freedoms?" explores the impact this connectivity scheme can have on participating countries. The article details how this connectivity scheme has wide-ranging effects on the sovereignty of the nation in which it is established and China's surveillance and espionage capabilities. While this initiative is pertinent to the issue of connectivity and regards a push towards advancing a non-Western framework of content on the Internet, adding in the sphere of Chinese and authoritarian influence would make the scope of this thesis too broad. Additionally, Community networks, similar to their proposed function in this thesis, would still work to diminish any reliance of the rural communities in the Global South on larger powers such as China, Western Countries, or large multinational corporations. In their discovery of a new way to commodify the Internet, the major tech companies use algorithms to learn and then sell specific information about a user and their habits to ad agencies that can then specifically target that user with goods that they know they might be interested in (Couldry & Mejias, 2019). These tech companies have become so successful in commodifying their users' information that a famous article in the Economist claimed that "The world's most valuable resource is no longer oil, but data" (Economist, 2017). This signaled that the sale of user data has become more profitable than the sale of oil. In other words, this meant that big tech companies were making billions through the "transformation of society through data extraction for profit" (Couldry & Mejias, 2021). Therefore, when Internet connectivity is the key ingredient in how these companies make their money, it is easy to see how their motive for connecting the rest of the world to the Internet can easily be tied to their desire to increase their profit. No company provides a better example of the blatant motive towards profit than Meta, the parent company of Facebook.

Meta's 'Free Basics' program "makes the internet accessible to more people by providing them with a range of free basic services like news, maternal health, travel, local jobs, sports, communication, and local government information" (Meta, 2023). Nevertheless, as the connectivity scheme has operated for several years, it became evident that it has primarily been successful only in integrating the communities that it has operated in on only one small aspect of the Internet, Facebook. This misperception of the Internet among the users of Meta's 'Free Basics' program can be best explained by Iris Orriss, Meta's Vice President of Internationalization, who stated, "Awareness of the Internet in developing countries is very limited. In fact, for many users, Facebook *is* the Internet, as it is often the only accessible application" (Mirani, 2015). This shows that the company, whose goal is to "make the Internet accessible to more people," has only been successful in making the populations that it has worked with only proficient in Facebook and still unaware of the other aspects of the Internet that could lead to significant economic development.

Moreover, suppose these populations continue to believe that Facebook is the Internet, which a Quartz poll showed that 65% of Nigerians polled believe (Mirani, 2015). In that case, it is possible that these populations will not seriously consider or search for another form of connectivity, and, as a result, the population's digital literacy will remain stunted. Examining the last part of the statement by Orriss, which said, "It's often the only accessible application," shows the minimal version of the Internet available to these developing countries. The practices here display clear examples of predatory practices by Meta, who, much like the colonizers in the 'age of discovery' and the settlers during the 'taming of the frontier,' are taking advantage of people in developing countries who do not entirely understand the new technology that is being introduced to them. However, this information is nothing new and has been circulating in the scholarly community for years. Research on the "decolonial perspective" on data and technology can be traced back to 2010 when Irani, Dourish, et al. proposed the idea of 'postcolonial computing' at a conference held by the ACM (Association for Computing Machinery). At this conference and in a later article published in 2012 by Dourish and Mainwaring, the researchers proposed a new way to think of the implicit power relations steeped in colonial histories affecting computing (Couldry & Mejias, 2021). It was Roberto Casati (2013) who was an early user of the term 'digital colonialism,' which attributes how tech companies have shifted the dynamics of social

interaction so that they are the mediators and then have profited off of this exploitative relationship (Casati, 2013).

This foundational research led to three distinct themes within the decolonial approach to data. The first is 'digital colonialism,' which argues that data practices sustain themselves, like all other capitalist practices, in inherited neo-colonial contexts (Kwet, 2019). The second is 'Technocolonialism,' which argues that data practices take a specific form in neocolonial settings because of the distinctive social and economic power characteristics of those settings (Madinanou, 2019). The third is 'Data colonization,' which describes the conversion of all aspects of our lives into digital data to generate profit (Couldry & Mejias, 2019; Ricaurte, 2019). These approaches to discern the proper context in which big tech companies are advancing a new version of colonialism discuss racialized inequalities in data collection and use that directly relate to the current problems with AI (Couldry & Mejias, 2021). However, a drawback to this research is that it is primarily focused on the collection and appropriation of user data, which, while it is a significant issue that needs to be discussed, does not relate to how different forms of connectivity can affect how users interact on the Internet.

Therefore, while there are important parallels to draw between this existing research since it establishes a foundation of exploitation, defines this new stage of capitalism, and is rooted in colonialism, it does not directly relate to my research. Moreover, the new launch of Meta's *Discover* connectivity scheme has seen the tech giant claim that Discover "does not store information about the things you do or the content you view within any third-party websites" (Facebook). Later in this research by Pei, Olgado, and Crooks (2021) will be able to link Discover as the act of Facebook "colonizing new markets," meaning that despite a lack of focus on personal data, neo-colonization was still present in Facebook' actions.

Dr. Sangeet Kumar's research additionally introduces the concept of *Network Power* as another one of Facebook's goals in connecting the global south. Essentially, network power exists due to the "path dependence" that is created when there are "certain versions of local practices, routines, and symbols" that erase any alternative (Grewal 2008, 4). Mark Zuckerberg has referred to the three impediments of connectivity: access, affordability, and people's lack of digital literacy (Kumar, 2021). In raising these points, Zuckerberg shows that he understands the challenges of connectivity. Nevertheless, how his "Free Basics" program has been implemented displays a clear motive for profit over genuine assistance.

As I have pointed out in the figures in the paragraph above, Meta, despite claiming to understand and attempt to address the problem of a lack of digital literacy, has introduced a connectivity scheme where the users are unaware that there is more to the Internet than Facebook. This is arguably one of the most essential facets of education concerning digital literacy. However, Meta has failed to achieve this basic level of digital literacy in a significant portion of every population in which Free Basics has operated. However, Meta still managed to carry out this connectivity scheme so that all the populations where Free Basics was operating had easy access to Facebook and even heavily encouraged the use of Facebook. This shows signs of predatory business practices since it conflates the humanitarian goal of connecting the unconnected from the real purpose of trying to find new avenues for profit. This basic explanation does not bring to light the long-term implications for the reduced potential development of the nations that Meta is working within and the power that Meta will gain as more communication will be concentrated over platforms that Meta has direct control over. The type of power and control that this will concentrate in the hands of Meta is referred to by Dr. Sangeet Kumar and many other scholars as *Network Power*.

Controversy around 'network power' arises when describing the conventions around connecting to a network. In the particular case of Meta and their "free basics" connectivity scheme, the populations of the developing countries that subscribe to this scheme will be unlikely to try to establish a new form of internet connectivity outside of Facebook since this is the easiest way for connectivity and the only aspect of the Internet that they are aware of. More simply, entrepreneurs in Africa may be less likely to develop their own form of social media since Facebook is where everyone has established a network of friends already and convincing a whole continent to abandon one app to build up a whole new list of friends and followers on another is very unlikely. Therefore, as a whole population starts to communicate through one social media site, it then requires a country's politicians to go onto this site and communicate with the people since it has become the most effective way to communicate a message. Whether the message that the government or politicians are trying to send is for the safety of the people or a reelection campaign, Facebook becomes the site that controls all of this traffic. With the control of the communication traffic, Facebook then operates similarly to a public infrastructure. This power was recognized by Mark Zuckerberg when he said, "There needs to be a 911 for the Internet." then elaborated on this statement by saying, "We've been working with operators to offer free

basic Internet for everyone, to break down the social barriers" (India Today, 2014). Comparing the service offered in Meta's connectivity scheme to an emergency service creates a direct link to the power that Meta has over a country's population. A fundamental principle about public infrastructure in any country that it exists in, especially if it is an emergency service, is that it is accountable to the public. However, if Facebook is centered in the United States, nothing would require them to be accountable to people in India.

Dr. Sangeet Kumar highlights the exact issue of a lack of sovereign control over what is published by US-based tech companies when he details India's conflict with Google's Google Earth application. According to Dr. Kumar, not only was India's protest the most vociferous but also "initiated a year-and-a-half-long conflict with continuing lingering effects," and it "starkly reveals how nation-states are ill-prepared to deal with this unprecedented technological challenge from a nonstate actor" (Kumar, pg.189, 2021). As detailed by Dr. Kumar, this conflict was due to Google Earth displaying sensitive sites on their website, such as military bases, the prime minister's residence, and the president's residence. The concern on behalf of India was the security threat that was present when anyone could access high-resolution images of India's sensitive sites. Google officially responded, saying they would be open to dialogue and working with the Indian government. However, nothing was ultimately done to change the images published on Google Earth.

A pivotal moment in this debate that Dr. Kumar highlights is India's officials then turning to their diplomatic channels and having the Indian embassy in the US to pressure and take up the matters with Google. Dr. Kumar stated that this was evidence of "a new era for the struggle for sovereignty... nation-states around the world desperately seek any possible leverage against digital platforms" (Kumar, pg.190, 2021). It was later revealed that the images did not change for over a year, with the change being more of a gesture of goodwill from Google's vice president's visit to India. This example and its drastic changes in the global interaction with digital companies, as explained by Dr. Sangeet Kumar, show the implication of the network power these big tech companies have over other countries' sovereignty and ability to protect themselves. In essence, if India wanted the benefits that Google Earth brought to the state and the population, such as its help with the identification of wildfires and tsunamis, then they have little leverage in the choices made in what gets published on its site. Dr. Sangeet Kumar describes this type of control as a

"paradoxical duality of access and constraint, of possibilities and prohibitions, of freedom and control, given that they are hardwired within its design are presented to users as inextricable parts of the same package that we can accept or reject in its entirety (Kumar 2021, 15).

This quote shows the suffocating power that companies such as Google and Meta have when they operate in foreign countries. Google Earth became an essential part of navigation and alert in India, functioning similarly to public infrastructure, and due to the lack of government control of this public infrastructure, the state of India lost its ability to control what gets posted on this site, leading to a serious security threat for their country. There is a strong parallel between what Google did with Google Earth and what Zuckerberg stated he wants to do with Free Basics by becoming the provider of India's "911 for the Internet".

It should be stated that countries have taken action to address Meta's violation of digital rights, which has since made Meta change some of their operations and even create a new version of Free Basics altogether. India ruled that Meta (Facebook at the time) was violating net neutrality, or the principle that internet service providers should not favor or block any content or applications, and forced them to stop operating Free Basics within their country (Goel & Issac, 2016). This made Meta change their approach to connectivity, and while connectivity in continents such as Africa rose, this was done particularly by Meta making simple changes to their scheme and focusing on "growing engagement with civil society" and "the focus of digital rights activists across the continent" (Nothias, 2020).

In focusing on their collaboration with civil society, Meta made several partnerships with African NGOs and included many different applications that would be added to their internet service. Partnerships with organizations such as the World Food Programme or the UNHCR showed efforts to offer real assistance to people who needed it and connect them with the proper services (Nothias, 2020). In this new version of Free Basics, it was stated by Toussaint Nothias, research director of Stanford University's Digital Civil Society Lab, that these new actions taken by Meta were simply about "capturing actors that may have led the charge against Free Basics" (Nothias, 2020). This shows purely surface-level changes on the part of Meta and one that they implicitly acknowledge by cutting their public reporting on Free Basics or any of their

connectivity schemes to zero. However, Meta, a year after this study by Nothias, launched a new app called Discover, which was promised to function like Free Basics but to remove the "walled garden" aspect by allowing users to scroll through a text-only version of any website for free and up to a certain daily data cap (Tobin, 2021). According to a conference paper titled "Market Testbed, Backroom: The Redacted Internet of Facebook's Discover," authors Lucy Pei, Benedict Salazar Olgado, and Roderic Crooks prove that Facebook's Discover "reproduces the very structural inequality that access to the internet frequently claim to ameliorate." In this study, the authors examined how Discover operated in the Philippines after its May 2020 launch.

This study found that through Facebook's Discover platform redacting some content online due to restrictions on the connectivity service, the platform ends up privileging certain content from certain sites. The researchers found that "uneven redactions lead to varying levels of functionality, presenting a skewed internet that favors some and leaves others behind" (Pei et al., 2021). Furthermore, in this research, they found that over 46% of the websites presented by Discover have owners based in the United States and found that Discover rendered Facebook's services far better than its competitors, with 65% of images removed on YouTube compared to just 4% on Facebook. In their conclusion, Pei, Olgado, and Crooks stated, "This profit-driven logic of redaction and form moderation further extracts from precarious consumers by colonizing new markets, rather than ameliorating structural inequality." While Facebook claimed that this was an error that they resolved, the crux of the issue remains that, despite this clear violation of net neutrality exposed on this new platform, Facebook still controls the images that users see.

Furthermore, this research can build on the research presented by Couldry & Mejias (2019;2023) by showing that despite the change in method of profit, from data collection to network power, Facebook is still operating as a neo-colonial entity. Tobin additionally reached out to Mong Palatino, a former member of the Philippines House of Representatives who studied Free Basics in the Philippines for the advocacy group Global Voices. Palatino stated that the fact that Discover only renders a few images can spread misinformation, elaborating on this by saying, "This makes it more difficult for readers to process information, and means users will react based on text or headline alone." However, the most powerful statement given to Tobin, which illustrated Meta's predatory business practice the best, was done by Manzar from the Digital Empowerment Foundation in India, who said, "If you really wanted to solve the connectivity problem, you could have said: Any entrepreneur who wants to do last-mile connectivity, we are

going to supply you with the equipment" (Tobin, 2021). Throughout all of this change that Meta has conducted around their connectivity schemes, you can see the overall goal they are trying to achieve within the global south: network power. Meta is willing to sacrifice the money they were making from mining people's information and the significant reduction in internet service offered due to their knowledge of the long-term payoff if they develop path dependency within these populations. If Facebook is the major ISP for the global south, they can increase the price later on, and the people would be virtually forced to pay due to the network power Meta achieved. Network power is the goal of these big tech companies, and by presenting the Internet as something as binary as either too expensive for communities to afford or a collection of simple websites tied to one social media company that tracks and profits off user activity is to mislead almost half of the world's population to experiencing something lesser than the rest. Typically, it could be argued that if the people did not like what Meta was doing, they could stop using it, and that is how the free market could correct this imbalance in power. However, since Meta governs the "free basics" connectivity scheme, users do not have access to other social media apps. For this reason, this research thesis attempts to present another option to these communities as a way out of their "walled garden" and into the vast expanse of the digital world.

Additionally, it is for this reason that big tech companies such as Meta are being portrayed as the modern-day colonizers on the Digital Frontier, functioning to take advantage of the lack of digital literacy in the developing world in order to terraform their perspective of the Internet. This can be comparable to how the United States Government treated the Native Americans, claiming that they were respecting their rights and their sovereignty yet restricting their life to a small plot of land that they could take away at a moment's notice. Dr. Kumar wants to refocus attention on the global impact of these new connectivity schemes on different cultures. In this next section, we explore how the media's continued support for this activity is highly detrimental to the developing countries that use it.

2.1.2 Media's Support of the Connectivity Schemes

When introducing the second element of Dr. Sangeet Kumar's comparison of the Frontier to the connectivity schemes taking place around the world, Dr. Kumar introduces the concept of "Manifest Destiny" and says that the connectivity schemes being offered by Big tech companies have been created in the same vein by creating legal, moral and ethical justification (Kumar,

2021). Much like in the 18th century with the US propaganda surrounding the right of the settlers to claim the Frontier, current web companies are conducting ad campaigns that run in parallel with a public push for the developing world to become connected to the Internet, which promotes this grab at controlling the digital infrastructure of multiple countries. More specifically, Dr. Kumar states that previous claims such as 'Manifest Destiny' and the 'Civilising Mission' have parallels to contemporary arguments for global connectivity in corporate and media discourses (Kumar, 2021).

This argument links strongly to existing scholarship around 'data colonialism' (Couldry & Mejias, 2019) through the historical parallels used to examine this new stage of capitalism in a timeline dating back five hundred years. Dr. Kumar specifically describes the public perception of companies such as Meta offering their connectivity scheme as charity. Despite Meta positioning itself to profit from this scheme and have a new type of control over the population and the country's politics, local news outlets framed their work in the context of charity. This reveals a veil that companies can hide behind due to the global perception of internet connectivity of any kind automatically being viewed as a fundamental human right, thereby attaching a god complex to companies carrying out this mission. Big tech companies continuously "seek to create a compelling argument that internet connectivity is a panacea to common social problems afflicting the developing world" (Kumar, 2021). This quote by Dr. Kumar highlights the cyber-utopianism that is key to every company's arguments.

The promise of internet connectivity and the economic and technological advancement it could bring to a developing country has many media outlets and public figures in broad support of the company's actions within their country. One claim by the Telecommunications and Digital Infrastructure Minister of Sri Lanka stated that "a 10% increase in internet penetration has the potential to drive a 1.2 increase in GDP" (Daily News 2016b; Sri Lanka, April 11). This statement, from a high-ranking public official overseeing the country's Digital Infrastructure, will provide much more confidence within the general population and the local media outlets that these companies will lead the country to prosperity.

However, Dr. Sangeet Kumar discusses the results of a 2017 study on the presented benefits of connectivity being based on "unspecified evidence" (Kumar, 2021). This means that the study could not find any evidence to back up various claims that they analyzed around the countries benefiting from connecting to the Internet. This study displays a false sense of confidence in the

free basics' ability to drastically change a country's production, as well as further proof of a lack of understanding of what is being offered.

Exploring what is genuinely being offered by Meta's 'Free Basics' program is essential to see how the capabilities of people being able to be introduced to the Internet through this scheme are over-promised and unrealistic. In quoting Mark Zuckerberg in a speech he made in Dehli about the benefits of his connectivity scheme, he stated, "Currently, there are a lot of people in developing countries who don't realize the benefits of the internet" (India Today, 2014). In this simple statement, Zuckerberg already accentuates his position within the country as someone who knows all about the Internet and the benefits it can offer developing countries. Mark Zuckerberg further elaborates on this statement by saying, "A lot of people who have never experienced the Internet just don't know why they would want it," following this up with a survey that showed 69% of people in India do not know why it would be useful for them (India Today, 2014). This shows that Zuckerberg acknowledges the lack of public awareness of the Internet and places himself in the position to tell the population that the products he offers will be able to help India and all developing countries. However, when Global Voices, an international, multilingual community of writers, translators, and human rights activists, researched whether Meta was meeting its promise, it showed:

"The [Free Basics] app primarily serves the needs of Facebook and other corporations, compromising user experience in order to achieve business objectives" (West & Biddle, 2017).

Further examination of the research by Global Voices shows that despite the claims made by Mark Zuckerberg and the goals stated in the app, it is mainly functioning as another revenue stream for Facebook as their profits in Western markets have dropped. The team, conducting the research in several different countries where the app is operating, found that "In every version that we tested, users were strongly encouraged to log into Facebook, or sign up if they didn't already have an account" (West & Biddle, 2017). This finding points to the fact that the primary motive behind Meta for initiating this project is to promote activity on their social media platform and generate more revenue. Nevertheless, one finding from Dr. Sangeet Kumar showed that despite this clear motive, local media outlets within the areas where the scheme operates

have been publishing newspaper headlines suggesting that this project is done simply out of Mark Zuckerberg's desire to connect the world (Kumar 2021, 58). To back up this claim, Dr. Kumar provides a list of examples of headlines such as "Facebook Ready to Spend Billions to Bring Whole World Online" (*Pak Banker* 2014; Pakistan, September 8) and "Facebook Chief in Bid to Widen Global Internet Access" (*Bangkok Post* 2013; August 22). Presenting these connectivity schemes as charitable acts without any motive of profit is yet another key piece of evidence that points to "Free Basics" being a predatory business practice by Meta. However, what Meta has accomplished with the "Free Basics" app is connecting aspects of the delivery of the content to multiple other companies who can hold and use their data.

An example of how Meta has provided the gateway for multiple companies to profit off of the populations within the developing countries they operate in is through one of the apps that provides users with health information. One of the most sensitive aspects of a person's personal information, where, in developed countries, the sharing of this information is tightly regulated, has become an area where Meta has profited due to sharing the user's data. The BabyCenter app on the Free Basics platform offers users general health information while also being a source of profitable data for the company regarding users' search behaviors and the interests and habits of potential customers (West & Biddle, 2017).

This is particularly dangerous because sharing users' sensitive information is "something that could compromise the scope or even the accuracy of the information provided" (West & Biddle, 2017). The potential inaccuracy can be explained by the desire to market certain pharmaceuticals to a particular individual simply due to the search history of that individual on this health application. This shows that Meta's deceptive and predatory practices to increase their bottom line have real-world consequences, which have, rather than bringing these developing countries closer to development, put the users in even more danger.

Further than this, it has been found that Free Basics has been a direct channel for corporations from the US to sell their products, proving to be yet another detriment to the local economy where the service is being provided. This can be seen in all versions tested in the Global Voices research, where they offered local content and corporate services from the US (West & Biddle, 2017)—showing how Meta has simply wrapped their messaging of connecting the world to the Internet with nice packaging that media outlets and even some government figures have repeated to their population who in turn have built up a misplaced trust in this platform.

The convolution of the original claims by Meta and Mark Zuckerberg displayed the true intention for their actions in the developing world. This has paralleled the contradiction of the claims made by those coming to the new world to spread Christianity or the settlers to "tame the wild frontier." This is simply the facade of an ethically righteous mission that hides the real motive of profit and cornering a new and nascent market. With the local media supporting the activity that they see as beneficial and events such as COVID-19 leading to the international community pushing developing countries to connect to the Internet, it is easy to overlook the importance of connecting to the Internet ethically. Local media and even public officials for countries are framing these connectivity schemes in a positive light given how fast these forms of connectivity are penetrating the global south, with Free Basics alone jumping from being offered in 30 countries in 2016 to 65 in 2019 and over 100 million people connected (Nothias, 2020). The speed and veracity that these big tech companies have been able to connect the global south with these unethical forms of connectivity to the Internet, shows the need to examine and test different ways to create more ethical and affordable forms of connection to the Internet. For this reason, this thesis is researching the effectiveness of community networks.

2.2 How Community Networks Differ from Traditional Connectivity

2.2.1 What is a Community Network and Why should we use them now

A community network is a form of internet connectivity in which a community pays for, implements, and maintains the infrastructure to provide the same community with internet service. As explained by Carlos Rey-Moreno in his article "Supporting the Creation of Scalability of Affordable Access Solutions: Understanding Community Networks in Africa," community networks can broadly be defined as telecommunication infrastructure deployed and operated by citizens to meet their communication needs. However, Rey-Moreno states that:

"In Africa, a community network is not simply telecommunications infrastructure deployed and operated by citizens to meet their own communication needs; it is a tool to

improve what a community is already doing in terms of their growth and development, by contributing to a local ecosystem that enhances the daily lives of those staying in the community."

This article explains that more than 3,000 active users are required to justify the baseline costs for an internet service provider (ISP) to provide internet connectivity. Moreover, Rey-Moreno stated that the form of connectivity is still in its infancy but, importantly, that it has the capabilities to grow quickly. This displays that the problem that many governments and telecommunication companies face is connecting communities under 3,000 people. This problem is where community networks are positioned to serve many rural communities in the global south. This section will explore how community networks are different from other forms of connectivity for rural communities in the global south.

A more basic element that is more revealing to the history of community networks is that the article by Carlos Rey-Moreno referenced in the previous paragraph was written in 2017. What is more, the first community network ever established was created in 1986 in Cleveland, Ohio. This first community network sparked a boom of other community networks established across the US. What finally brought this boom in the adoption of community networks to an end was the lowering of prices by major ISPs (Pinkett, 2003). Both articles display how the concept of community networks has been around for a long time and is even popular among many communities but has been hindered by the convenience of big ISPs (Internet Service Providers). In the article by Rey-Moreno, the author talks about the same benefits of community networks as discussed in this thesis. However, Rey-Moreno is speaking to the "4 billion people [who] still lack access to [the internet]" (Rey-Moreno, 2017) regarding the potential of community networks to benefit the global south in particular. A key difference between the time this article was written and now, a six-year difference, is that the current unconnected population is about 2.9 billion people (International Telecommunication Union, 2021). This means that while the benefits of community networks have been advocated for years by various non-profits and even UN agencies (Internet Society, 2017; Belli & Hazdic, 2022; Belli, 2017; Fascendini, 2018; Dynamic Coalition on Community Connectivity), the more extensive global adoption of these networks has still not come.

The International Telecommunication Union (ITU) established that not every form of connecting to the internet is the same and introduced the term “meaningful digital connectivity” in their report “Achieving Universal and Meaningful Digital Connectivity: Setting a Baseline and Targets for 2030”. As mentioned in the Introduction chapter of this thesis, the ITU established 5 criteria of connectivity enablers that included: infrastructure, affordability, device, skills, and security and safety. In order to be classified at the status of ‘meaningful connectivity’ a minimum threshold of standards to match each criteria needed to be reached that included:

1. Infrastructure: Fast and reliable availability and quality of mobile and fixed networks
2. Affordability: Affordable access to connection and devices
3. Device: Ownership of an internet-enabled mobile or fixed device
4. Skills: Adequate digital skills
5. Security and Safety: Safe navigation as it relates to connection security and navigation safety

Furthermore, the ITU defined ‘meaningful connectivity’ as “a level of connectivity that allows users to have a safe, satisfying, enriching and productive online experience at an affordable cost.” This criteria establishes a distinction between internet connectivity and provides a foundation of research to build a distinction between Facebook’s Free Basics and community networks. This report also included that it was deliberate in not mentioning a specific method of connection stating that “It is neither possible nor desirable to propose a one-size-fits-all policy mix to all countries” (ITU, 2022). This statement potentially contradicts the hypothesis within this thesis.

However, A UNHCR report "Community-led Connectivity: Assessing the Potential of Community Network Models in the Context of Forced Displacement in East Africa" addressed this lack of recognition. This UNHCR report stated that the reason community networks are not used more often is "mainly due to limited awareness of these new opportunities to self-provide communications infrastructure" (UNHCR, 2020). This report is critical to this thesis since it comes from the UN agency centered around assistance to refugees, and the report focuses on East Africa. Therefore, this report is directly linked to the activities of the BOSCO Uganda

community network since it is within East Africa and was created and maintained by an ethnic population that has been the victim of decades of violence and forced to live in displacement camps. Subsequently, when this report discusses the "potential benefits to community-based infrastructure deployment," it discusses these benefits within the context that the BOSCO Uganda community network is already operating. What is particularly significant about this report by the UNHCR is that its objective in addressing connectivity issues is "to support education, health, and livelihood development." Four primary potential benefits were stated in this report, which included:

1. Local control over how the network is operated and the types of content that are provided,
2. Creation of local opportunities for jobs and fostering entrepreneurship,
3. Retention of more funds within the community resulting from the low usage costs and the income generated by residents working to support the network,
4. Fostering a sense of agency within the community which can amplify their sense of capability in being able to help to improve the quality of life of the community members.

The fact that this UN agency is looking to community networks to achieve these stated goals provides further proof that connectivity through community networks provides positive development of rural communities in the global south and justifies this comparison.

What should be included with the use of a UNHCR report on connectivity is that they are partnered with Facebook's Free Basics in delivering critical support to refugees, as mentioned in the section titled "Race to Connect the Unconnected." However, it should also be remembered that existing research and scholars versed in Facebook's connectivity scheme have stated that this move is about "capturing actors that may have led the charge against Free Basics" (Nothias, 2020). Furthermore, existing research on Facebook's new Discover connectivity service meant to fix issues seen with Free Basics was reflected to focus mainly on profit rather than development (Pei et al., 2021).

2.2.1.1 Facebook's Free Basics Evaluated Against the ITU Meaningful Connectivity Framework

From the existing research on Free Basics (Pei et al., 2021; Nothias, 2020; West & Biddle, 2017; Rijurekha et al., 2017; Mirani, 2015) in addition to descriptions provided by Meta it is possible to make an educated assessment of where Free Basics stands within the ITU's five criteria of connectivity enablers.

Free Basics experiences 4 to 12 times worse network performance (80 Kbps) than their paid counterparts (320Kbps) which does not allow it to be considered fast and reliable and therefore does not meet the meaningful connectivity criterion for infrastructure (Rijurekha et al., 2017).

The widely advertised aspect of this service is that it is free which means that it meets the meaningful connectivity criterion of affordability of connection and device.

Facebook's Free Basics does not provide access to a device with internet access which means that it does not fit in the meaningful connectivity for the device criterion.

As included in the section "Race to Connect the Unconnected" Iris Orriss, Meta's Vice President of Internationalization, who stated, "Awareness of the Internet in developing countries is very limited. In fact, for many users, Facebook *is* the Internet, as it is often the only accessible application" (Mirani, 2015). This quote suggests that Free Basics does not meet the meaningful connectivity criterion required for digital skills.

Finally, given Free Basic's capture of personal data as explained in the previous section (West & Biddle, 2017) it is argued that due to the nature of the information being captured and sold by Free Basics that users cannot navigate the internet safely. This final point implies that Free Basics does not meet the meaningful connectivity criterion required for security and safety.

In concluding this assessment, it indicates that Facebook's Free Basics only meets one out of five criteria outlined to be considered to be providing 'meaningful connectivity'. In light of the definition and the criteria that Free Basics did not meet it suggests that Facebook's service does not provide "a level of connectivity that allows users to have a safe, satisfying, enriching and productive online experience (ITU, 2022)."

2.2.2 Case Example of a Community Network Operating in a Developing Country: The Zenzeleni Network

In order to convey the potential for a rural community within a developing country with little to no knowledge of how the internet works to become capable of establishing and maintaining a

network, a task that most early adopters of the internet do not know how to do, it is essential to display an example of such a community. This thesis will use the Zenzeleni network in South Africa to illustrate that rural communities who desire to receive an internet connection in their community can make it happen. This community network was the first “cooperative-owned Internet Service Provider” in South Africa, which started with a cooperation between the local Mankosi community and a group of researchers from the University of the Western Cape (Walker, 2022). The goal of this collaboration was to provide affordable telecommunications service for this community, and the result led to the Zenzeleni (meaning “do it yourselves” in the community’s native isiXhosa language) Community Networks winning both social impact and innovation awards (Walker, 2022). This community network was chosen as an example of the close relationship between a University and a rural community within a developing country. Where most would think that the learning curve for a rural community in South Africa might be too high and costly to be sustainable, this example shows that there can be successful relationships between higher education institutions and rural communities that soften the learning curve. This subsection shows a real-world example of how a community network can be seen as a pivotal tool to close the digital divide and ensure net neutrality through the exact ways it differs from connectivity provided by a big ISP.

To provide a better background on the community in which the community network is located, the Mankosi community, this thesis will explore an article written by Janine Greenleaf Walker titled “Connecting Communities and Changing Lives; the Story of Zenzeleni Community Networks” as a history of the network. Walker described the community as impoverished, with poor infrastructure and unreliable or no access to electricity, leading to patchy and expensive telecommunications and connectivity. Walker created a timeline of the developments and achievements of the Zenzeleni Network (Depicted below).

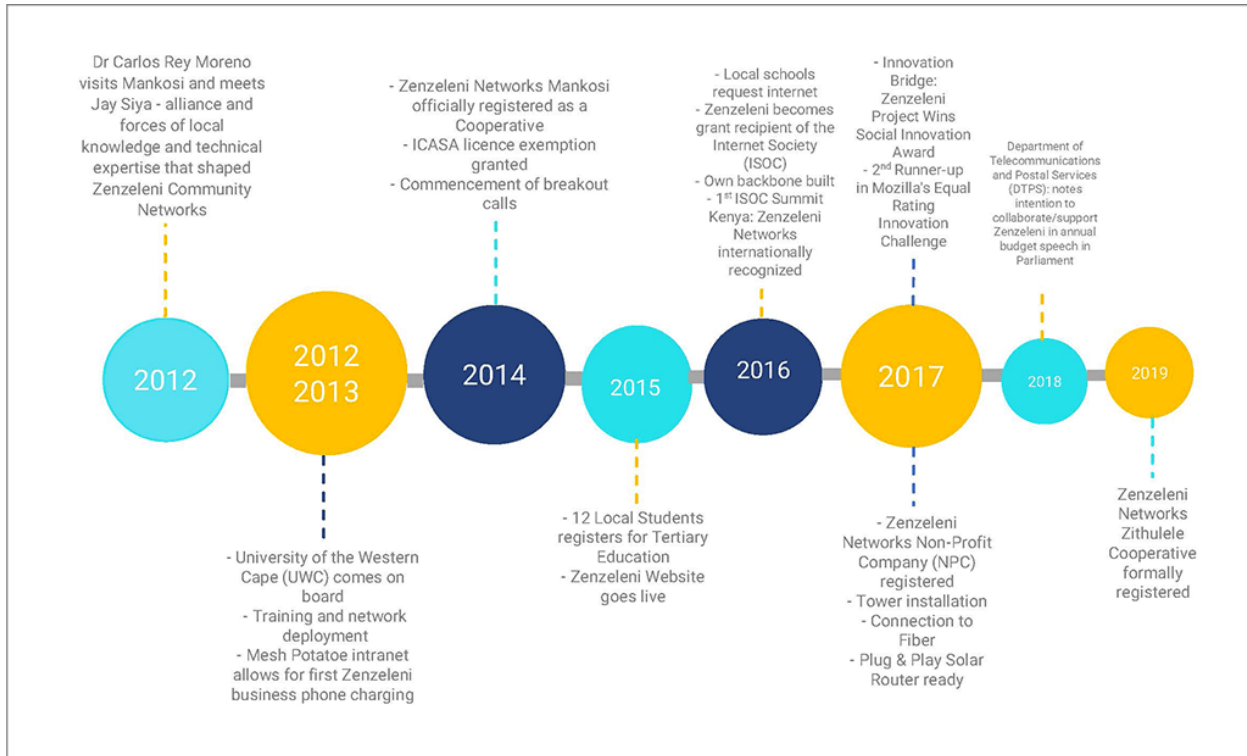


Figure 2.1: Timeline of Zenzeleni Community Networks

What is unique about this timeline, depicted in figure one, is that it only took two years (2012-2013) between the first meeting of a doctoral candidate with a member of the Mankosi community and the training and implementation of the infrastructure and maintenance of the network. This shows the speed at which, with the proper partnerships and dedication from the community, these community networks can be established. The rate of adoption of more complex forms of connectivity and subsequent awards and praise that this community received shows the importance and attainability of this form of connectivity. Walker also included a quote from the Higher Education, Science and Technology Minister, Blade Nzimande, who visited Mankosi in 2020, where he stated:

"By providing affordable connectivity in areas where there was none, or where it is not feasible for large telecommunications companies, community networks contribute to the empowerment of marginalized populations by fostering the local economy, creating local employment and small micro and medium enterprises, and contributing to the social cohesion of the community they serve."

This quote from a government figure showed a solid validation for the belief of this thesis, which is that a change in the form of connectivity will promote a difference in the use of the Internet that encourages the rural community that the network is operating in to transition some of their cultural traditions into a digital format to work towards preserving the tradition. When Minister Nzimande stated that "community networks contribute to the empowerment of marginalized populations" and connected it to the increased social cohesion of the community it serves, it suggests that community networks promote social cohesion in marginalized communities. This social cohesion centered around developing a connection to the Internet can promote teachers or elders in the community seeking ways to educate through this new medium. An example of how this social cohesion centered around the ownership of a network impacted how they view information on the Internet can be seen through the information that the Zenzeleni Community Networks posted on their website. The fact that this community network created a website that can be read in their local language and concerns activities that their local community undertook shows how this community changed how they interact with the Internet based on their ownership. In one section of their website, they included a "Community Noticeboard" where within it, they have provided multiple resources within their native isiXhosa language as well as in English regarding COVID-19 recommendations, Advice on how to cope with COVID-19 anxiety, and most directly related to this thesis, "Making sure the information you access is TRUE and reliable - be aware and avoid fake news" (Panday, Zenzeleni.net). In this last example of a publication provided by the Zenzeleni Community Networks noticeboard, there is a poster detailing specific steps to take when considering whether information consumed online is accurate. This noticeboard and the publications that are specifically adapted to this community through being written in their language, as well as publications that educate the community on how to consume information on the Internet properly, show a distinct difference in perception of information on the Internet that is directly linked to the community's ownership of their network connection.

In a video published by APC on the Zenzeleni Community Networks titled "Zenzeleni Networks Mankosi Ltd," members of the Mankosi community describe how they came to establish the network. In this video, around the end of minute four, Sihekeshane Mazantsana, chairperson of the project, explained that the community receives revenue that the community receives by

selling vouchers that grant internet access and the ability to charge mobile phones. Mazantsana stated that this money is saved and put to the side "so that we could be able to create a better future for the youth in the community." This shows that the community has already created a link between this project and benefiting the community's youth. The subsequent leap to adapting the education of the youth in their traditional culture online is not unthinkable. This video also details how this unique form of connectivity to the Internet was much more successful than other projects that have come and attempted to connect this population to the Internet. One community member stated that since most of these other projects depended on employees outside the community, the project would collapse when the employee left. This was to explain that the community members feel that this project is better since the community members run it and the members could see the need for the project.

This is a crucial piece that further explains connectivity and digital literacy attempts at other places in the global south that fund and set up all of the infrastructure but do not establish sustainability in the project due to the community not being involved. The primary reason it is so hard for telecommunications companies to reach this area is the rugged terrain and difficulty in reaching it. Therefore, when no local community member knows how to repair or maintain the network, it increases the cost and time for an employee of the telecommunications company to go out and repair it. Educating the local population not only allows the local community members to make their own repairs and maintenance but also enables them to learn valuable and modern trade skills that they can then teach to other community members and increase the digital literacy of a rural community.

Evidence of the increased interest in the collective community to participate in the wider online community can be seen in the figure one created by Walker, where the "Zenzeleni Website goes live." The fact that this community network created their website shows, at the very least, a desire to share some elements of their lives with the wider online community. This base desire to connect with the online community and their connection with an academic community that provided them with the tools to learn how to deploy a network allowed for the Mankosi community to create a website where they can share their unique culture with the online community.

In other words, the Mankosi community, with the new knowledge of how networks work and how to create a website, carved out a space in the Internet where their local non-Western culture

and epistemology can be valued higher than Western culture and epistemology. However, this website will certainly not reach the same level of recognition as Wikipedia. By establishing their network, making their own website, and creating a stronger social cohesion within the community, it seems that the Zenzeleni Community Networks have taken substantial steps towards preserving their traditional cultural values.

Additionally, there is evidence that this project is increasing the opportunities for the community's residents and the support that the community can provide through this collective. The video published by APC interviewed two members of the Mankosi community, aged 22 and 23, who made a direct correlation between their ability to be accepted by a university and the project that supported their ability to learn how to apply for these universities online and receive financial support. This suggests a direct connection to how the increased social cohesion created by this community network can benefit the future generations of this community and how this network, with unrestricted access to the Internet, can realize the promises made by Meta and their "Free Basics" program.

What this subsection proves through this case example of the Zenzeleni Network is that a community network operating in a rural community within the global south with no previous education on the Internet can, within a short period of time, set up a network connection in conjunction with a higher education facility, or experts of network connectivity. What is more, with the control of this network and the profits that come from it, the community can become more robust and use the profits to benefit the community and increase the opportunities available to the next generation. When comparing this form of connectivity to that provided by Meta, there is a clear and drastic difference. In Meta's Free Basics or even newer Discover connectivity scheme, there is no connection to increased community cohesion through this form of connectivity.

Additionally, while the platforms might be able to provide some fundamental elements of health information or connection with services provided by non-profits, there is no evidence that the profits that Meta has made from their connectivity scheme have been reinvested into the communities in which they operate. The Zenzeleni Community Networks focuses on the community's development and the youth. With the funds they receive from the community network Facebook or Meta, we have not seen the same focus on community development.

2.2.2.1 The Zenzeleni Community Networks Evaluated Against the Meaningful Connectivity Framework

From the information presented above and additional research included below it is possible to make an educated assessment of where the Zenzeleni Community Networks stands within the ITU's five criteria of connectivity enablers.

According to the University of the Western Cape, a sponsor of the Zenzeleni Community Networks, the users have network download speeds of 2 Mbps which does not fit within the 2030 targets of the ITU but is worth mentioning is significantly faster than Free Basic's 80 Kbps (Kruger, 2020). This information on the internet speed suggests that the Zenzeleni Community Networks does not fit the infrastructure criterion for meaningful connectivity.

The price for unlimited connection to the internet for 32 days in the Zenzeleni Community Networks is twenty-five rand, or a little of one-dollar, per month and according to the video published by the APC "Zenzeleni Networks Mankosi Ltd," members of the community claimed that this was affordable. This video suggests that the Zenzeleni Community Networks fits the criterion of meaningful connectivity to be considered affordable.

Information provided on the Zenzeleni Community Networks does not indicate it provides every member of the community ownership in their own internet-enabled device which means that they do not fit in the meaningful connectivity criterion for device.

The previously mentioned video posted by the APC also displayed how the Mankosi community was able to maintain their network connection for themselves and create their own website.

These two factors suggest that the Zenzeleni Community Networks fits within the meaningful connectivity criterion concerning digital skills.

Finally, the community noticeboard alert on what information is trustworthy (Panday, Zenzeleni.net) and the mesh network tied to the University of the Western Cape suggests that the Mankosi users of the internet have safe navigation of the internet. This information indicates that the Zenzeleni Community Networks fits the meaningful connectivity criterion for security and safety. To conclude the Zenzeleni Community Networks fits three out of the five criteria to be considered to provide meaningful connectivity.

When considering the comparison of Facebook's Free Basics connectivity to the Zenzeleni Community Networks connectivity against the meaningful connectivity criteria established by the ITU with the information provided, it suggests that the Zenzeleni Community Networks is

closer to achieving meaningful connectivity than Facebook's Free Basics. This comparison is especially impactful given that the Zenzeleni Community Networks and Facebook's Free Basics started their journey to connectivity around the same year, as mentioned above. Given these conditions, the study by Dr. Rey-Moreno and the UNHCR, and the comparison against the ITU criteria for meaningful connectivity it can be suggested that community network connectivity for rural communities in Africa to produce "a safe, satisfying, enriching and productive online experience at an affordable cost" (ITU, 2022).

2.3 The Lack of Intersectionality on the Internet

2.3.1 Introduction

One area critical to the study of the colonial impact on cultural values is the impact of Eurocentric epistemology on the different regions and populations that colonial powers controlled. While Dr. Sangeet Kumar discussed this in his book *The Digital Frontier: Infrastructures of Control on the Global Web*, his text's research on the abyssal line is absent. The abyssal line is a concept introduced by Boaventura de Sousa Santos in his article "Beyond Abyssal Thinking: From Global Lines to Ecologies of Knowledges." This article discussed how modern Western thinking is abyssal and consists of a line that divides society so radically that whatever lies on the other, non-Western side of the line remains invisible or irrelevant (Sousa Santos, 2007). This concept is innately intertwined with the concept of intersectionality, specifically in the context of the definition provided in the Introduction chapter, due to its close relation with non-Western content. Sousa Santos has additionally connected this terminology to other research (Bloch 1970; Tomba 2011; Hegel 1970; Mingolo & Escobar 2010) regarding the suppression of other cultures by the dominant Western culture. In describing Western epistemology as an abyssal line, Santos gives an image of a conflict that has been ongoing for centuries. This section parallels the research by Santos with existing research regarding the implicit Western-centric rules and regulations that govern how people interact with the new tool. Research emanating from the global south and global north has provided evidence going as far back as 2009 towards the empirical cultural impact that connecting to the internet has had on non-Western populations (Mochamad et al., 2020; Latif et al. 2021; Diaz et al., 2009). In these accounts, the authors state that there is not only a Western influence but a Western cultural

hegemony on the internet, making it easier for economic and political impacts on a non-Western country. These studies focus more on social media and the digital media that gets spread, which implicitly impacts how people of different cultures may view their own culture. The research conducted by Dr. Kumar and many others who have explored the negative impact that the internet has on non-Western cultures shows that the internet has accelerated this trend.

Therefore, this concept is intrinsically linked to the subject within this thesis since it provides additional historical context to how Western epistemologies that currently dominate the digital landscape will not compromise with the new populations of different cultures that will connect. So when a new population gets connected to the internet, to accommodate the existing dominant form of knowledge production, they might begin to value Western epistemology over their own traditional epistemology. Similar to how many colonized nations still speak the language of their colonizer.

In rural populations of the Global South making this transition, there is a risk that their form of knowledge production and preservation of history, primarily oral histories, might become diminished through their continued use of the internet for learning. What has been proven by many scholars and discussed in the previous section is how the internet currently privileges the side of history told by the soldiers and missionaries who colonized their ancestors. In the previous section, we found an implicit Western impact on knowledge production through Wikipedia due to its promotion of Eurocentric ideals. However, control over knowledge production on online encyclopedias is simply one example of how Western epistemologies operate to discredit other forms of thinking and make them irrelevant.

This section will examine how European thinkers have historically positioned Western epistemology to subvert other epistemologies. Then, we will explore how Western epistemology's transition to the online space can drastically affect non-Western populations connecting to the internet. This thesis will then build on this point by translating this terminology and its context to make it apply to rural populations of the global south seeking to connect to the internet. In other words, we will explore how the internet has the potential to introduce an increased veracity and range of the epistemological impact discussed by Sousa Santos. Additionally, we will explore a case study of how Western epistemology has impacted African traditional society. In concluding this section, we will explore how this effect can multiply impact populations new to adopting internet connectivity and illustrate once again why

communities within the global south must be deliberate in how they connect to the internet to have some protection from this form of neo-colonization.

2.3.2 The Abyssal Line in a Historical Context

The term progress brings with it many philosophers pondering on rules associated with the term and providing an accurate history that explains a distinction between the past and the present, which, in many of the older philosophers, is inevitably better than before. It was the belief of many philosophers of the 19th century that time would always bring positive progression. One of these philosophers was G.W.F. Hegel, who, in his *Philosophy of History* text, stated that there was a “spirit” that encompassed the golden ages of different civilizations, which, in his account, started in the East and then went west and resided in Germany, his home country at the time. While Hegel acknowledged that the Eastern cultures were great cultures and societies, he also suggested that at the time he was writing, Western culture held this “spirit” and implies that there is a positive accumulation of knowledge that comes with advancing more civilizations.

What can be discerned through Hegel’s thought is that a singular history of development has led to Western culture being the height. It is Ernst Bloch, in his *A Philosophy of the Future*, which counters this notion and specifically targets Hegel and this belief that he holds. By using the example of Hitler and the “victory of socialism,” Bloch states that “in this respect, there is no certain chronological index of progress” (Bloch 1970, p114). This refers to the fact that there was the movement of socialism well before Hitler with figures such as Karl Marx, yet blind progression led to the rise of a new, further detrimental form of ideology in Fascism. Bloch introduces the idea that there is no singular line of historical development and that history develops alongside each other in different fashions and ways. What Hegel presented and has since become a pillar in Western thought is a uniquely Western version of the world that silences all other cultural or educational developments made from other cultural contexts since the West is believed to be the dominant line of cultural and intellectual development.

When introducing the concept of the abyssal line, Boaventura de Sousa Santos took a much more critical approach than Bloch. In an earlier publication by Santos titled “Beyond Abyssal Thinking: From Global Lines to Ecologies of Knowledges,” the author makes a much more direct explanation of his concept by stating, “What most fundamentally characterizes abyssal thinking is thus the impossibility of the co-presence of the two sides of the line.” This can be

seen as an extension of Bloch's counter to Hegel, which was that there is no singular line of history and progression. In further contribution to this argument provided by Bloch, Sousa Santos elaborated on this point in his book *Epistemologies of the South: Justice Against Epistemicide*. Sousa Santos, in this book, assertively states his intent in the preface as three basic ideas:

“First, the understanding of the world by far exceeds the Western understanding of the world. Second, there is no global social justice without global cognitive justice. Third, the emancipatory transformations in the world may follow grammars and scripts other than those developed by Western-centric critical theory, and such diversity should be valorized” (Sousa Santos 2016).

Sousa Santos is building a more critical representation of how Western epistemology has placed itself ahead of others. However, what is more than that, there is a clear connection between what is being researched in this thesis and these three objectives of Sousa Santos.

In his first point concerning the understanding of the world being far more than the Western understanding, Santos is speaking about the same struggles that the global south is going through with the global adoption of Western knowledge production and the refusal to accept alternative forms of knowledge production within this system seriously.

The second point made by Santos relates directly to the intent of this thesis, to create a more even cognitive playing field in attempting to find alternative paths of connectivity to the internet that would allow for the history of a rural community of the global south to be heard at the very least among their community. Especially when it comes to a tool such as the internet that allows communities to have an increased ability for education and development, they should not have to sacrifice their cultural or epistemological values.

The final intent by Sousa Santos resembles the conflict that the global south has at having their side of the story told. As seen in the previous section, even sites dedicated to spreading global knowledge, such as Wikipedia, still innately favor published sources from the missionaries and soldiers who colonized a region. Santos is speaking more broadly about the suppression of knowledge production in various non-Western cultures. Nevertheless, it is still almost directly

related to the inequality contributing to the digital divide and issues concerning internet connectivity.

2.3.3 Defining Culture and Examining the Empirical Impact of Epistemicide

In exploring the impact that this abyssal line will have on rural communities, which still hold their traditional values to a great extent, it is essential to examine the existing effect that Western cultural domination has had on the more urban settings of the global south. Therefore, this thesis will analyze an article written by Dr. Clifford Meesua Sibani titled "Impact of Western Culture on Traditional African Society: Problems and Prospects." Within this article, Dr. Sibani builds on extensive existing research (Venkatesh 2012; Alloy 2003; Arinze 2006; Obinna 2016; Akama 2012) that discusses the ongoing cultural change and loss of traditional elements of African society due to the increased adoption of Western culture. Dr. Sibani uses a series of definitions of culture from various sources (Skinner, 2014; Akhama, 2012; Otite and Oginwo, 2016) to describe culture as the element that:

"distinguishes human being(s) from other animals, in that human(s) are able to construct patterns of behaviours for themselves, and are able to transmit this from person to person and through generations" (Sibani, 2018).

Dr. Sibani then divides culture into two different types, material and nonmaterial, with material culture being the aspect of culture that is "observable and overt, and nonmaterial consisting of being noticeable through the "psychological state of mind and manners of a people" (Sibani, 2018)—building even further on this definition of culture by explaining its characteristics as being: Learned and not biologically inherited, symbolic, dynamic, a shared set of ideals, values, and standards of behavior, sense of community life, sense of good human relations, sense of the sacredness of life, sense of hospitality, sense of sacred religion. It becomes evident that all these characteristics are intrinsic and highly valued within a community, with one characteristic even being a "sense of community life." Removing the "sense of community life" and replacing it with something completely different and foreign to a population seems comparable to detaching people from their sense of self.

A vital distinction recognized in the publication by Sibani is the acknowledgment that cultural change is inevitable and the explanation of the difference between cultural change and cultural dynamism, or the "susceptibility of culture to receive and add to itself certain other cultural values" (Sibani, 2018). The author uses existing research (Christie, 2014) to explain the various factors that lead to cultural change: invention, where new cultural elements are created; discovery, where a population gains a better understanding of things present in their environment; diffusion, cultural traits are transmitted to another; environment, the surrounding environment the population lives; and acculturation, where members of one culture adopt the beliefs and behavior of another group. One particular factor leading to change that must be highlighted is acculturation, where Sibani added that it is typically the minority group that adopts the majority's habits and aspects, such as language. In this simple definition of a typical factor of cultural change, it is evident how Western culture has had an outsized impact on African cultures. In establishing the definition and the context in which cultures in societies change, Sibani sets the stage to explain how Western culture has subverted intrinsic aspects of traditional African culture.

In a section of his article titled "Impact of Western Culture on Traditional African Society: Problems and Prospects," Sibani gives an insight into how Western culture has impacted areas such as traditional politics, the challenge of worship, a communication barrier, high rates of divorce, indecent sexual behavior, and the challenge of education and technology (Sibani, 2018, pp. 66-69). However, specifically, the sections about traditional politics, communication barriers, and the challenges of education and technology relate best to this thesis. In discussing the deviation from the traditional politics within African society that arose due to Western cultural influence, Sibani speaks on how the power to govern the community is usually vested within the community members and is only conferred onto an individual leader at times. However, the power given to this leader implies that they have the responsibility for the living and the dead and, therefore, become symbols of unity by maintaining the ontological harmony of the community (Sibani, 2018, pp. 66). This means that the leader or leaders of a group of people within traditional African society are not only connected to the living but have an intrinsic spiritual and possibly religious element attached. However, Western epistemology saw a flaw in this system and, due to their own history steeped in the need for separation of church and state, cannot accept this idea of leadership over the

living and the dead. In being conditioned to believe that Western culture is a more desirable trait, traditional African culture abandoned this cultural practice. This desire for the former colonies to be more Western was explored in the previous section by research, which spoke to the modern-day usage of English in India and its colonial roots (Viswanathan 1997). When commenting on how this political change impacted African society, Sibani stated that it "shows deviation and abandonment of values, especially the sacredness of human life" (Sibani, 2018, pp.66).

Displaying how this Western influence changed the political system, intended to allow for a more fair representation of people, had far-reaching impacts on issues as deep as the sacredness of human life to this culture. This is one example of the massive change that non-Western cultures must make within their own cultures and how they operate within their own country due to the inability of Western epistemology to accept the coexistence of different forms of thought. Nevertheless, an even stronger connection that shows how Western cultural domination impacts rural communities within African societies is the communication barrier created between cities and rural African communities.

In an example that shows how Western culture emanates from cities, Sibani provides the case example of Nigeria to display how the immense number of Nigerians who speak "English instead of their ancestral language today it has caused a barrier in communication between the young ones who migrated to the Urban Areas" (Sibani, 2018, 67). Sibani explains this impact by saying, "As native African societies continue to do this, most communities will be experiencing a corresponding loss of their traditional culture" (Sibani, 2018, p. 67). Sibani made this connection around how the Urban African population has lost a connection to their ancestral roots, specifically, people who reside in rural areas of the country. Recognizes that since rural communities within Africa are not yet connected to a consistent stream of Western ideology, such as urban populations are, they have retained more aspects of traditional African society. This also suggests that if these rural populations were given access to the same stream of Western content, such as internet connectivity, offered to the urban populations in the city, they would also make significant alterations to their cultural traditions. It is due to this need for the preservation of these cultural traditions within rural communities that this thesis is trying to find a way to get them connected to the internet, which would more actively promote rural communities to collectively find ways to adapt their culture to exist in this digital landscape—

effectively creating one area of the web for their epistemology to exist amidst the rest of the landscape being dominated by Western epistemology.

The subsection discussing the challenge of education and technology within this article by Dr. Sibani provides a direct link towards the specific Western epistemological impact that this thesis advocates rural communities should not be forced into consistent exposure. In the first sentence of this subsection, Sibani makes the perfect link by saying, "Westernism accompanied by advanced technology stepped down the pace of African local technological development and oral tradition" (Sibani, 2018, pp.69). It has specifically been the practice of oral traditions that have been referenced in this publication as an example of the potential impact that rural connectivity to the internet has the potential of erasing.

In this subsection, Sibani makes the direct link that it is Western culture combined with the technological developments they promote worldwide, which directly threatens an essential traditional practice associated with the education of new generations. It is the goal of this thesis to, rather than keep these rural communities in the dark, technologically speaking, and prevent them from accessing the internet, find a form of connectivity to the internet that allows for unrestricted access to the internet and promotion of community activity towards the adaptation of traditional educational, cultural practices to the digital landscape. This goal parallels Sibani's contextualization of how traditional African societies can interact with this new technology, saying:

"We should not keep basking in the euphoria of Western technological achievements and forget to improve our local technology, " stated Arinze (2006). We should appreciate the products of our local art works of painting, sculptures, and molding just for what they are, and it will encourage development" (Sibani, 2018, p. 69).

There is a tenable connection between finding ways to adapt aspects of traditional African society alongside Western technological advancements and finding a method of connectivity that would promote more community involvement in the adaptation of local history to an online context.

2.3.4 How Wikipedia's Framework Suppresses Alternate Epistemologies

A key finding within Dr. Sangeet Kumar's *The Digital Frontier: Infrastructures of Control on the Global Web* is that within Wikipedia, "The rules and procedures that determine what can be written, what counts for evidence, the role of existing editors, and the entry pathways for new editors" hinders the goal it sets out to accomplish (Kumar, 2021). Presenting the case example of the Ganga/Ganges debate (mentioned in a later section), Dr. Kumar can show how, despite a number of local Indians wanting to correct the name provided for their landmark, they are unable to based mainly on Wikipedia's rules. There is much existing scholarship that is critical on Wikipedia that Dr. Kumar's research builds off of (Zhu & Greenstein, 2012; Simonite, 2013; Menking & Rosenberg; Ferran-Ferrer et al., 2022; Shi, 2017). Nevertheless, the research in this thesis, comparing a blog post against a Wikipedia article concerning the same subject, builds off of Dr. Kumar's research by finding what elements of a biography of a population are omitted due to Wikipedia's rules. In showing what is left out of the history and identity of a people on one of the top information sources on the internet, we will be able to see the danger in issues such as large language models being trained on information gathered from Wikipedia (Simonite, 2013). However, first, we must address the existing scholarship (Westerman, 2009; Fallis, 2008; Chen, 2010), which argues against Dr. Kumar's findings and other supporting researchers and sees the knowledge production created on Wikipedia as positive. In his chapter titled "Epistemology, the Sociology of Knowledge, and the *Wikipedia* Userbox Controversy," William Westerman parallels folk knowledge with the type of knowledge production on Wikipedia and within the Wikipedia online community. It supports the concept of being able to establish an online epistemology that incorporates the commonly held opinions of a group yet also supports the rules that a new source must be from a "reputable source" so that no one will argue with it (Westerman 2008). Don Fallis, in a journal article titled "Toward an Epistemology of Wikipedia," explicitly states that Wikipedia has "good epistemic consequences" (Fallis, 2008). Fallis specifically defends the verifiability of Wikipedia regarding the "process by which the entries in the encyclopedia are produced." Finally, and most importantly, Shun-Ling Chen, in her journal article titled "Wikipedia: A Republic of Science Democratized," directly links the framework of Wikipedia to the unrestricted ability to share all cultural knowledge. Chen states that this model "not only fulfills society's pursuit of progress, but enables all individuals- with a baseline digital capacity - to freely access and tinker with shared cultural resources."

Each of these works praises Wikipedia for its ability to unite people from all over the world to create a sort of global epistemology, and while there is truth to these articles in Wikipedia's increased access to information to the world. The issues within these articles can be seen in the lack of understanding of how this 'new epistemology' focused on storing global knowledge is modeled directly on Western academic traditions. The lack of access to institutions such as publication houses for non-Western communities during their pre-colonial history shows a disproportionate ability for Western colonial sources to be used to disprove pre-colonial accounts.

The rules for sources to be published on Wikipedia should not automatically degrade the accuracy of pre-colonial history to something beneath that of Western academic traditions simply due to a lack of access and different forms of knowledge production. Therefore, these claims supporting Wikipedia's framework as the "sum of the world's knowledge" provide an academic foundation for Wikipedia to refute claims made against its Western-centric framework.

Furthermore, a more culturally inclusive Wikipedia would allow companies training their large language models (LLMs) to believe that they can use Wikipedia as a source to train these models, thereby continuing to reinforce the suppression of an alternate epistemology and colonial history.

It should be stressed that the intentions of Wikipedia are noble, and this critique of the rules and framework should not be seen as an attack on the site's existence. The implicit bias within their framework can be seen in many current and advanced technologies. It is the scientific process that became ascribed to the Western form of knowledge production and the creation of the field of social science that created a separate and distinct scholarly world with rules and regulations around the acceptance of history and study of certain populations and societies. This tradition of exclusionary practices emanates throughout the web and especially on Wikipedia due to its goal, so there is a preference for certain information attached to an international forum of knowledge production.

There must be a system to determine what is justifiable and acceptable knowledge to share with the world to ensure that misinformation does not spread rapidly. In Wikipedia's attempt to discern what they should publish as fact, they follow the same Enlightenment tradition of exclusion to discern what they view as fact and what they will allow to be published on their site. The impact of Wikipedia can be viewed through the fact that it is one of just three sites that,

since 2004, has remained among the top 11 websites in the world as determined by internet traffic (Statistics & Data, 2021). This makes Wikipedia the "biggest nonmarket, peer-produced platform in the ecosystem of connective media (van Dijck 2013, 113). Wikipedia, in particular, is crucial to use in this study because of its focus on compiling all of the world's knowledge through the internet and its wide global use, making it a perfect candidate for understanding the knowledge production of the internet.

The five pillars of Wikipedia, as listed in their policies and guidelines webpage, include

1. Wikipedia is an encyclopedia,
2. Wikipedia is written from a neutral point of view,
3. Wikipedia is free content that anyone can use, edit, and distribute,
4. Editors should treat each other with respect and civility,
5. Wikipedia has no firm rules.

These pillars are seen as the "fundamental principles of Wikipedia," yet, as we will see later in this section, they fall short of their intended purpose. When considering the "broad, fundamental policies and guidelines that apply throughout Wikipedia" in the "Content Guidelines" section of Wikipedia's policies and guidelines page, we can see the principal source of contention is the rule of reliable sources. The site's reliable sources rule states that articles "should be based on reliable, published sources, ensuring that all majority and significant minority views that have appeared in those sources are covered."

According to the Wikipedia policy and guidelines page, sourcing always depends on the context, and "common sense and editorial judgment are an indispensable part of the process. In the subsection that defines a source, the page states that a source can come from a book or a webpage but that some sources, such as unpublished texts and an editor's personal experience, are prohibited. In the subsection defining published, the webpage states that it is any source made available to the public in some form commonly associated with text materials in print or online format but also mentions audio, video, and multimedia content. The later content must have been "recorded then broadcast, distributed, or archived by a reputable party." More than this, there is a scale of evaluation for the reliability of sources so that secondary sources, sources reviewing existing research such as a textbook, are better than primary sources.

To any scholar educated in a Western academic tradition, these rules are standard and should look very familiar; however, this encyclopedia aims to gather knowledge from all over the world.

In that case, it should develop a strategy to include sources produced outside the traditional Western academic framework.

Below, I will provide two examples of the exclusion of non-Western sources in a subsection that further details the restrictions of this rule of reliable sources. These rules contain minimal conditions that all must be satisfied to share information and cultural knowledge with the world. It should be acknowledged that these rules, according to the goals of the co-founders, were not meant to be exclusionary to people from non-Western contexts. However, in imagining a rural community such as Paimol in Northern Uganda, one of the millions spread throughout the world in different contexts and continents, how is this inclusive to their cultural traditions, and how do these rules work towards the goal of representing the "sum of all human knowledge"?

2.3.4.1 Demographic Challenges of Wikipedia's Editors and Administrators

Dr. Kumar starts his analysis of the existing framework of Wikipedia by examining the diaspora of editors that function as the "indispensable part" of the determination of content and the sources permitted to be used. By citing scholarship (Carr 2006; Halfaker et al. 2013; Herring 2011; Jemielniak 2014), Dr. Kumar can expose the "cliquish" nature of Wikipedia editors and administrators, making it so newcomers have a hard time joining. This revelation automatically affects a significant proportion of users from the global south who are still struggling to obtain secure connectivity. It is important to note that a big reason for it being harder to become an editor at Wikipedia has been the increased risk of bad actors becoming editors, which has become more important as the spread of misinformation on the internet grows.

Nevertheless, Dr. Kumar states that these checks and balances have functioned to create "a system where investment of time and persistence distinguishes those who stay from those who leave," thereby reducing "incentives towards contributors with expertise and knowledge."

Wikipedia's existing rules and leadership have also functioned to skew heavily in favor of men from the Western world. Studies have found that less than 10% of the editors on Wikipedia are women (Ford & Wajcman 2017), and more than 47% of editors come from Western countries in a poll on the top 10 countries of residence (Khanna, 2011). With only 21% of total Wikipedians residing in the Global South and 20% of the edits originating from the Global South, some figures show the disproportionate representation and ability to contribute (Khanna, 2011). However, while Wikipedia admits that this lack of representation from the Global South is disproportionate to the global population, their actions to rectify this trend are dismal. In the

same editor survey that discussed the need to increase penetration of users and representation in the Global South, they suggested using Facebook to "support editor interaction and communications." This recommendation, in light of the activity of Facebook's Free Basics connectivity scheme, displays how their approach towards inclusion further cements an inadvertent degradation of alternate cultural values. An example of this impact can be found in the "primacy of the English version of the encyclopedia...even in countries that do not identify English as a primary language" (Kumar, 2021). This further promotes the need for non-Western cultures to adopt their own cultural practices to receive recognition. What is most revealing about the Wikipedia editor survey study, compiled by Ayush Khanna, is that despite the recognition of the lack of edits on content in the Global South and a desire to address these issues, there is no recognition of the impact of their rules and framework. Alternatively, as discovered in later scholarship (Carr 2006; Halfaker et al. 2013; Herring 2011; Jemielniak 2014), the fact that a significant population of editors is from Western countries and a vast majority are English speakers, might impact the ability of non-Western and non-English speaking editors from being accepted by the existing group.

The impact of this editorship being primarily English-speaking and largely from Western countries explains Dr. Kumar's finding, which states that the content of the English Wikipedia remains primarily Euro-American. Therefore, despite a global readership and a focus on global knowledge, "its founding and predominant location in the west imbues its material and cultural architecture with cultural and ideological orientations" (Kumar, 2021). This is to say that since Wikipedia was founded in the US, the rules and framework for its content and sourcing of material are biased towards Western sources. This innate bias towards Western sources within Wikipedia's framework, similar to the racial bias we can see in AI today when combined with the collection of the world's knowledge, "disproportionately represent already dominant knowledge systems and epistemologies over others" (Kumar, 2021). Furthermore, through this cliquish nature of editors, their role as an "indispensable part" of the determination of the content and sources to be used further entrenches Western academic traditions, thereby excluding the ability for pre-colonial history to be included in this encyclopedia.

2.3.4.2 The Rule of Reliable Sources

Wikipedia's rule of reliable sources states that articles "should be based on reliable, published sources, making sure that all majority and significant minority views that have appeared in those

sources are covered.” We can see examples of how this sentence contradicts itself and works against the primary goal of Wikipedia, which is to represent the “sum of all knowledge.” As explored in the last paragraph, we can see that since the framework of Wikipedia is founded in Western academic traditions and the editors and administrators are functioning to advance this trend, any non-Western sources cannot be included in an article. Therefore, while the statement within the rule claims to ensure that all majority and significant minority views that have appeared in reliable sources are covered in topics concerning the Global South, this rule ensures that the views of the indigenous people are silenced.

This can be seen in the analysis of the Wikipedia debate over the Ganga/Ganges river in India, where local Indians wish for Wikipedia to display the name of the river as Ganga. However, editors and administrators will not allow it because no published books on the river are called Ganga. Therefore, on Wikipedia, this river is referred to as the name given to it by British Colonists because their name for the river was published in a book. Dr. Kumar uses this case example to display how Wikipedia amplifies the “off-line global disparity in knowledge production in the online world” (Kumar, 2021). Dr. Sangeet Kumar was inspired by existing research (Tkacz 2015; Jemielniak 2014; Rogers 2013) that studied how the platform’s framework withstood conflicts on the site. This specific conflict relates to the rule on Wikipedia, which states that the articles must be published in the same language as that version of Wikipedia. This means that if a source was written in Italian, it would apply to the Italian Wikipedia page, not the English language page. The Ganges/Ganga case deals with a population that primarily speaks English directly due to colonial activity. However, historically, it has not had an English-language media and publishing industry due to the population not speaking English before they were colonized.

This background and the fact that the Ganga/Ganges edit war is one of the longest-running on Wikipedia (Kumar, 2021) make it a great case study to analyze since it concerns rules around content, sources, and the resolution of disputes via voting. While voting on a conflict in Wikipedia is discouraged and heavily suggested to be the very last case scenario by the online encyclopedia, this example shows that every method to resolve a dispute failed and, being left to a vote, reveals the implicit biases that form its foundation. According to Dr. Kumar, it represents “the common phenomenon of infrastructural breakdown wherein the routine procedures and processes for achieving an end goal (that is to create content) fail” (Kumar, 2021). The particular

themes and details around this debate will be covered in more depth in the section of this thesis titled “Analysis of the Ganga/Ganges Edit War.”

2.3.4.3 How This Applies to Community Networks

In this thesis, we will compare a blog from the Paimol community where a Cultural Director allowed for a portion of their history traditionally retold through song to be included in a text format in this blog post on their community network website. This community is taking the initiative to use their internet connectivity to share their history and key elements of their own unique identity with the internet. An action that, theoretically, is supported and encouraged by Wikipedia.

However, when examining the rules that Wikipedia has stated in its Reliable Sources webpage, a blog post would fall into the category of Preprint, or research that has not been peer-reviewed and is considered to be not reliable sources that are discouraged from being used unless they meet the criteria for self-published sources. Nevertheless, when examining the rules within the "Self-Published Sources" section of the webpage, it states that "content from websites whose content is largely user-generated is generally unacceptable. In detailing examples of user-generated content that is excluded, they include personal websites (would include BOSCO Uganda and Zenzeleni Community Networks websites), personal and group blogs, content farms, internet forums, social media sites, and other collaboratively created websites.

What is most impactful in this rule is that the section referring to excluding personal and group blogs, which would refer to the blog post by the Paimol community, specifically includes newspapers and magazines as the exception to this rule. In other words, even at the lowest level of potential to be included, a community network, which has already significantly adapted to its culture of transitioning online, must adapt its culture even more and introduce more Western elements. In a separate section of the web page titled "Self-published and questionable sources as sources on themselves," another level of exclusion is applied to a community network's ability to write an article on Wikipedia that would share their history.

This section includes five criteria that must be met, which include: 1) the material is neither unduly self-serving nor an exceptional claim, 2) It does not involve claims about third parties (such as people, organizations, or other entities), 3) It does not involve claims about events not directly related to the subject, 4) There is no reasonable doubt to its authenticity, 5) The Wikipedia article is not based primarily on such sources. In every one of these criteria, whether it

be explicitly stated in the rule or due to the concentration of Western editors and administrators, there are grounds for any article to be written by a community network within the rural global south about their own history. This is primarily because any colonial history accounts would immediately be seen as more accurate than their own account simply because the colonial account was created and published under a Western academic tradition.

The method of deletion of this article perhaps has the most impact on the future of the pre-colonial history of these indigenous people since it is carried out by bots with little to no human intervention (Tkacz 2015; Niederer and van Dijck 2010). This is an example of algorithms improperly constructed so that they exclude the view of pre-colonial history from the global south and privilege the history of the colonizers. More than anything, this shows the need for Wikipedia to adapt its rules to fit the goal that it has set for itself. If the platform's goal is to create the sum of all human knowledge, they must be able to think from the perspective of 85% of the world's population living in the Global South (Véron, 2023).

A first step in doing this is recognizing that the efforts put forward to establish a neutral point of view, such as "no primary sources" and the preference towards citing secondary sources, further disadvantage any non-Western sources of information. Dr. Sangeet Kumar is studying the relationship between Wikipedia and its ability to allow communities from the global south to work within the existing framework of Wikipedia and, therefore, the dominant Western platforms of the internet. This thesis advances this research by studying rural communities from the Global South who have been able to work outside of this framework, publish their own content, and see the global knowledge lost due to Wikipedia's existing framework.

2.3.5 Analysis of the Ganga/Ganges Edit War

A cornerstone of this thesis was the study that Dr. Sangeet Kumar conducted over an edit war that has transpired for nine years over the name of a river in India that the locals of the region refer to as the Ganga region. However, the English Wikipedia page continues to refer to the river as the Ganges. There have been multiple votes on the site regarding the name change, which has led to more than fifteen different threads, each thread spanning months and containing more than fifty thousand words concerning evidence and arguments for name changes or leaving the name as is.

This edit war, in the eyes of Dr. Sangeet Kumar and many other researchers, is representative of the much larger debate on the Internet over allowing a different epistemology to impact Western knowledge production. What is particularly impactful about this edit war is that the executive director of the Wikimedia Foundation, the foundation responsible for running Wikipedia, Sue Gardner, has commented on it and stated that despite the Indians being right in this issue, the disproportionate representation of Western people rejects their opinion. Dr. Kumar's inspiration came from other scholars (Tkacz 2015; Jemielniak 2014; Rogers 2013) who have researched other edit wars on Wikipedia.

The study by Dr. Kumar was the inspiration for the research conducted in this thesis due to it being tangible evidence of the innumerable potential conflicts that would arise as soon as rural regions from the global south connect to the Internet and their new generations are exposed to these new forms of knowledge production. The goal of the research for Dr. Kumar is:

Analyze the ways in which Wikipedia's rules, its privileging of certain kinds of evidence others, and the larger structure of the web of which the collaborative site is a part move it away from its stated goals of being a globally representative encyclopedia" (Kumar 2021, p.95).

In other words, Dr. Sangeet Kumar is examining how connectivity to the Internet contributes to further domination of Eurocentric epistemologies due to the high concentration of Western people connected to the Internet and the fact that the most popular websites were created in the West.

The finding of the analysis, being in stark contrast to this mission statement by Wikipedia, rather than showing any malicious motive on the part of the founders, displays the innate epistemological and cultural domination placed on information and traditions as soon as they connect to the Internet. Where the research conducted by Dr. Kumar is to find how new connectees to the Internet are faced with a wave of Western cultural values that inevitably change the way people of non-Western cultures interact in the real world, this thesis will examine how a different form of connectivity can mitigate this barrage of Western content communally. More simply, this thesis looks at how community networks lead to a greater representation of that community on the Internet than a more basic form of connectivity due to

the premise of connectivity being that the community comes together to achieve Internet connectivity.

This subsection will explore the four themes Dr. Sangeet Kumar found within the Ganga/Ganges edit war, which he believes shows the systemic problems that affect Wikipedia. The four themes consisted of:

- 1) The nature of evidence and what counts as a reliable source,
- 2) The political status and role of English in our world,
- 3) Colonial legacy and the postcolonial politics of naming,
- 4) The role of voting versus consensus on Wikipedia.

Within these themes, Dr. Kumar identifies the broad issues of online collaborative knowledge, which is at the heart of Wikipedia's goal of neutrality. More importantly, these themes reveal how this desire to remain neutral in knowledge production allows for systemic geopolitical advantages to remain unchecked. Dr. Kumar's analysis is foundational for the research in this thesis since it introduces the problem of Western influence on the Internet subjugating non-Western knowledge, which I am testing different forms of connectivity against to see if rural traditions/history can be accurately preserved on the Internet.

2.3.5.1 Theme 1: The Nature of Evidence and What Counts as a Reliable Source

Analyzing his first theme, Dr. Sangeet Kumar states that because the deliberations on what counted as evidence were filtered through Wikipedia's policy on reliable sources and the need for published material, Wikipedia is "fated to replicate and reproduce the status quo of knowledge distribution on the wider internet" (Kumar, 2021 pp. 96). The primary reason that this is a theme is the frequent citation of Wikipedia's 'rule of reliable English-language sources' and how frequently it was used by supporters of the name remaining to be called Ganges.

Additionally, the frequent use of Google Scholar, Books, and web results within the discussions on the edit war, used to prove the increased relevance of one name over the other, displayed another institutional bias. According to Dr. Kumar, the common use of Google as a source of evidence "points to the self-referential nature of an online encyclopedia that...recirculates and cites sources on the web as evidence while excluding knowledge that may exist in the off-line world in non-digital or undigitizable forms" (Kumar, 2021). In this point, Dr. Sangeet Kumar points out that these rules for sources and use of evidence privilege the existing disparity between Western and non-Western knowledge production through the academic community

while also further privileging populations who digitized first and have a more prominent online presence.

I am citing a book section by Geoffrey Bowker titled "Sustainable Knowledge Infrastructures," which discusses how advancing technology requires a new form of knowledge production that detaches itself from the older emphasis on the published linear text. There is the recognition that, as the current status quo, non-Western communities operating in an environment regulated by Western knowledge production must adjust their traditional forms of knowledge production to be considered 'reliable.'

This is to say that, according to Wikipedia and the Western knowledge production that they base their internal policies around, a person could have visited a country in the Global South for the first time and written a book about that country's culture. Despite the book being published thousands of miles away and reviewed by a scholar who had a similar visit, this would be the gold standard for a source of information used on Wikipedia to understand that culture today. Using this same case scenario, if a traditional community leader of a rural population in the Global South were to read this information about their culture and notice some information that is entirely wrong. Despite the community leader's culture being the subject of the book, the oral history used to correct the misconception and explain a cultural practice would not be accepted by Wikipedia.

What is revealed in this scenario is that Wikipedia's goal of obtaining a neutral point of view contradicts its framework for accepting sources since the sources that Wikipedia values most privilege the perspective of a person from the West. With this existing structure of accepting sources, Wikipedia, in its effort to ensure that it publishes accurate information to its readers, makes it harder for information coming from the Global South to be valued alongside information coming from a Western context. Bowker and Dr. Kumar suggest that because of the Internet's ability to transform how people around the world interact with information, there should be a new form of knowledge production that should value non-Western forms of knowledge alongside Western forms of knowledge.

Therefore, if Wikipedia's goal is to collect and share the "sum of all human knowledge," then Dr. Kumar argues that this goal should be predicated on Wikipedia being able to create a knowledge production that values all forms of knowledge equally. This inability for the two forms of knowledge to coexist and the continued prevalence of the traditional Western model of

knowledge production being inalterable for years despite the technological advances that have attributed to a new type of information exchange make a direct parallel to the literature by Sousa de Santos when he speaks of the abyssal line.

One challenge that I believe was left out by Dr. Kumar in this analysis is the ability to find these sources. The fact is that much of the history from rural communities or populations in the Global South is either preserved through oral history, written in poems, or other contexts that, in some cases, require physically going to the community. Examining the existing work of several community networks, I have found a common trend where establishing a community network led to a community website. Creating a website shows a community response to an internet connection that promotes more internally focused sharing, or sharing with one another in the community through their language and traditional context.

This use of the Internet as a medium of interaction with one another in rural communities in the Global South forms a small section of the Internet where this community is not forced to cater to a primarily Western audience. Therefore, this interaction on the Internet also promotes increased sharing of information on the Internet of information that would initially require an in-person meeting to obtain. This example displays community networks' potential for addressing some of the problems posed by Dr. Sangeet Kumar and other scholars in this text.

Another principal source of conflict with the rule system is the rule that the published material must be in the site's language. This means that "countless tomes, poems, and hymns referring to the river as Ganga in local Indian language" cannot apply to this debate since they were not published in English (Kumar, 2021, pp.99). This does not include the cases of oral histories about the river, which remain inadmissible to Wikipedia.

2.3.5.2 Theme 2: The Political Status and Role of English in our World

In this second theme, Dr. Kumar analyzed parts of the debate concerning arguments over which type of English speaker has the authority to change the English Wikipedia page. Users in support of the Ganga name pointed to a sub-rule within Wikipedia which stated that the title of an article that has ties to a particular English-speaking nation should use the form of English appropriate to that nation (National Varieties of English; Wikipedia, n.d., "Wikipedia: Article Titles"). Despite a user citing a Wikipedia entry that showed India being ranked second among the English-speaking countries of the world (Wikipedia, n.d., "Countries by English-Speaking Population"), Wikipedia still claimed that the rule could not apply to this case due to Ganges being of "greater

intelligibility to English-speaking readers worldwide (Wikipedia, n.d., "Article Titles"). This second theme shows an apparent contradiction to the rules stated regarding the favor of the form of English appropriate to the nation that the subject is in, and in doing so, displays the overt support for continuing the knowledge production of the traditional colonial powers.

The supporters of the Ganges name claimed that accepting this change would balkanize the English language. However, this comment shows the unwillingness of the dominant hegemonic culture to make any sort of room for the people that it has colonized. This fear over the balkanization of the English language, or any regional influence on the language, expressed by the Ganges side of the edit war represents the much larger scope of the abyssal line and continuity of colonial traditions. The impact and tradition of colonial powers spread English across the world and placed it in the position to be the modern lingua franca on the Internet. The argument against the balkanization of the English language represents a desire to have all traces of the native language erased when assimilating to the new global standard. To simply tell an indigenous person that they can edit the Hindi Wikipedia page, an argument voiced by some on the Ganges side of the debate is not to recognize the influence that English has on the international academic community.

Additionally, if the supporters of the Ganga debate were only to be allowed to make changes to the Hindi Wikipedia page, despite also speaking English, it would essentially work to subjugate the pre-colonial historical value further. Therefore, while these comments by the Ganges side of the debate might not have intentionally supported the colonization of India, they still support the impacts they have had on the country. This continuity of colonial traditions can be seen in the desire for this decision to be decided only by native English speakers. Examining this claim from a historical perspective, you can see how this timeline of events is a clear progression of the same action simply through a different platform.

Therefore, when putting this debate in the context of a rural community in the Global South connecting to the Internet for the first time, we see a further degradation of their culture when trying to use the Internet as an educational tool. If a new generation of children in a rural community in the Global South would like to utilize the Internet to increase their knowledge of their region, they would increasingly find more sites and sources that favor history as it was told by colonizers rather than the oral histories told by community leaders. This change in perception would be supplanted by the framework to which you can trust sources of knowledge, thereby

suggesting that this new generation should diminish their trust in the accuracy of the history as it was told through an oral history by their community leaders.

What this theme displays is the potential for a community in the Global South to be silenced about their history in a language that they were ultimately forced to speak by a colonial power. The consequence is that new connectees are at an increased risk of losing more elements of their traditional culture. The importance of the English language in the academic world and the overwhelming presence on the Internet strongly encourage its use; this sub-rule within Wikipedia regarding the ties to English speaking strengthens this position and displays an additional fault in Wikipedia's framework. In advancing the research in this book, my research will examine how a communal approach to connectivity through community networks encourages the transition of many different elements of community activity online. This includes transcribing oral histories into a digital and text format, which might not be enough to be permitted to be shown on Wikipedia but still is enough to preserve this community's history and traditional values.

2.3.5.3 Theme 3: Colonial Legacy and the Postcolonial Politics of Naming

In the third theme concerning colonial legacy and the postcolonial politics of naming, Dr. Kumar examined the many instances of the colonial connection to naming the river brought up in the debate. In existing research (Berg and Vuolteenaho 2009; Nash 2009), it has been seen that the power of naming had real-world implications on the power exerted by the colonizer and affected the history and culture of the regions that were renamed. There have been many other instances of regions or cities desiring name changes, and the politics within these movements have been mainly driven by the desire to erase past colonial markers.

The connection between colonization and the Ganga/Ganges debate was acknowledged by the former director of the Wikimedia Foundation, Sue Gardner, who stated that Ganges “bears the stench of colonization for many Indians” (Valby 2011). This same issue is common among many other colonized places around the world and has been associated with the devaluation of the indigenous language (Berg and Kearns, 2009). This theme closely parallels the concept of the abyssal line by going further in depth in the arguments by the supporters of the Ganga name. The fact that the dominant Western and colonial culture has suppressed the names of indigenous landmarks and locations in order to make it easier for the colonizing power to pronounce is yet another example of how Western culture has made non-Western cultures adapt around it. Despite India’s population learning and speaking English and the return of sovereignty to the Indian

population, the indigenous Indian culture is still forced to make more adaptations to their landmarks to account for the former colonial power.

Reconsidering the definition of the abyssal line, which states “a line that divides social society in such a radical way that whatever lies on the other, non-Western, side of the line remains invisible or simply irrelevant,” there is a clear parallel with this theme. The fractured relationship that former colonies have with the languages that were imposed on them is highlighted by Dr. Kumar in his coverage of the edit war. When several Wikipedia users commented that the supporters of the Ganga name should simply stop speaking English, Dr. Kumar re-examined the options that the local Indian population was left with. It was the coercive assimilation towards using the English language by the colonizing British forces on the Indian population that left India as the second-ranking country of English speakers.

This ability to present English as a desirable language shows that “cultural domination works by consent and often precedes conquest by force” (Viswanathan 1997, 113). This is to say that to make the comment that the Indian population can simply stop speaking English after their whole population was manipulated to assimilate it into their society over one hundred years ago is to be ignorant of the fundamental issue that the Indian population has with the name Ganges in the first place.

This has a crucial implication for the research conducted in this thesis due to the ability of those populations within rural regions of the global south who are newly connected to the internet. By assimilating into the online culture dominated by the West, they risk losing critical elements of their culture by assuming it is desirable to adopt a particular Western trait. The connection here is the assumption that adopting the Eurocentric scientific method and favoring it over their more traditional methods of knowledge production will make them more acceptable. A final observation made by Dr. Kumar noted a string of comments by both sides stemming from accusations from supporters of the Ganges name against the supporters of the Ganga name for being nationalistic and not removing their own point of view from this debate, which goes against Wikipedia’s NPOV (Neutral Point of View) rule. This accusation, in the face of the background established in the previous paragraph of this thesis, concerns how the parallel to the abyssal line shows an ignorance of this colonial tradition.

However, instead of being a display of a few bad apples on the internet who have a xenophobic view of the world, this is an example of how the framework of Wikipedia has been based on one

knowledge production and, as has historically been seen as a consequence of this epistemology through the concept of the abyssal line, that suppresses non-Western forms of knowledge. As stated at the beginning of this section, the value of this analysis is that, due to the nature that the website is a widely used online encyclopedia with a mission of collecting the world's knowledge, this debate is representative of the knowledge production on the internet. More specifically, this debate represents how this knowledge production does not allow for the equal valuation of a non-Western perspective.

When including the sensitive nature of the debate around the renaming of locations and landmarks that are tied to specific people, we must also include the entire practice of naming ethnic groups as well. The BOSCO Uganda community network encompasses a part of an ethnic population called the Acholi in the region of Northern Uganda; this ethnic group also includes people in South Sudan. What is mentioned in both the Wikipedia article and the blog post by the community is that the name "Acholi" is a derivation of a name that Arab-speaking traders used to describe them, "Schooli," that British colonists then transitioned to Acholi.

However, what is revealed in the blog post is that the identity of the clan and chiefdom society within the people, who are commonly referred to as Acholi, is much more complex and much more independent from one another. Therefore, the specific case that I am analyzing in this thesis relates strongly to this theme since it unveils layers of false identification of the very ethnicity of the people within the region that has been further suppressed through colonial activity.

Suppose a community network could encourage sharing their communal history, such as what is included in this blog post. Other populations placed under a common ethnic identity, despite a more complex and unique system of communal identification, can be conveyed to the international community through this same form of internet connectivity. As shown in the blog post by the BOSCO Uganda community network, a positive form of internet connectivity that encourages positive growth in digital literacy acquisition presents rural communities in the Global South with the platform to rewrite centuries of history that would integrate the pre-colonial perspective.

2.3.5.4 Theme 4: The Role of Voting Versus Consensus on Wikipedia

The final theme discusses the inner politics within the site and how a core group of editors, mainly of a Western background, have become well-versed in the rules of Wikipedia and

instinctively vote in favor of each other. While Wikipedia discourages voting since it could lead to factionalism, outweighing more discrete options for resolution, some contributors think the majority will have their way and be used to arbitrate content. The analysis of this debate has shown so far that due to Wikipedia's framework being based in the West, it naturally makes it harder to include information from non-Western sources.

Therefore, on occasions where there is conflict over the use of sources, the framework in which Wikipedia operates naturally favors the position of an argument from a Western perspective. However, through analysis of where these editors are located and how they have voted on this Ganges/Ganga debate, the fact that Western voters voted in favor of the Ganges name illustrates the final and most significant roadblock to accepting non-Western perspectives on the site. Dr. Kumar has claimed that this discovery "confirms key arguments about the ways in which the prevailing dominant opinion on Wikipedia is shaped by editors' demographics rather than an open and fair exchange" (Kumar 2021, p. 117). More simply, when there is any debate on Wikipedia on the content since most editors are from the West, this will invariably play a key role in their decision to accept non-Western sources and prevent an equal representation. A critical contribution to the research in this thesis is when Dr. Kumar states:

"When these procedural and cultural architectures combine with the imbalance of demographic distribution on collaborative digital platforms, they create an insurmountable barrier to free, uncoercive, and inclusive debate" (Kumar 2021, pp117)

This is to say that there will always be a barrier to a free exchange of ideas and knowledge due to Western hegemony on the Internet and the fact that the Western world was connected to the Internet far faster than the rest of the world. This final theme discussed by Dr. Kumar is the most substantial connection to how this debate is representative of knowledge production on the Internet.

The simple fact is that the West connected to the Internet first, which means that in this new space, the West comprises the majority; however, considering that 80% of the population resides in the Global South, this majority on the Internet does not represent the global population. The consequence of Western culture forming the foundation of a new form of information flow that is gradually being adopted by the world can be seen in the research on the abyssal line

introduced by Boaventura de Sousa Santos and other research (Bloch 1970; Tomba 2011; Hegel 1970; Mingolo & Escobar 2010). While Sousa de Santos has introduced how Western culture has dominated any non-Western forms of thought, it does not specifically go in-depth on the consequences of how it relates to internet connectivity. Alternate research (Mochamad et al., 2020; Latif et al., 2021; Diaz et al., 2009) has exposed how the fact that the foundation of the Internet is based on Western ideals impacts the non-Western cultures that connect to the Internet. Consequently, when introducing new connectees to the Internet, it must be understood that they will be exposed to a whole new stream of Western-centric ideas, proven to have a degenerative effect on non-Western cultures. What has been understood by Dr. Clifford Meesua Sibani in his article titled "Impact of Western Culture on Traditional African Society: Problems and Prospects" is that rural communities in Africa are the last strongholds of traditional African Society. This not only means that these rural populations will face a greater shock and need for adjustment when connecting to the Internet for the first time but also that traditional African society potentially will be diminished when these last strongholds of traditional cultural values increase their proximity to the Western culture.

This thesis explores how a more communal method of connectivity to the Internet for new connectees residing in rural regions of the Global South will promote a more communal response to these initial shocks of Western influence and encourage a digital transition of some elements of their culture. Dr. Sibani directly linked the advancement of Western technology with the threat of losing "African local technological development and oral tradition" (Sibani, 2018). This quote alone directly connects the problems introduced in the existing scholarship that I have just mentioned to the need for African society to adapt to these challenges. However, perhaps a more impactful representation of Dr. Sibani's intention is captured with his saying, "we should not keep basking in the euphoria of Western technological achievements and forget to improve on our local technology" (Sibani, 2018). This is to recognize that Western culture has influence through its cultural hegemony on the Internet and encourage African populations to take pride in their own culture and not continue to adapt to their cultural traditions to fit in with the perceived majority.

Through analyzing the BOSCO Uganda blog post regarding the Paimol community and comparing it with the Wikipedia article on the ethnic community that the Paimol community belongs to (The Acholi), this thesis shows how connectivity to the Internet can encourage this

shift. This thesis hypothesizes that connectivity to the Internet through community networks would promote a different way of interacting with the information on the Internet and promote an increased digital transition of community activity.

2.4 Conclusion

This literature has shown how not all forms of connectivity to the Internet are equal. When connecting rural regions of the global south to the Internet, it is essential to examine how different forms of connectivity might diminish or promote the preservation of the traditional history and culture of the community.

Specifically, this literature review compared how connectivity through community networks differs from a form of connectivity through a big tech company when connecting rural communities within African countries. To properly illustrate how these different forms of internet connectivity relate to knowledge production, otherwise known as epistemology, of the Internet, I went further in-depth into the debate surrounding Facebook and digital colonialism and how its Free Basics connectivity method compared to a community network.

Including how Facebook's Free Basics form of connectivity has become a very popular method of connectivity to the internet in Africa with thirty-two African countries utilizing Free Basics, I examined research finding Free Basics to be a practice of neo-colonialism (Nothias, 2020).

Exploring work that explains data colonialism and the profit motive of Facebook, I wanted to contrast it with an alternative form of connectivity (Couldry & Mejias 2023; Couldry & Mejias 2019; Pei et al., 2021).

In introducing what a community network is, I showed how they have come to be advocated by organizations such as the UNHCR. Through the case example of the Zenzeleni Community Networks and the ITU's criteria for 'meaningful connectivity' I was able to compare Facebook's Free Basics to a community network against a set criteria which indicated that that the Zenzeleni Community Networks fit more of the criteria that leads to "society-wide benefits" from connectivity (ITU, 2022).

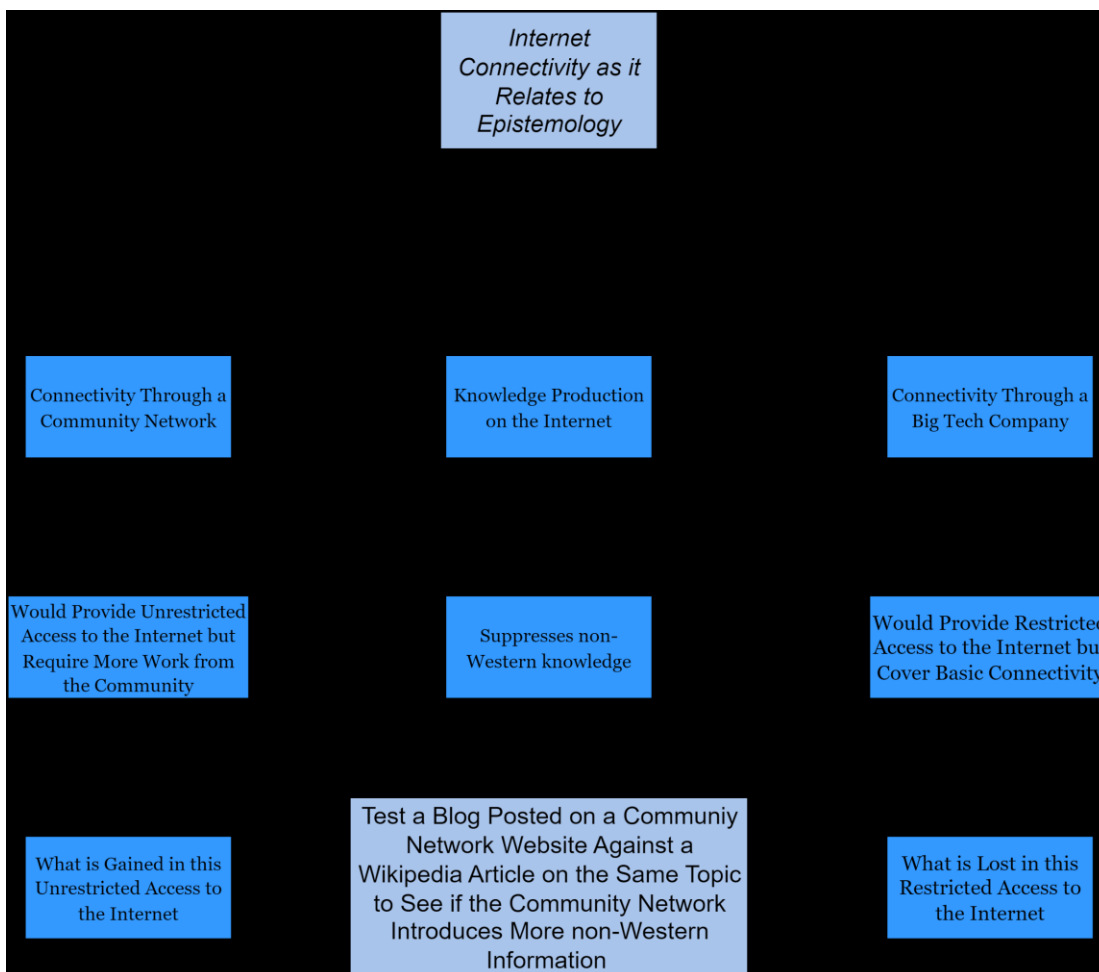
Finally, the last section of the literature review concerns how the existing knowledge production on the Internet has established Western academic traditions as dominant to any other. While the last two sections examined how different forms of connectivity impact rural populations in the Global South, this section discussed how the existing saturation of Western culture on the

Internet impacts new connectees more broadly. I combined research from Boaventura de Sousa Santos, Dr. Clifford Meesua Sibani, and Dr. Sangeet Kumar, and their assessment of the impact of Western epistemology on non-Western epistemologies to display how it translates to sharing information online.

Each subsection of this chapter forms the foundation for the analysis presented in this thesis on how connectivity through a community network can impact how rural communities interact with information in this space. The research question posed at the start of this thesis asked: Does the notion of participation and ownership in a network have any influence on how you critically engage with information on the Internet? It is hypothesized that the increased community activity around establishing an internet connection and the subsequent digital literacy needed for its maintenance encourages an increased communal usage of the online space. The foundation of research presented in this chapter indicates that community networks are more inclined to create a stronger communal bond and that they are more aligned with the meaningful connectivity criteria established by the ITU. Furthermore, the disillusioned framework of Wikipedia that propagated Western content, as suggested by Dr. Kumar, indicate an increased sensitivity of non-Western cultures to being subverted when rural populations of the global south connect to the internet.

3. Analytical Framework

In an effort to make my research more comprehensible, I have created a diagram illustrating my analytical framework (attached below) which should allow the reader to better understand how I have positioned my research.



4. Methodology

4.1 Introduction

From the start of this thesis, the objective was to explore the following question: Does the notion of participation and ownership in a network have any influence on how you critically engage with information on the internet? Intrinsically, this question examines if there is a causal relationship between community networks in a community in the global south and their interaction with information on the internet. Due to the complexities that arise when analyzing the behavioral traits of a rural community in the global south when connecting to the internet, the information gathered in this research must be examined through a non-numerical lens.

Therefore, this thesis uses a qualitative methodological approach in its research. More specifically, this thesis aims to gain a more in-depth understanding of a cause-and-effect relationship between connectivity to the internet for these rural populations and the publishing of unique elements within a population's history intrinsic to the community's identity. However, the constraint of not being able to conduct interviews with the members of the community networks I am studying, despite the effort, required an alternate way to establish this cause-and-effect relationship.

Although an interview method might have been better when examining this research question, the fact that many other researchers studying this same subject have used a similar qualitative method as used in this thesis makes it reliable and effective. Another critical consideration that needs to be taken into account for this research is my personal position within this research; since I am white and from a Western country, there is an implicit bias and disconnect with the subject that I am researching. Accordingly, with this position to the research subject in mind, I have taken deliberate steps to center my citations and study around authors from the global south who strongly connect to the problems surrounding my research.

4.2 Data Collection Methods

In order to establish an academic foundation for this research to build upon, this thesis needed to critically explore how the wider internet community interacts with users attempting to engage from a non-Western perspective. For this reason, this thesis has used secondary data from existing research that provides additional strength to the methodology used in this thesis. In

sections within the literature review of this thesis, we have focused our analysis on previous research (Kumar, 2021; Sibani, 2018) regarding the loss of traditional culture when a non-Western culture connects to the internet. In the section of this thesis titled "Continuity of Colonization through Connectivity," we explored research conducted by Dr. Sangeet Kumar in his book *The Digital Frontier: Infrastructures of Control on the Global Web* where, among other themes, it established Wikipedia as a credible variable to use in a study in order to represent the general knowledge production (epistemological framework) of the internet. This provides an academic foundation for this thesis's use of Wikipedia as a variable to represent the existing knowledge production framework on the internet. Additionally, this research justifies using the English page of Wikipedia to make this comparison due to the author's finding that most of Wikipedia's web traffic, including its edits, is done on the English Wikipedia page. This is supported by an editor survey conducted by Wikipedia in 2011, showing that over 90% of their editors primarily edit English pages (Khanna, 2011).

In the section of this thesis titled "Defining the Abyssal Line," we analyzed research by Dr. Clifford Sibani in an article titled "Impact of Western Culture on Traditional African Society: Problems and Prospects," where it was established that rural areas of Africa are the last stronghold of traditional African society. This research presented by Dr. Sibani provides a foundation of research from an African scholar within Africa regarding the loss of traditional African society due to its proximity and increased interaction with Western culture. Using the research by Dr. Sibani and his findings, which link the proximity to Western culture to the loss of traditional African society, this thesis will explore further how rural African communities' connection to the internet could accelerate this trend.

Finally, the exploration and analysis of community networks done in the section of the literature review titled "How Community Networks Differ From Traditional Forms of Connectivity" displayed the viability of community networks to operate and benefit the rural community they serve successfully, Providing a critical comparison between community networks and the other options of connectivity given by big tech companies. This last section presents the basis onto which this thesis can critically examine the feasibility of implementing community networks within rural communities in the global south. These sections work together to provide the foundational research required to effectively test the research question posed in this thesis and represent the need to conduct this research qualitatively.

As stated previously, the original goal for my method of analysis would be a mixed methods analysis where I would use interviews or surveys with the members of a Community Network to conduct a more in-depth analysis. I was planning on centering questions around examining the collective sentiment on how their culture and history are represented online and if a lack of online representation encouraged them to share more elements on their own website. In addition to emails sent to the two community networks that I have used as case studies, the Zenzeleni Community Networks and the BOSCO Uganda Community Network, I set up an interview with a professor, Dr. Shaun Pather, who was on the board of the Zenzeleni Community Networks. Dr. Pather is the chair of the Department of Information Systems in the Faculty of Economic and Management Sciences at the University of the Western Cape and the Board Chair of the Zenzeleni Networks Not-for-Profit. In this interview, Dr. Pather explained that with no budget for research, even a simple Google survey sent to community members of the Zenzeleni Network is unattainable primarily due to the language gap but also due to his observations of past attempts to study this community. I should include that before I could even set up a Zoom meeting with Dr. Pather, he was insistent that any research conducted on this community would also benefit them.

In effect, it ensures that this community network is given its space and not marveled at or overly harassed by researchers worldwide. Once I explained the intentions of my research, Dr. Pather agreed to meet, and in further outlining my research, he included that it is a topic that he had not thought about before and immediately connected it to the future impact of AI and large language models. Dr. Pather also included in this meeting that the alternative method of analysis, the retrospective causal comparative model, can still produce effective results for the topic I am studying. Additionally, I did not receive any response after emailing the contact listed on the BOSCO Uganda community network website. While the current method of analysis that I am using now was not my first choice, given the constraints of no research budget, assurance by Dr. Pather, and existing research on knowledge production on the internet utilizing similar methods, I feel confident that this method of analysis will still be effective.

The primary tool used in this research is past articles centered around the small town of Paimol, located in the Agoga district within the Northern Region of Uganda. This small town is connected to the Battery Operated System for Community Outreach (BOSCO) Uganda community network. BOSCO Uganda is a not-for-profit, faith-based community network

operating under the trusteeship of the Catholic Archdiocese of Gulu, which established connectivity in 2007. The original goal of this community network was to establish a way for people within Northern Uganda to communicate with aid workers and not be isolated from support during an armed conflict in the country. However, what is so special about this community network is that from this original goal, the mission of this community network has come to encompass so much more. BOSCO Uganda has been able to equip "various groups of people with essential knowledge and skills in ICT, education, energy, entrepreneurship, and other related fields," and in doing so, they have "received people of all tribes, religious affiliation, and even age" (BOSCO Uganda). In their time operating, they have even developed partnerships with Notre Dame University to reduce dependencies on donors and to help develop courses on Entrepreneurship. Through all these endeavors, it is clear that this community network has become a beacon throughout the region to develop further ICT skills, digital literacy, and professional development for everyone.

4.3 Justification for Variables Chosen

In addition to BOSCO Uganda being a model community network, there are several reasons this community network was selected to represent community networks as a variable in this study. The first is quite simply their original goal for the network: to provide critical communication support for the region suffering isolation due to war. This is critical since the original goal of the Free Basics connectivity scheme was to provide a "911 for the internet," as stated by Mark Zuckerberg at a talk in India back in 2014 (India Today, 2014). Using a community network that shared an initial goal with Facebook's Free Basics, this thesis will provide the foundation for an ulterior evaluation of the effectiveness of the goals of Facebook's Free Basics connectivity scheme compared to a community network. This future research might serve to convince Meta or another big tech company to change their strategy for connectivity.

This comparison benefits the research in this thesis because of the stark difference in developmental capability between connectivity through BOSCO Uganda versus Free Basics. We can see how one method of connectivity, Free Basics, led to populations believing that Facebook was all there was to the internet (Mirani, 2015). On the other hand, community network connectivity allowed for the development of ICT skills training and digital literacy education within surrounding communities (Rey-Moreno, 2017). This ulterior comparison serves as an

additional suggestion towards the notion that owning a network changes the behavior of a community while also suggesting that community networks promote more positive development than a form of connectivity to the internet provided by a big tech company. The second reason I chose BOSCO Uganda as the variable to study further is the length of time the community network has been running and the network's experience.

Given that the Community Network first started in 2007, this community network provides a better look at the potential trajectory of utilizing a community network connectivity method. My case study of the Zenzeleni Network provided an example of a community network established closer to the date that Facebook's Free Basics was created since the Zenzeleni Network was created in 2012 and the Free Basics was created in 2014. The BOSCO Uganda community network can account for five more years of experience compared to the Zenzeleni Network and seven more years of experience compared to the Free Basics connectivity scheme. The final and potentially most profound reason why I chose this community network is due to the current fragile connection that the younger generations within this community have to their traditional values due to their violent displacement from their land and the subsequent death of a generation of elders (Okot, 2013). By choosing a community network with more experience and current cultural fragility than others, such as the Zenzeleni Community Networks, there is more to explore in their history of connectivity and adapting to the changing landscape of the internet. Returning to the specific material used to explore the question posed in this thesis, whether or not ownership in a network has affected how a population critically engages with the information that comes across the web. This thesis will use two articles to compare and contrast the history written and published online on the Acholi people, the wider ethnic population connected with the small town of Paimol, who are a part of this community network. One article will be from Wikipedia, while the other will be from a blog post published on the BOSCO Uganda website. This comparison will consider the content of the articles and any aspects of the history of the people that one article may leave out, as well as the sources referenced in the articles. The results of this study will explore if Wikipedia's rules for verifiability, being based in Western academia, are leaving out information critical to the Acholi people, as expressed in a blog post published by an Acholi community.

4.3.1 Justification For Wikipedia as a Variable to Represent the Global Epistemology

A previous study by Dr. Sangeet Kumar established how Eurocentric epistemology is favored on Wikipedia through their rules on publishing content, which negatively impacted how users from non-Western cultures could interact with the site. The previous study identified an area where Eurocentric epistemology on Wikipedia does not allow users from non-Western cultures to publish content based on their traditional epistemology.

This thesis aims to display how a rural non-Western community can easily adapt its local history to the online format, where it can exist alongside an alternate history being represented. Building off of Dr. Kumar's research by utilizing a similar methodology grants additional validity to the qualitative methods used in this research. In other words, this study by Dr. Kumar provides an academic justification for using Wikipedia to represent the general epistemology on the internet. A more detailed explanation of the reasoning behind using Wikipedia as the representation of global knowledge production can be seen in the subsection of this thesis titled "How Wikipedia's Framework Suppresses Alternate Epistemologies." This subsection explains that Wikipedia's global popularity, permittance of global editing, and founding mission to present "the sum of all human knowledge" puts it in a unique position of analysis where it can represent the knowledge production of the internet. Simply, the site has become a beacon for free information on the internet, and because of this, it has become one of the most used websites in the world and a principal resource for training AI, such as ChatGPT. Due to this comprehensive utilization and openness to have the online community edit the pages to add or change information, Dr. Kumar and other scholars discussed in the aforementioned subsection posture that it is a representation of the knowledge production of the internet.

An additional note that should be made regarding the use of the Wikipedia article "Acholi People" is that there is an additional Wikipedia article titled "Acholi." However, this alternate Wikipedia article is much smaller than the other article, consisting of two sections instead of six. It repeats information provided in the Wikipedia article titled "Acholi People." The only addition that the "Acholi" Wikipedia article adds is a small section titled "Family System"; however, no sources or notes are attached to this information. Nevertheless, the most convincing reason why this article was not used is Wikipedia stating that this article is a stub. As stated in Wikipedia's "Help: Sketch" website, the stub refers to "An outline," which is "a short entry, not adequately

structured to be considered a "mature encyclopedic entry, but broader than a dictionary entry." Since Wikipedia classified the article "Acholi" as a stub, it cannot be considered a proper Wikipedia article. Therefore, it would not be fair to use it to represent the standards of a Wikipedia article. The Wikipedia article titled "Acholi People" does not have any such classification and, therefore, can be considered a Wikipedia article that is representative of Wikipedia's standards.

4.3.2 Justification for BOSCO Uganda as a Variable for Community Networks

It should also be noted that the blog post by the BOSCO Uganda website contains a partial copy of complete research on the Paimol people and the Acholi culture on a website titled "Martyrs of wiPolo." There are several strong indicators, such as the location of the website being 13 kilometers away from a BOSCO Uganda ICT centre, the author of the research was a student from Notre Dame carrying out a fellowship when Notre Dame is a sponsor of BOSCO Uganda, and the website is sponsored by the Archdiocese of Gulu which is also a sponsor of BOSCO Uganda. All of these connections to the "Martyrs of wiPolo" website being associated with the BOSCO Uganda Community Network are outside the obvious fact that a section of the research published on the Martyrs of wiPolo website is being copied and published on BOSCO Uganda's website. However, since there is no explicitly stated connection between the BOSCO Uganda website and the Martyr's of wiPolo website, I will only be using the part of the research posted on the BOSCO Uganda website. This is out of an effort to remain neutral and fair in my evaluation of information published on both websites. Additionally, by only evaluating information that is directly associated with the BOSCO Uganda community network, this thesis strengthens the connection of the results of this study to different forms of connectivity. Therefore, the research and evaluation within this thesis are congruent with the research question.

Additionally, in conducting this research digitally, it is important to recognize several ulterior facets that make this study more complex. In conducting this research exclusively through Google Chrome, the most used and popular browser by users of the internet, with over 60% of internet users globally using Google Chrome, there are some innate biases attached to the results (StatCounter, 2023). However, to accurately test the global representation of information on the internet, I must conduct my research on a browser that is utilized by most of the global internet

community. While including an in-depth analysis of the ranking of the list of results provided by Google Search when entering Acholi History or Acholi Culture would add a new dimension to the portrayal and advancement of Acholi History as told by Acholi people, I will only touch on this briefly and advocate for a more in-depth examination solely focused on this relationship in future research. A few elements within the Google Search results make an in-depth analysis of why certain results were ranked in front of other websites. The most complex of these is Google's use of AI to personalize the results that each user will see.

This means that the results that Google's Search results display for me are based on my search history and can be completely different from what a user halfway across the world will see. In connection with my research, since I have been searching extensively about the Acholi history and the Paimol community and viewed the BOSCO Uganda site many times, Google's AI could have recognized this behavior and then placed more Acholi history connected to BOSCO Uganda higher on my search results.

Notably, the Google Search personalization feature can be turned off by users. However, it is the default option, meaning that it is utilized by a majority of global internet users. This correlation can be made due to a widely recognized "Rule of Defaults," which references a study made by Microsoft researchers who, in a survey, found that 95% of users do not change their default settings (Arthur, 2013). This research has since been supported by research outside the tech industry that found that default options steer human choices (Thaler & Sunstein, 2008).

Therefore, given that a majority of global internet users use Google Search and a majority of people worldwide do not change their default options, Google Search personalization can be understood to be used by a majority of global internet users. Since a majority of global internet users use Google Search personalization, it makes it harder to analyze which specific search results will be seen first by a majority of internet users.

Additionally, as noted by Google's Help Center in the "Personalization & Google Search Results" section, "Search results may vary between people for reasons other than personalization, such as language settings or localized results" (Google Search Help, 2023). The fact that the Google Search results are further localized to your region and dependent on your language settings complicates the study even more.

The final and most impactful reason why I did not include more in-depth research into whether Google's Search Results more prominently display one source of information than another is due

to the global popularity of Wikipedia. The very reason why I chose Wikipedia to be a variable in my study is because it is one of just three sites that, since 2004, has remained among the top 11 websites in the world as determined by internet traffic (Statistics & Data, 2021).

This global popularity of Wikipedia will instinctively make people view a Wikipedia article more than a website for a community network when wanting to learn about the history of a people or region. This popularity and trust in the brand both contribute to Wikipedia consistently ranking high on Google search results and more people preferring information on Wikipedia versus a blog on a community network website. Therefore, due to this massive disparity of brand recognition and global usage, this research is being conducted with the understanding that Wikipedia will consistently rank higher than the community network in terms of Google Search Results.

The research in this thesis focuses on showing the disparity in the information being presented on Wikipedia, a representative of the internet's knowledge production and principal resource used to train AI, due to its rules and framework. In other words, in recognizing that Wikipedia will consistently rank higher than other non-Western sources of online information, I am comparing a non-Western source of information against a Wikipedia article on the same subject to see what is excluded by Wikipedia due to their rules and framework being based in Western academic traditions.

4.4 Analysis Method: Retrospective Causal Comparative Model

The method of analysis that this thesis will use is a retrospective causal comparative model in order to analyze the history that is published within the two articles about the Acholi community on the BOSCO Uganda website and see how it conflicts with what is posted on Wikipedia. The retrospective causal-comparative method of research works by looking to past scholarship to examine why a specific relationship between two variables leads to a particular outcome and how that outcome can be changed if the variables are different.

In analyzing the difference in history represented in the two sources that this thesis is analyzing, we see the specific element of one variable originating from a community network led to an alternate version of history and an increased involvement of the community in retelling their history. In order to accomplish this, this thesis analyzed the sources used in each article and the content within each article to assess the meaning of certain elements of history missing from one

version of history represented in one online site. I conducted an in-depth comparison of multiple seemingly minute differences. When I conducted my analysis of the differences between the Wikipedia article and the BOSCO Uganda blog post, I assessed the content and the sources used by each website.

In my analysis of the sources, I presented metrics that divided the sources into three categories: Western authors, Western organizations, and non-Western authors. I divided the sources referenced by the BOSCO Uganda blog post and Wikipedia article into categories based on background research into each author and organization that created the source. The background research on the referenced authors and organizations included examining their profession, nationality, and past or current academic experience. In the event that the author or organization did not have one of the three factors used in my examination, profession, nationality, and past or current academic experience, publicly available, I then categorized them based on what factors were remaining. Fortunately, every author had at least one examination factor to utilize in my background research.

Additionally, I conducted an analysis of the content of the sources used based on three criteria that would suggest the source is portraying the side of the local Acholi communities. These three criteria categorized sources based on whether they included the precolonial history of the Acholi, did not portray the British as detrimental to precolonial history or did not mention precolonial history at all. In order to properly categorize these sources, I read each source and created a detailed report on the history of the Acholi they included. Given that each source that was referenced did not always have all of this background information available, I would present the information that was made publicly available. I then created a pie chart visualizing the percentages at the end of both analyses of the content of the sources.

Concerning my analysis of the content of the Wikipedia article and the BOSCO Uganda blog post, I utilized more detailed criteria. These criteria will focus on various factors associated with the Acholi history to see how each website represents that history in an attempt to see if the two websites represent the information differently. I identified three critical historical periods discussed in each article: precolonial history, colonial history, and history after independence from colonial rule. I then analyzed the information pertaining to each period and compared the two websites to see what information was being included and what information was being excluded.

The metrics used to compare the inclusion of each of these historical periods included a count of how many paragraphs were used to describe a particular historical period. I attached a paragraph to a specific period if a majority of the content within the paragraph was referring to a specific historical period. In the "Background Metrics" subsection in the "Difference in Content" section, I further clarified how I categorized each paragraph regarding two historical periods. Separately, I identified similarities and differences within subjects discussed within each historical period, delving into how the website represented each period. The criteria developed to create a distinction in the representation of each historical period was utilized through my analysis of how the article and blog post presented the cause, development, and outcome of events of each historical period.

I categorized information into different criteria based on main points of information and supporting points of information, which would be used to categorize information used to describe that particular historical period. In analyzing every sentence within every paragraph associated with a particular historical period, I categorized information according to whether it provided new information or supported existing information being discussed. If a sentence provided new information, it would be categorized as a central point of information, and if a sentence supported existing information, it would be categorized as a supporting point of information. An example of how this information is structured can be seen in a point of information provided in the BOSCO Uganda blog post that stated that in the 19th century, the chiefdoms of the Acholi became more jointly identified. The following sentence included that this joint identification was due to outsiders. In this example, the former information would be considered a central point of information, and the latter would be considered a supporting point of information. Furthermore, since this information concerned the beginning of the modern conception of the Acholi, it was categorized in the development criteria of assessment within the precolonial history period.

Additionally, it is important to note that the Wikipedia article covered a much more extensive range of the history of the Acholi, including the language, location and population size, religion, and rebellions. Provided that there was a disparity in the focus of each article on a certain historical period, some criteria for analysis of the similarity and difference in the presentation of the historical period were left out. When that scenario arose, I simply stated that the specified criteria were missing from the article or blog post's description of that particular historical

period. This was done to remove any potential bias I would attach to an assumption of how the blog post or article framed a historical period. These differences that the average reader would not observe, count, or compare play a significant role in how non-Western rural communities are represented on the internet. In a broad sense of what this method will accomplish, the retrospective causal comparative model will look at the content of two articles published on different websites concerning the same subject.

This method of analysis will examine the differences between these two articles to see what a more traditional form of knowledge production leaves out of the history of a population in order to understand how the establishment of a community network can encourage a new activity on the internet which allows for another epistemology to permeate the Western dominated digital landscape.

4.5 Sources Tested:

Table 4.1: List of Sources Referenced in the Wikipedia Article "Acholi People."

<u>Wikipedia Sources Tested</u>				
<u>Title of Sources</u>	<u>Author</u>	<u>Year Published</u>	<u>Orientation</u>	<u>Category of Source</u>
"The Evolution of Ethnicity among the Acholi of Uganda: The Precolonial Phase."	Atkinson, Ronald R.	1989	Western	Author
"Acholi." Ethnologue: Languages of the World."	Lewis, M. Paul	2010	Western	Author
<i>The roots of ethnicity: the origins of the Acholi of Uganda before 1800</i>	Atkinson, Ronald Raymond	1994	Western	Author
State formation and fragmentation in Agago, Eastern Acholi'	Webster, J.	1970	Western	Author
<i>The Acholi of Uganda</i>	Girling, F.K.	1970	Western	Author
The Acholi of Uganda: adjustment to imperialism'.	Dwyer, John Orr	1972	Western	Author
From Uganda to the Congo and beyond : pursuing the Lord's Resistance Army	Atkinson, Ronald Raymond	2009	Western	Author
<i>Alice Lakwena & the holy spirits: war in Northern Uganda, 1985-97</i>	Behrend, Heike	1999	Western	Organization
UGANDA/DRC: OPERATION RUDIA II UPDATE	WikiLeaks	2009	Western	Author
<i>The International Criminal Court in Ongoing Intrastate Conflicts</i>	Wegner, Patrick S.	2015	Western	Author
"Kony's Message: A New Koine?".	Doom, Ruddy and Koen Vlassenroot.	1999	Western	Author

"The Anguish of Northern Uganda - Section 1 - Uganda".	Relief Web	2020	Western	Organization
<i>The International Criminal Court and Peace Processes in Africa</i>	Gissel, Line Engbo	2018	Western	Author
"Acholi of Uganda"	People Groups	2023	Western	Organization
"Uganda: Minorities: Acholi"	Minority Rights Group	2013	Western	Organization
"UGANDA: 1,000 displaced die every week in war-torn north - report"	IRIN News	2005	Western	Organization
"Northern Uganda tradition-based practices in the Acholi region, 1. The conflict"	Latigo, James Ojera	2006	non-Western	Author
DID NOT INCLUDE TITLE	New Vision	2007	non-Western	Organization
"The Acholi Traditional Conflict Resolution in Light of Current Circumstances:"	Latigo, James Ojera	2006	non-Western	Author
Religion, Politics and Cults in East Africa	Twesigye, K., Emmanuel	2010	non-Western	Author
"Population composition"	Uganda Bureau of Statistics	2006	non-Western	Organization

Table 4.2: List of Sources Referenced in the BOSCO Uganda blog post “Complexities of Identity: Clan, Chiefdom, and Ethnic Group Identity in Northern Uganda.”

<u>BOSCO Uganda Sources Tested</u>				
<u>Title of Sources</u>	<u>Author</u>	<u>Year Published</u>	<u>Orientation</u>	<u>Category of Source</u>
<i>The Roots of Ethnicity: Origins of the Acholi of Uganda</i>	Ronald R. Atkinson	2010	Western	Author
“ethnicity, n., sense 2,	Oxford English Dictionary	2014	Western	Organization
“British Colonialism and the Creation of Acholi Ethnic Identity in Uganda, 1894 to 1962,”	Charles Amone and Okullu Muura	2014	non-Western	Author
Interview With a Paimol Cultural Director	N/A	2023	non-Western	Author
“The fate of a transitional chief in colonial Acholiland: Iburaim Lutanyamoi Awich, 1850s–1946,”	Patrick Otim	2021	non-Western	Author

4.6 Content Tested

4.6.1 Wikipedia Points of Information

Table 4.3: Points of information, as defined and characterized in the “Analysis Method: Retrospective Causal Comparative Model” section within this chapter, categorized according to their cause, development, and outcome regarding Acholi precolonial history within the Wikipedia article “Acholi People”

<u>Precolonial History</u>					
<u>Cause</u>		<u>Development</u>		<u>Outcome</u>	
Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information
Referred back to 1000 AD to the presumed nominal forebears of the present Acholi and how they migrated south from Bahr el Ghazal in South Sudan.		In the late 17th century new sociopolitical order developed among the Luo of Northern Uganda, characterized by the formation of chiefdoms headed by Rwodi	Although the Rwodi were believed to have supernatural powers, the chiefs ruled through a council of clan elders, so they never ruled singlehandedly.		
		Chiefs had one clan and each chiefdom had several villages made up of different patrilineal clans	The councils representatives could mediate issues between clans, and essentially covered both civil and criminal functions, like a Supreme Court.		
		In the mid 19th century, 60 small chiefdoms existed in eastern Acholiland	It was a system of governance fully integrated with their religion and cosmology.		
		During the second half of the 19th century, Arabic-speaking traders from the north started to call them Shooli, a term			

		which was transformed into Acholi			
		According to James Latigo, prior to colonialism, "the Acholi people maintained a traditional government that was rooted firmly in their religious beliefs, norms, and customs, which demanded peace and stability in Acholiland at all times, based on their philosophy of life. This structure was maintained by the real anointed chiefs of the Acholi, the rwodi moo."			
		All Acholi believed held the same precolonial belief in the superior being named YA Lawter.			
		Killing a person was prohibited and if it took place, negotiations for blood money were led by the victim's family with agreement followed by rituals of a reconciliation ceremony to restore the killer to the community.			
		There are important rituals that occur to cleanse homes and sites of spirits in order to welcome back people who have been away for a long time, people who have been captive, or clear spirits of places where killings have occurred.			
		The second paragraph exclusively discussed			

		the organization of the community referring to them as hamlets specifically their specific cultural practices around style of homes and the roles of women and men in the communities.			
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Table 4.4: Points of information, as defined and characterized in the “Analysis Method: Retrospective Causal Comparative Model” section within this chapter, categorized according to their cause, development, and outcome regarding Acholi colonial history within the Wikipedia article “Acholi People”.

Colonial History					
Cause		Development		Outcome	
Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information
		Stated that “During Uganda’s colonial period, the British encouraged political and economic development in the south of the country, in particular among the Baganda.”	Many Acholi soldiers joined the Kings African Rifles (KAR), the British colonial army, were deployed to the frontlines in southeast Asia in WW2 where they held British positions against the intense Japanese offensive.	Stated that James Ojent Latigo described some of Uganda’s social problems as based on the way the political elites have used ethnicities to divide the country.	Described as noting the emphasis on the distinction among ethnic groups being part of the internal government dialogue.
		The Acholi and other northern ethnic groups supplied much of the national manual labor and came to compromise a majority of the military, creating what some have	Notable Acholi soldiers who made the ranks were Gen. Tito Okello-Lutwa, Brig. Pyerino Okoya and Lt. Gen Bazilio Olara-Okello.		Quoted as saying “part of the structural causes of the conflict in Uganda has been explained as rooted in the ‘diversity of ethnic groups which were at different levels of socio-economic development and political organization.’”

		called a “military ethnocracy.”			
			Due to the changing economy, after the 1950s, fewer Acholi was recruited to the armed forces but continued to be associated with them in popular mythology and stereotypes.		

Table 4.5: Points of information, as defined and characterized in the “Analysis Method: Retrospective Causal Comparative Model” section within this chapter, categorized according to their cause, development, and outcome regarding Acholi history after independence within the Wikipedia article “Acholi People”.

<u>History After Independence</u>					
<u>Cause</u>		<u>Development</u>		<u>Outcome</u>	
Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information
Quote by Latigo "Since independence in 1962, Uganda has been plagued by ethnically driven, politically manipulated violence referred to by some as a history of 'cycles of revenge and mistrust'. Deep-rooted divisions and polarization		Milton Obote was the first leader after independence and relied on the Acholi Luo people and two other ethnic groups in government.	Museveni has held absolute power since and survived civil war, unrest, and numerous attempts at coups.	The long civil war in the North destroyed much of their society.	The majority of elected members of parliament in the Acholi sub-region are members of the opposition.

<p>remain between different ethnic groups, and these have been greatly exacerbated by the way in which the country's leadership has developed since independence.</p>					
		<p>Idi Amin was from north Uganda but the Kakwa people and overthrew Obote's government and established a dictatorship, suppressing and killing 300,000 people, including many Acholi.</p>	<p>This led to rebel groups being created in the north with the most prominent being the Uganda's People's Army, the West Nile Bank Frontiers, the Uganda People's Democratic Army, the Holy Spirit Movement, and the LRA in the Acholi region.</p>	<p>Latigo noted that leaders have called for a revival of the traditional processes of the indigenous people for the accountability and justice.</p>	<p>The Ugandan minister of internal affairs and leader of the government negotiating team have noted the effectiveness of the traditional system.</p>
		<p>General Tito Okello was Acholi and came to power in a military coup but defeated in January 1986.</p>	<p>Some Acholi groups, like the Uganda's People's Army, were angry with the regime because it had overthrown the government that they served.</p>		<p>The minister and others suggested that it could help the nation more than adopting the Western system of the International Criminal Court at the Hague.</p>
		<p>The years of leadership of men from the North did not make any changes to the economic marginalization of that region and led to higher rates of</p>	<p>The NRA defeated all of the rebel groups except for the LRA.</p>		

		poverty than other areas of the country.			
		Now president Yoweri Museveni and his National Resistance Army defeated Okello and his Acholi-dominated Uganda National Liberation Army and subsequently conducted revenge killings in the north.	The activities of the LRA have been devastating within Acholiland.		
		The Acholi are known to the outside world mainly because of the long insurgency of the Lord's Resistance Army (LRA) led by Joseph Kony, an Acholi from Gulu.	In 1996 the Ugandan government moved hundreds of thousands of Acholi from the Gulu districts into camps for their protection.		
		In 1995 a constitutional reform recognized religious cultural leaders of the Acholi but still they have not been fully restored to their previous powers due to a change in society.	Since 1996 this policy grew to encompass the entire rural Acholi population of four districts and comprising one million people.		
		Religious leaders have tried to end the conflict in the country for the last two decades and reconcile the parties.	These camps had some of the highest mortality rates in the world.		
			Malaria and AIDS have been the		

			primary diseases and causes of death.		
			The refugees in the camps have been subject to raids by both the LRA and the government forces.		
			At the height of the insurgency, 1.8 million people in the north were living in camps.		
			Peace talks beginning in 2005 promised some relief to these people, and some camps were closed in 2007 as security in the north improved.		
			As of September 2009, large numbers of Acholi people remained in camps as internally displaced persons.		
			Traditional cultural practices that cleared away spirits after being away from a location for a long time was practiced by the displaced Acholi who returned to their villages.		
			It is intended to restore communities to balance, and to bring people back into relation in their home communities, where ideally, they would return at the end of the war.		

			In 1997 Catholic, Anglican, Muslim, and the Orthodox religious leaders of Acholi created the Acholi Religious Leaders Peace Initiative to formalize their increasing cooperation on Peace issues.		
			Kitgum, Pader and Gulu, three districts of the Acholi sub-region, each established peace forums for continuing discussions.		
			They have also played a key role in Acholi traditional reconciliation processes and in preparing the community to receive former combatants.		

4.6.2 BOSCO Uganda Points of Information

Table 4.6: Points of information, as defined and characterized in the “Analysis Method: Retrospective Causal Comparative Model” section within this chapter, categorized according to their cause, development, and outcome regarding Acholi precolonial history within the BOSCO Uganda blog post “Complexities of Identity: Clan, chiefdom, and ethnic group identity among the Acholi people of Northern Uganda.”

<u>Precolonial History</u>					
<u>Cause</u>		<u>Development</u>		<u>Outcome</u>	
Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information
This blog post states that the concept of		Chiefdoms of the area began to develop in the late 17th and	Within each chiefdom were various clans, which, despite	Identity eventually became solidified under	Atkinson notes that “the primary sociopolitical unit continued to be the

<p>Acholi as a singular identity is recent.</p>		<p>early 18th centuries, they were not only completely independent of each other, but the people of each chiefdom did not see themselves as sharing a common identity with each other.</p>	<p>having dissimilar origins, found a common identity with each other.</p>	<p>the name Acholi by the time of the arrival of the British later on in the century.</p>	<p>individual chiefdom,” and that “there are certainly no examples from the period of Acholi-wide organization, cooperation, or other activities of any sort.”</p>
		<p>By the 19th century, the chiefdoms of the present-day Acholi people became more jointly identified.</p>	<p>Paimol was established during the 1720s by its first chief and namesake, Omol, who was an outsider of the region, being of Paluo origin. Thus, when Omol established Paimol, he incorporated the Taa and another related clan, Atura, into his chiefdom.</p>		<p>Unlike, the clans, which were defined by their larger chiefdoms in which they actively participated, the simple grouping of people under a common tribal name was nothing more than an artificial identity.</p>
			<p>The other clans that were subsequently brought under the chiefdom were both from the region and from regions as far away as those now classified under different ethnic groups.</p>		<p>I met with one of Paimol’s cultural directors learned these histories from the wife of Ogal, the favored warrior of Paimol’s last chief before British rule.</p>
			<p>An individual chiefdom having mixed origins and its people still</p>		<p>During the time of this chief, which was around the start of the 20th century,</p>

			<p>considering themselves as having a distinct identity from neighboring chiefdoms whose locations are much closer to them than the regional origins of some of their own clans.</p>		<p>Paimol was much smaller in order for the chiefdom to mobilize quickly if any of the neighboring chiefdoms were to attack, which was a common occurrence.</p>
			<p>A chief had only as much power as his chiefdom’s clan leaders, and that, as a result, decisions could only be made with the approval of these leaders.</p>		<p>These small-scale fights with other chiefdoms are confirmed in the traditional stories that he teaches younger generations.</p>
			<p>The clans still retained their separate identity while also adopting the more general identity of their chiefdom.</p>		<p>The song “Lweny pa Jo Kabala ki Paimol” recounts a fight with the neighboring Kabala chiefdom after the latter raided the former’s cattle, and the song “Lweny pa Jo Omiya ki Kabala” recounts a fight between the Omiya and Kabala chiefdoms, in which Paimol assisted the former.</p>
			<p>The causes were largely external.</p>		<p>Despite being labeled under a common identity by outsiders, the Acholi people overwhelmingly saw their identity to be first and foremost their clan and chiefdom.</p>

			Arab traders, known as the Kutoria, arrived in the mid-1800s, they paid no attention to the distinctions between the different chiefdoms but instead classified them as a common ethnic group based on their shared language, an identity which eventually became solidified under the name Acholi.		
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Table 4.7: Points of information, as defined and characterized in the “Analysis Method: Retrospective Causal Comparative Model” section within this chapter, categorized according to their cause, development, and outcome regarding Acholi Colonial history within the BOSCO Uganda blog post “Complexities of Identity: Clan, chiefdom, and ethnic group identity among the Acholi people of Northern Uganda.”

<u>Colonial History</u>					
<u>Cause</u>		<u>Development</u>		<u>Outcome</u>	
Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information
		By the 1910s the British, while in the process of solidifying their control over Uganda, further forced the Acholi identity onto the chiefdoms.	The British colonial government set up indirect rule through the Acholi chiefs, making them servants of the state	Thus, not only was the Acholi identity solidified during this time, but also a British one as well.	While one’s clan and chiefdom are still important identifiers, the ethnic group has taken a prominent place in a modern Ugandan identity.
			Chiefs who resisted, such as Paimol’s, were suppressed militarily.		Thus, the people of Paimol have a common identity with those in Gulu but not their

					Karamojong neighbors.
			Furthermore, all the chiefdoms were placed under one administrative “Acholi District,” with each chiefdom adopting their new designation as sub-counties.		

Table 4.8: Points of information, as defined and characterized in the “Analysis Method: Retrospective Causal Comparative Model” section within this chapter, categorized according to their cause, development, and outcome regarding Acholi history after independence within the BOSCO Uganda blog post “Complexities of Identity: Clan, chiefdom, and ethnic group identity among the Acholi people of Northern Uganda.”

History After Independence					
Cause		Development		Outcome	
Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information	Main Point of Information	Supporting Point of Information
When the British identity of Ugandans was officially removed at independence in 1962, the other identities that the British created, such as Acholi, remained.		The Kudeng clan of Paimol, which is in charge of several important sacred rituals and practices for the chiefdom, was originally from Karamoja.		Just as different clans work together under one chiefdom and different chiefdoms under one ethnic group, the potential for improved intertribal relations is also present.	
		This connection seemingly demonstrates a common identity between Paimol and the neighboring Karamojong people, especially as this			

		clan is one of multiple in the chiefdom who can trace their origins back to Karamoja.			
		Just as the Acholi people were developing their chiefdoms at the time the Kudeng arrived at Paimol, Karamojong society was also developing.			
		That the Kudeng thus missed the development of Karamojong society while at the same time participated in the parallel development of the Acholi chiefdoms makes the connection between the Kudeng and the Karamojong possibly too far removed.			
		Despite being of two different ethnic groups, the Acholi people of Paimol and the Karamojong people once had a close friendship through the sharing of cattle grazing land up to 1986 at the start of the civil war.			

4.7 Conclusion

As displayed in past research concerning the same subject (Kumar, 2021; Sibani, 2018; Sousa de Santos, 2016), qualitative research methodology is preferred among scholars carrying out research pertaining to causal relationships between actions of rural community members within the global south and their interactions on the internet. One area where I wanted this thesis to stand out was through interviewing members of the community that I am researching.

However, due to a lack of resources and a language barrier, this was not possible. However, since the research of another scholar, one that provides a foundation for the research conducted in this thesis, uses a very similar methodology, the justification for using this methodology is academically sound and reliable.

Potentially, in future research, a mixed methods analysis will produce a more in-depth analysis of the results presented in this thesis. The objective of this research is to explore the question: Does the notion of participation and ownership in a network have any influence on how you critically engage with information on the internet? It is well established that the qualitative methodology is the best to use, and it will be seen that the retrospective causal-comparative method will be the most appropriate.

Simply put, this method of analysis will examine the differences between these two articles to see what a more traditional form of knowledge production leaves out of the history of a population in order to understand how the establishment of a community network can encourage a new activity on the internet which allows for another epistemology to permeate the Western dominated digital landscape.

5. Analysis and Findings

5.1 Introduction

In this analysis, I compared a Wikipedia article titled “Acholi people” against a blog post titled “Complexities of Identity: Clan, Chiefdom, and Ethnic Group Identity in Northern Uganda” published on a community network website run by Acholi. This analysis functioned to discuss Sources used by the blog post that Wikipedia does not use, and second, if the content within the websites led to a new and more accurate understanding of the subject. However, in conducting this research, I must first provide more baseline information on the Acholi and Paimol people, including basic information about their regions and culture, and go into more depth into why they should be studied.

5.2 Who are the Acholi People, What is Paimol, and Why is Internet Connectivity so Impactful to Them

5.2.1 Acholi People

Within Uganda's patchwork of Multi-ethnic, multi-national, multi-class, multi-racial, culturally diverse, multi-religion and multi-society country (Otunnu, 2017; Nzita and Mbaga-Niwampa, 1998; Okot p'Bitek, 1971) the Acholi people are an ethnic group located in a region in Northern Uganda and crosses over into part of Southern Sudan, Kenya, Tanzania and the Democratic Republic of Congo (Apwonyokwe, 2022; Ortega, 2023). Anthropologists describe the Acholi "as part of the umbrella groups of Luo/Lwoo who are considered ethnically and linguistically related." Nevertheless, it should also be noted that critics argue that Acholi is the colonized version of Acoli (Apwonyokwe, 2022).

In my research, what I have observed as being critical to understanding the identity of the Acholi people is that they live within a clan/kinship structure, which entails that they collectively hold the property that they work (Finnström, 2008; Atkinson, 2008; Okot, 2013; Allen, 2019; Apwonyokwe, 2022). This intricate society is made up of "54 major clans and several sub-clans," with each clan being headed by a "Rwot" or chief (Okot, 2013).

The fact that the Acholi people collectively owned the lands where their community worked functioned to integrate a form of social protection for all of the community members (Okot, 2013). It was essentially the role of the Rwot or chief to regulate the activity of these collective

lands and ensure that they were all tended to. Key to this organization and the culture of this community is their land since "Each major clan and its sub-clans occupy a particular geographical place in Acholiland from which they derive identity, kinship, belonging and communal land rights" (Okot, 2013). However, this traditional and cultural attachment to the land and how to cultivate it was largely lost when, from 1996-2007, "90% of the Acholi population were forced off of their land" as a result of an insurgency by the Lord's Resistance Army (LRA) led by Joseph Kony and then counter-attacked by the Ugandan Army (Okot, 2013). During this period of violence, the new generations could not learn the "traditional cultural knowledge, practices and skills" due to the knowledge not being able to be accurately handed down and also because "almost an entire generation of elders perished" (Okot, 2013). Furthermore, there was a push by the Ugandan government to establish a free market sale of the traditional land that the Acholi clans and sub-clans have worked for hundreds of years and are intrinsically tied to their identity and social structure. This has reportedly led to "easy opportunities for land grabbers and illegal sales that threaten the land rights of tens of thousands of Acholi people" (Okot, 2013).

This fundamental violation of rights of an indigenous community with cultural ties to the land that is being stripped from them through government legislation and misrepresentation forms a strong parallel to what the US government did to the Native American tribes. The result of these actions of the US government led to a significant loss of cultural and traditional knowledge of thousands of Native American tribes, and it was a select few that were able to take early action and preserve critical elements.

Principally, it was the action of a Cherokee leader named Sequoyah and his creation of a written form of the Cherokee language, credited as helping preserve their language and cultural traditions (Georgia Historical Society, 2023). This historical comparison presents a close parallel to the Acholi population and many other rural populations in the Global South, whose actions we can learn from to preserve non-Western knowledge and promote alternative accounts of history. The Ugandan government's push for a free market sale of land indicated Western practices and traditions influencing the future of many other decisions made by heads of state in the Global South. Internet connectivity through popular methods such as Facebook's Free Basics would only further restrict these communities' ability to take action to preserve their culture due to their inability to enjoy unrestricted access to the internet.

The violence and subsequent loss of traditional cultural knowledge and cultural leadership from elders of the Acholi communities shows two things. First, it shows that the traditional knowledge of the various clans and sub-clans has been diminished within the new generations, which makes traditional cultural values susceptible to being diminished even further, and other pre-colonial knowledge attached to this knowledge is at risk of being lost as well. Second, it provides an example of how the method of preserving traditional knowledge of the clans and subclans that make up the Acholi population is fragile and can be disrupted easily. Both of these points speak to the importance of how the identity of the Acholi people was displayed online and the susceptibility of newer generations within the Acholi ethnic group to favor the more promoted and better preserved colonial history of their people versus their own pre-colonial history. The current threat of loss of traditional knowledge, mainly within the Acholi population, makes their use in this research much more impactful. The study of whether community networks will change how people interact with information on the web and encourage local clans and subclans to put their knowledge online would mean that there is a way for future generations never to risk losing this knowledge.

5.2.2 The Paimol Community

Paimol is a small clan within the greater Acholi ethnic group that resides in the Agogo county of the Agogo district, which is in the Northern Region of Uganda. It is about 129 kilometers, or 80 miles, away from the capital of the Northern Region, Gulu, and about 318 kilometers, or 198 miles, away from Kampala, the capital of Uganda (Places in the World, 2023). The small town is most well-known for two catechists, Daudi Okelo and Jildo Irwa, who, in their attempt to preach the gospel, became martyrs when they were speared to death in Paimol by people who opposed the new religion.

A shrine was dedicated to these martyrs in Paimol, which initiated a pilgrimage from residents in Gulu, Kampala, Lira, Nebbi, and Arua dioceses. On October 20, 2002, Pope John Paul II brought even more renown to the site and pilgrimage when he beatified the two martyrs. By beatifying these two martyrs, the pope placed them one step below sainthood, meaning that they are either definitely in heaven or can plead for god on your behalf. Therefore, on the one-hundredth anniversary of the martyrdom, on October 20, 2018, Paimol received over 10,000 pilgrims

(Daily Monitor, 2021). The Paimol community, according to their oral history, have been known for their bravery in battle and their strong connection to their land.

What is perhaps more widely known about the Paimol community, and the Acholi ethnic group as a whole is how they were terrorized by the insurgency of the Lord's Resistance Army (LRA) led by Joseph Kony. Kony and the LRA waged a war against the Ugandan government's National Resistance Army (NRA), which later became the Uganda Peoples Defence Forces (UPDF) and was supported by numerous local militias as well (Kasaija, 2017). This war started in 1987 and continues to this day, albeit not nearly as intensely as earlier years. However, these attacks have been mainly concentrated in Northern Uganda and against the Acholi people, who, in earlier rebellions such as the Holy Spirit Movement one and two, were the focus of frustration since the Acholi led the government at the time of rebellion in 1986. The LRA, with support from Sudan, primarily attacked the Gulu, Pader, and Kitgum districts and conducted brutal attacks that included mutilation, rape, and the abduction of children who would forcibly be turned into soldiers or sex slaves (Kasaija, 2017; The Hague Justice Portal).

Paimol, being within the Gulu district, was directly impacted by the attacks and became part of the 1.9 million people who became internally displaced persons (IDPs); it was further estimated that 92% of the 1.9 million people were Acholi. While recent years have seen the actions of the LRA have diminished down to sporadic attacks, "the LRA's reign of terror continue(s) to haunt communities in Northern Uganda to this day" (The Hague Justice Portal).

This history of the Paimol community and the larger Acholi ethnic population displays that since they were the victims of war crimes and have been continually terrorized for more than two decades, their culture and way of life have been threatened with extinction. As discussed earlier, the Acholi culture and tradition are intrinsically tied to the land where communities work together, and it was due to these attacks and the subsequent death of community leaders and displacement from land that a lot of these traditions remain fragile or potentially lost forever.

5.2.3 Where Community Networks Come In

Gus Zuehlke, a Catechist at the Saint Bavo Catholic Church in Mishawaka, Indiana, was first exposed to the gravity of what the Acholi people were suffering in the war against the LRA in his visit to Gulu in 2003, as was suggested by Father Robert Binta, the chaplain for the Catholic members of Uganda's parliament (Bonfiglio, 2011). Being driven to find new ways to connect

with the affected people, who had no landline phones and virtually no cell phone capability, he enlisted help from local computer systems, information technology, and solar energy experts and created BOSCO.

Launched in 2007, BOSCO provided and helped install the equipment that "connects Catholic Churches, clinics, and schools in northern Uganda with each other and the rest of the world" (Bonfiglio, 2011). At the time of an article being written on these efforts in 2011, BOSCO had 22 ICT locations, was serving more than 100,000 people, "embraced by the Ugandan government and credited by the international community for improving education, economics, human rights documentation, health care and rural development in the communities it serves" (Bonfiglio, 2011).

According to the BOSCO Uganda website, the network currently has 56 ICT centers and is responsible for using renewable solar energy to power over 55 learning institutes. In addition, Notre Dame funds an internship program where a student works with BOSCO Uganda over a period of 10 weeks (Bonfiglio, 2011). The partnership with Notre Dame also led to the introduction of an Entrepreneurship Essentials Module, a six-module computer-based learning platform that has spread to all BOSCO Uganda Community Centres (BOSCO Uganda).

The impact that BOSCO and its community network have had on the Paimol community is vast and has led to massive growth in their development. In basing the connection of populations to the internet in an attempt to truly see that communities succeed and be sustainable in their progress, they utilized community networks.

It is worth considering that since the Free Basics form of connectivity started seven years after the creation of BOSCO, why didn't Facebook utilize the same form of connectivity? What is made clear through this story of establishing connectivity to this population is that the intention was to help a population in dire need. One should pay special attention to the tools that Gus Zuehlke was provided with at the start of this journey and from where he got his assistance. When comparing this journey to connectivity against the model of connectivity provided by Facebook's Free Basics program, you can easily see that with the exponentially more considerable amount of resources that Meta has to work with compared to a person such as Gus, their intention for connection is not based on providing assistance.

Furthermore, Gus Zuehlke's actions almost mirror Reverend Samuel Worcester's actions in his assistance in establishing a printing office for the Cherokee Nation. Zuehlke and Worcester

presented Western technology to non-Western communities to assist a community that has suffered displacement. In this comparison, we can also see that the Cherokee were able to establish the *Cherokee Phoenix* newspaper with this gift and further promote unity among the displaced nation and promote the Cherokee language. In this thesis, I am utilizing a blog post published on the BOSCO Uganda community network website to see if this can function similarly.

In seeing how this connectivity impacts the cultural preservation of the Paimol community, we examine a website called the Martyrs of wiPolo created through the utilization of the network connection provided by the BOSCO Uganda community network. This partnership between BOSCO Uganda and the wiPolo website, while not explicitly stated, can be observed by the fact that BOSCO Uganda is under the trusteeship of the Catholic Archdiocese of Gulu, which is also a sponsor of the wiPolo site (BOSCO Uganda; Martyrs of wiPolo). Additionally, the BOSCO Uganda Gwok Ma Inongo Paimol Network ICT Centre is located only 13 kilometers (or about 8 miles) away from the wiPolo site of the Martyrs. This is one of 55 ICT centres that "serve as hubs for ICT training, research, and education" (BOSCO Uganda). Therefore, due to the shared sponsor, close proximity, and the mission of the BOSCO Uganda ICT Centres, it can be understood that the creation of the website is directly linked to the support of the BOSCO Uganda community network. The Martyrs of wiPolo website is dedicated to the two catechists, Daudi Okelo and Jildo Irwa, who were killed in Paimol by people who disagreed with their teachings. However, in addition to telling the story of these Martyrs, which included descriptions of how the British administrative officers would kill and replace any chiefs that resisted the adoption or cooperation with the British, they included an additional section on the culture of Paimol.

The Martyrs of wiPolo's section dedicated to the Paimol details ethnographic research regarding the observation of the Paimol culture over a six-week period from the 13th of June to the 24th of July in 2023. The research, posted on the website, consists of six parts: "Living as a Community," "Sights and Sounds of Paimol," "The Sacred Importance of Rituals," "Reconciliation in Acholi Society," "The Clans of Paimol," and "The Center of Communal Life." It is within the first part of this study, "Living as a Community," that contains the chapter titled "Complexities of Identity: Clan, chiefdom, and ethnic group identity among the Acholi people of Northern Uganda," where we have further proof that BOSCO Uganda is directly supporting the

Martyrs of wiPolo website. This is because the chapter titled "Complexities of Identity: Clan, chiefdom, and ethnic group identity among the Acholi people of Northern Uganda" is posted in the News/Blog section of the BOSCO Uganda community network website. The ethnographic research was conducted and written by Olivia Ortega on July 24th, 2023. Olivia, a senior at Notre Dame, was in Paimol for a summer fellowship opportunity dedicated to promoting peacemaking across all cultures. Ortega is not from Paimol and comes from a Western academic institution; being from Oklahoma City, Ortega is coming from a Western context as well. However, it was likely due to the sponsorship and existing internship program between Notre Dame and BOSCO Uganda that led to her conducting an in-depth interview on the Paimol people and their culture.

5.2.4 Consequence of Limited Awareness

While this method of connectivity has led to increased development of a community and ethnic population that has suffered immensely, there are drawbacks to this form of connectivity that should be included. The research into the Paimol culture as a result of the community network contains valuable and rare insight into the Acholi and Paimol culture. However, it should be noted that this information is contained within a small website centered around a specific topic. This means that this valuable information regarding the history of a "traditional chiefdom of the Acholi ethnic group" from interviews of the leaders of the community was hard to find through a general search of the Acholi people and Acholi history. It was only when I specifically searched "Acholi history + Paimol" that this website showed up as the fifth result, which, even then, is titled "Paimol Martyrs - Martyrs of wiPolo," which does not indicate any further history about Paimol. Additionally, listed above the website are two Facebook groups, a master's thesis from Clemson University (located in the US), and a profile of the Martyrs by a website run by the Vatican. Immediately, this shows that even if a person had the insight to search for Acholi history + Paimol specifically, they would first see links that, in the Western cultural context, would be valued more due to their sources.

In other words, if a person educated on how to search for reliable sources through a respectable institution such as Columbia University Libraries were to see this list of options regarding the topic of Martyrs, they would primarily value the Vatican (Milstein Undergraduate Library, 2023). This is because the Vatican has the utmost authority regarding catholicism and is a trusted

institution. As stated in the Columbia University Libraries article "Evaluating Online Sources" under the publisher title, you should consider the "reputation and trustworthiness" of the publisher (Milstein Undergraduate Library, 2023). This guidance suggests that the user should value information from the Vatican rather than the Martyrs of wiPolo website.

Furthermore, if this same person were searching for Acholi history, they would primarily value the master's thesis from Clemson. This is because Clemson is a trusted academic institution, but also since the link displayed is titled "The Creation and Evolution of the Acholi Ethnic Identity." This thesis, while written a decade prior to the research conducted by a differently educated student and not having conducted in-depth interviews with the community members, still looks more reliable and relevant. This shows that despite valuable and trusted pre-colonial information being displayed on the Internet in a fashion that aligns with Western academic traditions, it is still unlikely that the global community will see it when they conduct a cursory search of Acholi history.

Although this prioritization of search results being listed for me might differ from another user due to Google Search's use of personalization to improve results, this concern is irrelevant for two main reasons. First, Google's use of personalization in search results functions so that "some results might be personalized while others aren't" (Google Support). Second, where the link is listed on Google's Search Results still does not impact the issues regarding the standard suggested use of verifiability of online sources. This issue regarding user verification of sources they read online might intrinsically favor Western sources. However, it is hard not to use it in the face of the amount of misinformation and spam on the Internet.

One positive aspect of the search results displayed when searching for "Acholi history + Paimol" was the two Facebook groups that occupied the first two results. This displays a positive utilization of Facebook by the Acholi community due to being listed at the beginning of the search list and the users who shared the information retelling oral history. What this leads some to consider is if this positive usage of Facebook by members of the Acholi community could suggest that the use of Facebook by digitally literate people could also function to preserve pre-colonial history similarly to a community network and with a reduced cost. Additionally, this positive utilization would mean that the information being shared on Facebook could have greater access to a worldwide audience and not face as much scrutiny as an unrecognized website. With this sort of awareness of the problem, all that Meta would need to do is implement

a digital literacy campaign encouraging this type of usage of Facebook that could be as simple and cost-effective as a widely shared instructional video/ ad campaign in multiple countries. Effectively leading to a more affordable form of connectivity and a preservation of traditional non-Western culture. Additionally, the Martyrs of wiPolo website is published on WordPress.com, a company with headquarters in the US, and has user guidelines for the content that can be published. The information posted on this wiPolo website is still subject to being removed by a company with a Western framework. This means that just like the content moderation that Facebook utilizes, WordPress.com could still potentially remove content and not allow the information to exist on the Internet.

Nevertheless, this simple fix would still not promote positive development through connection to the Internet for the rural communities in the Global South and ultimately continue the suppression of non-Western knowledge regarding Meta's Free Basics and Discover connectivity schemes. The first and most basic reason is that their form of connectivity would still restrict their access to the Internet, creating unequal access and a restricted ability to use it for growth and development. The second, more important, reason is that if this information were to only exist on Facebook, it would still not be valued alongside the information published by colonists. This means that we would still have an online epistemology and use of algorithms that privilege Western knowledge over non-Western knowledge. In other words, the information posted on Facebook would still not be able to be used on Wikipedia, where most Internet users gather a quick baseline knowledge about a subject. Additionally, it would not encourage the increased interaction between Western academic institutions and knowledge that BOSCO Uganda or the Zenzeleni Network has utilized. It has been through this sort of partnership between community networks and universities that we have seen the study of the traditional history of these rural communities that is in line with the Western academic framework that would allow it to be used not only on Wikipedia but in academic journals and scholarly books on the subject. Therefore, simply encouraging members of the Global South to share more information about their culture on Facebook still does not fix their unequal access to the Internet and does not change the way that their culture is valued.

The Martyrs of wiPolo website was established through WordPress.com, a Western-based company with user guidelines regulating what can be posted on a website. Facebook and Wikipedia also have content moderation to restrict information. According to the user guidelines

on WordPress.com, the only content that cannot be posted is the following: spam or machine-generated content, advertising, posting private information, directly threatening material, impersonation, malware or spyware, gambling, sexually explicit material (nudity in and of itself is acceptable), intellectual property infringement and illegal content and conduct (WordPress.com). It is expressly stated in the user guidelines that they believe in the freedom of speech, and given the restrictions on the user guidelines, posting information on the WordPress website might serve to increase trust. Trust in the reliability of the information or even the safety of the link might be increased if a user of the Internet sees that the website is through WordPress and recognizes that this site does not allow for spam or other illegal content. Additionally, the BOSCO Uganda community network website is not created through WordPress, which shows that even if WordPress removed its website, the community members could still create a website separate from a Western company. What is revealed with the defense of the effectiveness of the BOSCO Uganda community network website is that although there is still room for improvement, the community still has control over its content.

Therefore, unlike the information posted on the groups on Facebook, which could be subject to removal by Facebook if they determine that it is spreading false information or a debate occurred on the accuracy of the account similar to the Ganga/Ganges debate, the members of the Paimol and Acholi community have more control. This concept of complete control by the community itself is what community networks support and what existing research suggests leads to far-ranging positive developments for participating communities, but also what would be lost when connecting to the Internet via a big tech company such as Meta. However, what is most important with this revelation is that the use of WordPress.com to create a website shows another example of a Western company capable of working with a non-Western rural community. The pathway to connecting rural communities in the Global South to the Internet while still respecting their desire to preserve their cultural history exists. It is now up to leaders within Western countries currently protecting their own citizens to ensure that the correct path is taken when connecting the Global South that would not lead to additional exploitation.

5.3 Background Metrics on the Articles

After a careful examination, the blog post published on the BOSCO Uganda website titled “Complexities of Identity: Clan, Chiefdom, and Ethnic Group Identity in Northern Uganda”

includes sources within the references section and themes that are not included and sometimes even conflict with the information published on the Wikipedia's article titled "Acholi People." By first providing background metrics on the two articles, there will be better context for understanding the examinations later in this section. Regarding the BOSCO Uganda blog post, focusing exclusively on the history and ethnicity of the Acholi people, this post was a total of 1,224 words and used five sources within their references list. Regarding the Wikipedia article at the time of this research, in writing about Acholi ethnicity, language, location, history, religion, rebellion, popular culture, and notable people, the article was a total of 3,260 words and used five sources within their references list. However, it should be noted that the notes section within this article included more sources attached to the content within the article, which would then bring the total number of sources used in the Wikipedia article to twenty-four. Since the Wikipedia article discussed more topics than just the history and culture of the Acholi people, this analysis compared and contrasted the sources used in all sections of the Wikipedia article pertaining to the history and culture of the Acholi region and people. Therefore, the number of sources that then pertained to the Wikipedia article in the comparison made in this thesis is twenty-one, and the total words written in the sections concerning the history and culture (ethnicity, language, location, history, religion, and rebellion) come to 2,053. These metrics showed that the Wikipedia article has 16 more sources and 829 more words than the BOSCO Uganda blog post.

5.4 Background Analysis of Sources

The examination of the Wikipedia article and the BOSCO Uganda blog post, as stated in the methodology, took into account the content of each article as well as the sources used, using these characteristics to provide the differences portrayed in each article. A key finding in the examination was the difference in sources used.

5.4.1 Wikipedia

Of the twenty-one sources within the Wikipedia article, eleven were from a Western author. This proportion means that 52.4% of the sources that the Wikipedia article used came from Western authors and, therefore, Western epistemologies. Additionally, separate from the eleven sources from Western authors, there were five sources, or 23.8%, from international organizations based

in the West, and five, or 23.8% from non-Western authors. It is important to note that simply because the organization is based in the West does not mean that the author of the article is speaking from a Western perspective. With that said, there is also the potential for an unconscious bias from a company located in the West or an author working for a company located in the West. For this reason, I included a separate category and percentage for the international organizations based in the West. Given this split in percentage, it meant that five sources, or 23%, were from non-Western authors or institutions.

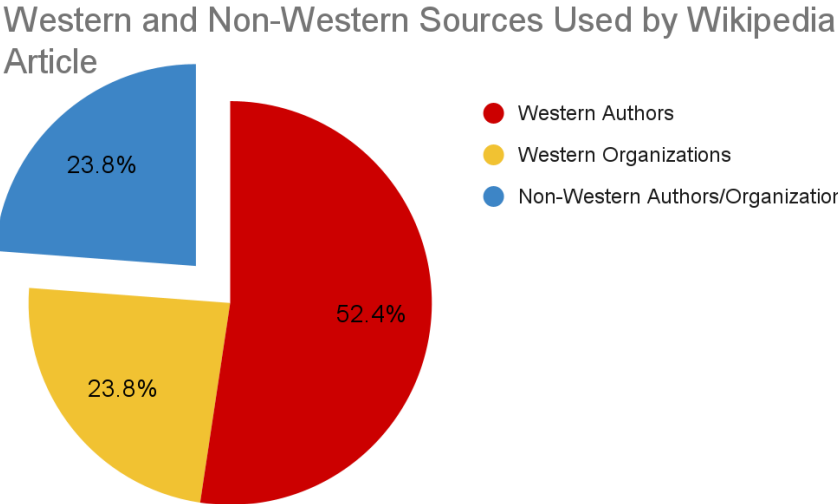


Figure 5.1: Pie Chart Depicting the Western and non-Western Sources Used by the Wikipedia Article.

5.4.2 BOSCO Uganda

Of the five sources used within the BOSCO Uganda blog post, one, or 20%, was from a Western author. Additionally, there was one source, or 20%, from a Western institution. This split, therefore, meant that the remaining three sources, or 60%, were from non-Western authors or institutions. In the blog post, the ages of the sources were as follows: from oldest to the most recent: 2010, 2014, 2014, 2021, 2023. The year the collection of sources used in the BOSCO Uganda blog post was published was averaged to be 2013, meaning that the average age of the source is ten years.

Western and Non-Western Sources Used by BOSCO Uganda

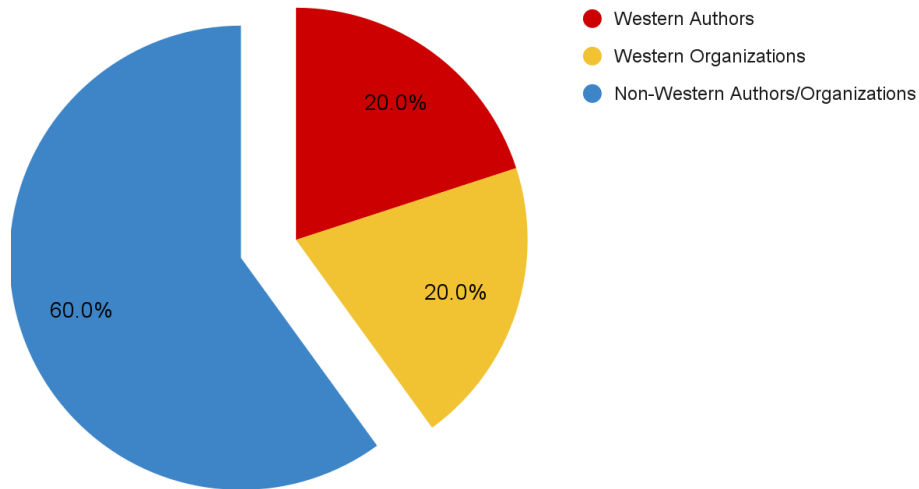


Figure 5.2: Pie Chart Depicting the Western and Non-Western Sources Used in the BOSCO Uganda blog post.

5.4.3 Age of Sources

Another significant difference between the sources used was the year these sources were published. In the Wikipedia article, the age of the sources were as follows from oldest to most recent: 1960, 1970, 1972, 1989, 1994, 1997, 1999, 1999, 2003, 2005, 2006, 2006, 2007, 2009, 2010, 2010, 2011, 2013, 2015, 2018, 2023. This brings the average year the collection of sources used in the Wikipedia article was published to 2000.76. The difference of 12.24 years between the average age of the sources used between the Wikipedia article and the BOSCO Uganda blog post means that the sources used in the BOSCO Uganda Blog post are, on average, 12.24 years more recent.

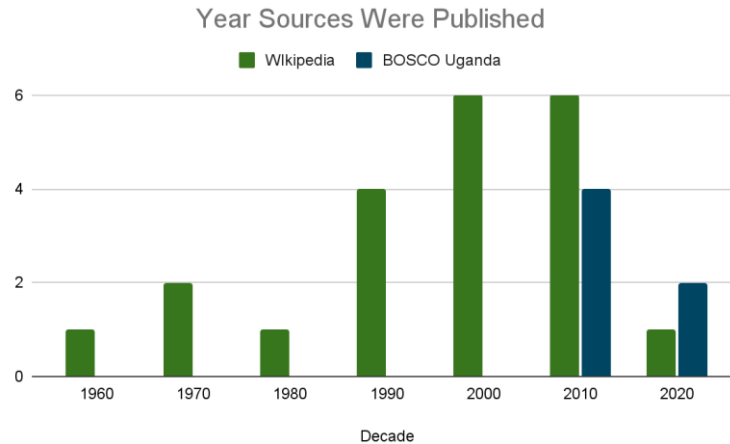


Figure 5.3: Bar Graph Depicting the Year that the Collection of Sources Referenced in the Wikipedia Article and the BOSCO Uganda blog post were Published.

5.5 Analysis of Source’s Content

In a further in-depth analysis into the sources used and to concurrently test for any bias towards texts that promote a Western or colonial history, this subsection briefly explored the content of the sources, obtaining a general understanding of the narrative, to see if the information within the sources reinforced a Western or colonial perspective. Therefore, the metrics used to analyze the sources tracked whether or not the source included the precolonial history of the Acholi, did not portray the British as being detrimental to precolonial history, or did not mention precolonial history at all. Each of these factors will be recorded below and then displayed in a pie chart to visualize the percentages. For my research into Wikipedia’s sources, I will start my analysis with the five non-Western authors, followed by the five Western international organizations, and then analyze the eleven Western authors. Then, for my research into the sources by the BOSCO Uganda blog post, I will start with one Western international organization, followed by the four non-Western sources, and finally move on to the one Western source.

5.5.1 Wikipedia

5.5.1.1 Non-Western Sources

The inclusion of non-Western authors when analyzing the inclusion of a non-Western precolonial history was evident. However, when specifically considering the information presented in a Wikipedia article, it was especially important to check the information being

presented primarily due to the risk of misinformation. While there were standards in place for the sources that can be published on Wikipedia, as seen in this subsection, the quality of the citation and the source is not entirely trustworthy. For this reason, I conducted an in-depth analysis of the content of each source presented by the BOSCO Uganda blog post and the Wikipedia article, regardless of the perspective.

The source titled "Population composition" referred to "The 2002 Uganda Population and Housing Census, Population Composition" and was linked to the Wikipedia article section that explained the Acholi people's practiced religions. This was a trusted source based on the Ugandan government's activity, thereby making the source non-Western. However, due to its focus on population metrics, this source did not mention any precolonial history of the Acholi. James Ojent Latigo is an author linked to seven notes in the Wikipedia article "Acholi People," which made him the most referenced author. These links all referred to two articles by Latigo titled "The Acholi Traditional Conflict Resolution in Light of Current Circumstances" and "Northern Uganda: Tradition-based Practices in the Acholi Region." However, the reference to James Ojent Latigo is wrong since the author's name is James Ojera Latigo. This can be confirmed through the articles that the Wikipedia article "Acholi People" referred to, all of which include the name James Ojera Latigo. The author is a Program Director of Uganda Historical Memory and Reconciliation Council and Research Fellow and Academic Coordinator at the Marcus Garvey Pan-Afrikan Institute, according to the international organization "Conciliation Resources." Both articles heavily center around the war between Uganda and the LRA, and given Latigo's credentials, it is understood that this information came from a non-Western perspective of someone living in Uganda, providing credibility to the information presented in these published works. An important note to mention within this use of source is that the context to which the source is referenced in the Wikipedia article does not correlate to how James Latigo presented the information. However, this is discussed further in the content section of the analysis. This more immediately shows that the assumed author of the most utilized source in the Wikipedia article was being referenced differently than how he referenced himself, particularly concerning the negative association of British colonial policy. Notably, both of Latigo's works included a precolonial history of the Acholi.

The second non-Western source used in the Wikipedia article is the book *Religion, Politics and Cults in East Africa* by Emmanuel K. Twesigye. This source is placed in the notes

and is linked to an excerpt of the Wikipedia article mentioning that Acholi elders still perform some acts of purification in connection with the refugees of the war with the Lord's Resistance Army (LRA). Emmanuel Twesigye was born in Uganda to a tribal king and, therefore, is speaking from the perspective of a person with strong ties to the country and the problems that affect it. Therefore, even though Twesigye was a professor at Ohio Wesleyan University in the United States, considering his ties to the country, I included Twesigye as a non-Western source. In his mention of the continued cultural practice of purification by Acholi elders, which is connected to traditional Acholi spiritual beliefs around death, this source represented a cultural practice connected to the precolonial history of the Acholi. Therefore, this book was counted as a reference that included a precolonial history of the Acholi.

The third non-Western source used in this Wikipedia article is a newspaper called New Vision, which is based in Uganda. According to the BBC, this is a state-owned media company that has one of the most widely read English newspapers in Uganda, covering news in Eastern Africa with a focus on Uganda. The Editor-in-Chief, Barbara Kaija, was educated in Uganda and, given her position, still remains close to many of the current issues. New Vision is used in the Wikipedia article to reference a decision made at the International Criminal Court at the Hague regarding charges against the LRA leaders. Given the credentials of this media organization, it is evident that this is a trusted source providing a non-Western perspective. Unfortunately, due to the reference in the note only including "*New Vision*, 2007," I could not find the particular news story it referenced. For this reason, I could not include it as a source that included the precolonial history of the Acholi. It would be irresponsible to make an assumption on content that I have not seen.

5.5.1.2 Western Organizations

The significance of placing international organizations based in the West in the same category relates specifically to the context and framework it is developing. As we have seen in previous sections of our analysis of Wikipedia, implicit biases are present when Western companies attempt to present what they consider accurate information. An example could be that an editor at an international organization might not allow a source of information to come from a song sung by the community. This is not to suggest that this has impeded the good work that international organizations have done already in the region and throughout the world, but rather to recognize the constraints present in knowledge production online. In making this recognition,

it is crucial that I evaluate the sources of information coming from international organizations separate from those from non-Western sources.

The first source from a Western organization used within the Wikipedia article was a reference to a webpage titled "Acholi of Uganda" on a website called *People Groups*. This website is run by the International Mission Board, a company with a mission "to serve Southern Baptists in carrying out the Great Commission to make disciples of all nations" (International Mission Board, 2023). Since this company is based in Virginia, it can be understood that it operates under a Western academic tradition when publishing information. The information on the "Acholi of Uganda" webpage mainly concerned demographic information, which was linked to the information provided in the Wikipedia article. This source did not include any mention of Acholi precolonial history since it focused on measurements of the population.

The following source from a Western organization was from the international organization Minority Rights Group International and cites a section of the website concerning Uganda, which has a subsection that includes general information on the Acholi people. The subsection includes information on the language spoken, population size, historical context, and current issues. Both the historical context and principally discuss the war with the LRA and the displacement of the Acholi people. What is worth noting about this source is that when discussing the Acholi people's historical context, the webpage does not explore any history before 1986. This source, for similar reasons to the source in the previous paragraph, was not counted as a source that included the precolonial history of the Acholi.

A report by the United States titled "The Anguish of Northern Uganda - Section 1" was another Western source of information cited in the Wikipedia article "Acholi People." What was particularly interesting about this source is that despite its focus on the military conflict within northern Uganda, it briefly touched on the precolonial history of the Acholi, including the perspective of Acholi elders. However, it did not go so far as to criticize the British Government directly for its actions during the colonial period. Instead, the report stated, "Acholi people generally hold the view that the colonizers exploited them for the uniformed services and unskilled labor, leaving them at the margins of Uganda's development" (Government of the United States of America, 1997). Given that this position is coming from a Western state, it can be understood that this quote embodies a Western position on discussing the conflict. In the Wikipedia article, this report is referenced in the "History" section of the article within the

subsection titled "Lamogi Rebellion: Acholi Civil War (1986-1989)". As seen above, this source included a mention of precolonial history and the colonial period. However, it did not directly state that the British colonists were detrimental to the Acholi people. Therefore, this source will be categorized as a source that did not portray the British colonists as detrimental.

The final Western organization source utilized by the Wikipedia article comes from an independent non-profit news organization called The New Humanitarian, which was originally known, and cited in Wikipedia, as IRIN News, a project founded by the United Nations in 1995 after the Rwandan genocide to create objective on-the-ground reporting of crisis (The New Humanitarian, 2023). The specific news report that was cited in the notes of the Wikipedia article is titled "1,000 displaced die every week in war-torn north - report". This report provides an in-depth analysis of the displacement camps caused by the war against the LRA and, in echoing a report by the Ugandan Ministry of Health in addition to on-the-ground reporting, a close look at the metrics around the dead, sick, and hungry. This source was linked to a section of the article concerning the conditions of the displacement camps where many Acholi people had to live. Similar to the past two sources analyzed, this source did not include information regarding the precolonial history of the Acholi.

5.5.1.3 Western Authors

While the bias towards Western sources and scholarship through the existing framework within Wikipedia has been proven in past research, principally Dr. Sangeet Kumar as it relates to this thesis, the content within these sources on non-Western subjects and people must also be analyzed. The significance of this subsection is through the establishment of a more focused and in-depth comparison between the sources used between the Wikipedia article titled "Acholi People" and the BOSCO Uganda blog post "Complexities of Identity: Clan, Chiefdom, and Ethnic Group Identity in Northern Uganda." Importantly, this subsection will provide an overview of the content within the sources written by Western authors that will then be compared to an overview of the content within the sources written by Western authors in the blog post.

The most referenced Western author in the Wikipedia article is Ronald Raymond Atkinson, and both within the References and the Notes section, Atkinson has a total of three of his works cited in this article. These works include one book, *The Roots of Ethnicity: The Origins of the Acholi of Uganda Before 1800*, and two articles titled "From Uganda to the Congo and Beyond:

pursuing the Lord's Resistance Army" and "The Evolution of Ethnicity among the Acholi of Uganda: The Precolonial Phase." Due to the significant presence of Atkinson in this Wikipedia article, a more in-depth analysis of the author is conducted. Ronald Atkinson is a professor and Director of African Studies at the University of South Carolina, teaching African history. He has lived and worked in Kenya, Uganda, Ghana, and South Africa but has received all his higher-level education in the United States.

It could then be understood, given the information available, that despite living and working in Kenya, Uganda, Ghana, and South Africa, he did not have as deep of a connection to Uganda as James Ojera Latigo and Emmanuel K. Twesigye allowed me to consider Ronald Atkinson as a non-Western author. Emmanuel K. Twesigye was born in Uganda to a tribal chief, and James Latigo works in Uganda as the Program Director of Uganda's Historical Memory and Reconciliation Council. There is not enough publicly available information to show that Ronald Atkinson could be considered alongside these authors as non-Western. What should be noted, however, is that, according to the University of South Carolina's Directory, his primary focus of research and writing is the Acholi region and people in northern Uganda. Furthermore, Atkinson conducted a sabbatical research leave in northern Uganda in 2008-2009, where he conducted projects that included a "three-to-five-year oral history project to record, transcribe, and translate personal and community histories from across Acholi" (University of South Carolina, 2023). This displayed a deep connection with the Acholi communities and a commitment to preserve their history.

In *The Roots of Ethnicity: The Origins of the Acholi of Uganda Before 1800*, Ronald Atkinson analyzes the historical developments associated with the Acholi people, mainly through the study of oral history. Atkinson explores the origin of the Acholi identity and how the identity of the Acholi people was created before the colonial arrival. Most importantly, this book's extensive use of oral history works not only transcribes pre-colonial history but also introduces and further advocates its value to be used in future academic works. This work, therefore, is a piece of Western literature included in Wikipedia that includes, and highly values, oral histories as told by Acholi communities. This particular book is associated with the first paragraph of the Wikipedia article "History," in which the pre-colonial history of the Acholi is discussed. With the background of this author and the use of oral history from Acholi communities in his book, it can be understood that while he is personally from a Western country, he was able to represent a

non-Western epistemology. It is worth noting that, similar to the work of James Latigo, the mention of the impact of the British Colonial rule is absent from the context in which Atkinson's work is being referenced. This will be explored further in the section concerning content. This book met the criteria used to analyze the content of the sources, which suggested the source included the precolonial history of the Acholi.

In the article "From Uganda to the Congo and Beyond Pursuing the Lord's Resistance Army," Ronald R. Atkinson focuses explicitly on one military operation conducted by the Ugandan military called "Operation Lightning Thunder" and the subsequent evaluation of its effectiveness. In his evaluation of information provided by NGOs, the Ugandan military and Government, and a weekly Ugandan news magazine called *The Independent*, Atkinson argues that peaceful dialogue is the best approach to stop this war rather than increased military action. The Wikipedia article links this source to a sentence regarding the estimates for the number of people who have died in this conflict. The background of the author, being steeped in the close relationships with the Acholi community, and his former portrayal and coinciding project to transcribe the oral history of Acholi communities means that he is in close contact with the leaders of the Acholi communities and values their knowledge system. Additionally, according to the information presented in the Directory of the University of South Carolina website, Atkinson was in Uganda for his sabbatical at the same time this article was published. This means he was also writing this while in the country and among the people suffering the most. All of these factors justify that the information presented by Atkinson in this article took into account the feelings and knowledge of the local Acholi communities, thereby making the information reliable. However, since this analysis of the content of the sources centered around the portrayal of the precolonial history of the Acholi, the fact that the author only discussed post-colonial history as it related to the ongoing war did not meet the criteria of analysis suggested it presented the precolonial history of the Acholi people.

In the article "The Evolution of Ethnicity among the Acholi of Uganda: The Precolonial Phase," written by Ronald Atkinson, the author once again delved into the precolonial history of the Acholi as it related to their ethnicity. Through the focus on precolonial history, as it relates to the Acholi, the author also discussed colonialism's consequences and detrimental effects on the traditional elements of the society. In the Wikipedia article "Acholi People," this particular work of Atkinson was linked to the section titled "Location" and subsequently had its footnote

attached to a sentence regarding the size of the region. The author's reliability on the subject of the precolonial history of the Acholi is established in the paragraphs above and could be similarly attributed to the work of Atkinson as well. With this source, there was still the continued observation within the content of the references not matching the context in which the history was being presented in the Wikipedia article. A correlating observation is that two of the most referenced authors, Ronald R. Atkinson and James Ojera Latigo, had vital elements within their work missing from the Wikipedia article. However, this article met the criteria that suggested it provided the precolonial history of the Acholi.

A textbook titled *Ethnologue: Languages of the World*, edited by M. Paul Lewis and published in Dallas, Texas, provided a listing and brief description of all of the known living languages in the world. Since the publisher is based in a Western country, the editor, M. Paul Lewis, is from the United States, and the textbook has a global focus, there is neither any particular attachment to the Acholi people nor a non-Western perspective within the text. This source was linked to a sentence within the Wikipedia article that provided an estimate of the number of Acholi people living in South Sudan at the time. This source, focusing on languages spoken in the region, did not include the precolonial history of the Acholi.

The article titled 'State Formation and Fragmentation in Agogo, Eastern Acholi' written by J.B. Webster is one of the five texts included in the "References" section of the Wikipedia article "Acholi People." While J.B. Webster was Canadian, many different accounts speak about his passion for exploring pre-colonial African history in East Africa, including the recognition of oral histories (Bridges & Posnansky, 2004; Sicherman, 2003). These accounts describe Webster as a progressive figure who transformed the History department into one that led to more appreciation for precolonial African history during a time when many history departments advanced "racist views of Africans as mere brutes" (Sicherman, 2003). Therefore, given that the publishing date aligns with the "History of Uganda Project" that was spearheaded by Webster (Sicherman, 2003), this text is one of the first Western academic research projects into the exclusive study of pre-colonial history in Eastern Uganda. This is further confirmed by the fact that Webster's article "State formation and fragmentation in Agogo, Eastern Acholi" is contained within the 1st annual conference of the *Provisional Council for the Social Sciences in East Africa*. Therefore, it can be understood that Webster's article included foundational evidence that represented the precolonial history of the Acholi people. Within the Wikipedia article, the

reference to J.B. Webster was linked to the section titled "History," which contained information regarding precolonial history. It should be noted that only J.B. Webster and Ronald Atkinson are linked to the section of the Wikipedia article concerning the precolonial history of the Acholi.

Given the background and research conducted by the author, this article met the criteria for analysis to suggest that the author was presenting the precolonial history of the Acholi.

An additional source from a Western author referenced in Wikipedia's article "Acholi People" is an unpublished Ph.D. thesis by John Orr Dwyer titled "The Acholi of Uganda: adjustment to Imperialism." Provided that this source was unpublished and a product of a Western student at a Western university, it can be understood that this perspective is one based on Western ideals.

With that being said, this source still discusses the ramifications of the British colonial rule, particularly against the Acholi communal and tribal form of governance. Despite being in the references, this source is not linked to any particular section of the Wikipedia article. Although, this source, given the information presented above, included a precolonial history of the Acholi.

The book *Alice Lakwena and the Holy Spirits: War in Northern Uganda, 1985-97* by Heike Behrend was another reference in the Wikipedia article linked to a Western author. Behrend was a professor at the University of Cologne who primarily researched war in Africa, specifically focusing on Uganda (Columbia University Libraries, 2023). The nationality and position of a professor at a Western university led me to understand Heike Behrend as having conducted her research from a Western perspective. In her book, *Alice Lakwena and the Holy Spirits: War in Northern Uganda, 1985-97*, she details a rebel movement in Northern Uganda called the "Holy Spirit Mobile Forces" led by Alice Auma, an Acholi woman, who almost beat the Ugandan government forces. This book primarily focuses on the life of the leader of this rebel group and the subsequent war that was waged by her movement. This book was referenced in the Wikipedia article "Acholi People" within a subsection titled "Lamogi Rebellion: Acholi Civil War (1986-1989)". Given that this book focused on the war with the LRA, it did not include a precolonial history of the Acholi.

A supposed report from the US embassy in Kampala to the Secretary of State of the United States posted on the website WikiLeaks was listed in the notes of the Wikipedia article with the title "Uganda/DRC: Operation Rudia II Update. If a US Embassy created this report for the US Secretary of State, that would subsequently ensure that it was a source of information from a Western perspective. The content is centered around the war between the Ugandan military

forces and the LRA and was linked to a footnote in the "History" section of the Wikipedia article within a paragraph detailing the war's destruction in the northern Uganda region. Due to this report's focus on the history of the current war in the region, it did not include a precolonial history of the Acholi.

A book titled *The International Criminal Court in Ongoing Intrastate Conflicts: Navigating the Peace-Justice Divide*, written by Patrick S. Wegner, used the war in Uganda against the LRA as a case study to examine the impact of ICC investigations. Wegner, educated in Germany, presented this information from a Western perspective. Furthermore, his focus on the impact of the ICC further distances the source from coinciding with the information presented by BOSCO Uganda's blog post. Wegner's book is linked to the section in the Wikipedia article titled "History" within a subsection titled "Lamogi Rebellion: Acholi Civil War (1986-1989)," which primarily discussed the war with the LRA. Similar to the previous two sources analyzed, this book did not include a precolonial history of the Acholi due to its focus on the war with the LRA.

In the article titled "Kony's Message: A New Koine? The Lord's Resistance Army in Northern Uganda", written by Ruddy Doom and Koen Vlassenroot, the authors construct a historical analysis of the war between Uganda's military and the LRA, which includes the precolonial history of the Acholi. Since both authors worked for the University of Ghent in Belgium and were European nationals, they presented this information from a Western perspective. This article by Doom and Vlassenroot is referenced in the "Location" section of the Wikipedia article and linked to a sentence regarding the current population of the Acholi people. Notably, since this article also included a historical background centered on the British colonial division and how it negatively impacted the tradition of the Acholi of the country and society, it included a precolonial Acholi history.

The book titled *The International Criminal Court and Peace Processes in Africa: Judicialising Peace*, written by Line Engbo Gissel provided an examination into the effectiveness of the ICC, similar to that of the book by Patrick S. Wenger, discussed earlier. Line Engbo Gissel is a Danish national and associate professor at Roskilde University, a Danish public university, which suggests that she provided a Western perspective. Furthermore, similar to Patrick S. Wenger, because Gissel's book primarily focused on the ICC and presented the war in Uganda as a case study, it distanced its ability to be compared to the sources used in the BOSCO Uganda blog

post. This book, in particular, focuses on how much involvement the International Criminal Court should have in other matters, using the war in Uganda as a case study. The Wikipedia article links this book to the "History" section within the subsection titled "Lamogi Rebellion: Acholi Civil War (1986-1989)". Due to the focus of this source having been primarily on the ICC, it did not include any precolonial history of the Acholi.

Finally, the book *The Acholi of Uganda* by F.K. Girling is a book that, during the time of the writing of the book, 1960, provides some "seminal" insights into the Acholi customs during British colonization (Allen, 2019). Author Frank Knowles Girling, a national from England, a student at Oxford, and a work published by Her Majesty's Stationery Office during the British colonial control of the Acholi, spoke from a Western perspective. This account by Girling to some researchers, such as Tim Allen in his book *Introduction - Colonial Encounters in Acholiland and Oxford: The Anthropology of Frank Girling and Okot p'Bitek*, reveals key aspects and traits of the Acholi ethnicity during the colonial period.

However, Girling himself "became disillusioned with the kind of anthropological approach his African work represented and openly discouraged it as a neo-colonial product" (Allen, 2019). Additionally, in work by Allen, which supports the work of Girling, he critically includes the work of Girling alongside the work of Okot p'Bitek, "one of the most celebrated of all African creative writers," when discussing the benefits of using Girling's research. Furthermore, regarding Frank Girling's work referenced in the Wikipedia article, Tim Allen stated that "scholars based at Gulu University, located in the largest town in the Acholi region," have never heard of him. In the Wikipedia article "Acholi People," Frank Girling's book *The Acholi of Uganda* is one of five sources in the "References" section displayed in a larger font than the sources included in the notes section of the article. This book was an anthropological study of the Acholi people during the colonial period; it therefore presented the history of the Acholi during the colonial period and discussed precolonial traditions.

Since the author himself viewed the book as being a work of neo-colonialism, as well as the fact that the British government published it while they controlled the region, I did not include the work as having portrayed British control as detrimental to the Acholi.

5.5.2 BOSCO Uganda

5.5.2.1 Non-Western Authors

The inclusion of non-Western authors when analyzing the inclusion of a non-Western precolonial history is evident. However, when specifically considering the information presented in a blog post, it is especially important to check the information being presented primarily due to the risk of misinformation. Due to anyone's ability to create them, blog posts present a specific risk for any researcher who desires to use the information contained within them. For this reason, I am conducting an in-depth analysis of the content of each source presented by the BOSCO Uganda blog post and the Wikipedia article, regardless of the perspective.

The article "British Colonialism and the Creation of Acholi Ethnic Identity in Uganda, 1894 to 1962," written by Charles Amone and Okullu Muura, specifically discussed the development of the Acholi ethnic identity and the impact of British colonialism. What is more, this source integrated oral histories from Acholi communities in their analysis of the development. Charles Amone was a professor of history at Kyambogo University, located in Kampala, Uganda, who specialized in cultural and ethnic studies. Okullu Muura was a researcher and author associated with Gulu University, the largest university in the Acholi region of northern Uganda. This background of both authors established an understanding that they were speaking from a non-Western perspective. Furthermore, the article by the two authors, directly discussing the impact of British colonizers on Acholi ethnic identity through their utilization of oral histories, presented the precolonial history of the Acholi.

The source titled "Interview With a Paimol Cultural Director" is an example of information that would not be able to be used by Wikipedia and information that would be risky for an academic researcher to cite if it came from a blog post. However, in conducting the proper background research on the website, the blog post that was written, and the author of the blog that was written, I established that it was very plausible that this information was reliable. While I was not able to witness the interview or receive confirmation from the cultural director himself, who is 70 years old, I placed the author in the community at the time that the blog post was written and further gathered they were working with the community in a larger project with an academic institution. This extensive research made this source reliable to be trusted in the academic setting. The extra research required to verify the referenced information spoke to the challenges of the modern inclusion of oral histories into the Western academic context. I will speak to this

challenge more in the conclusion. Given that I verified the source, it is clear that the Cultural Director of an Acholi community represents the precolonial history of his own people.

The article "The Fate of a Transitional Chief in Colonial Acholiland: Iburaim Lutanyamoi Awich, 1850s - 1946," written by Patrick Otim, focused on the transitional period between British colonial control and precolonial history. Notably, this source focuses on the Acholi chief who consistently resisted British colonial control, and his references displayed that the author utilized oral histories from Acholi communities. Otim, having received some of his education from Makerere University, a university in Kampala, Uganda, and having become a professor of African History at Bates College, this background provided reliability of the source and an understanding that the article provided a non-Western perspective. Since this article discussed the negative impact of British colonial control and utilized oral histories, it met the criteria in my analysis that suggested it presented the precolonial history of the Acholi.

5.5.2.2 Western Organizations

As stated in the previous subsection that analyzed the sources from Western organizations in the Wikipedia article, the analysis of the impact of the Western organizations is crucial due to the potential Western bias they can have on the topic. Due to their framework being centered on the Western academic tradition, the utilization of sources from Western organizations might work to diminish alternate history presented by a different epistemology. Regarding the use of Western organizations in the blog post, it is essential to see if there is any sort of bias present in the content that would work against the non-Western sources of information.

The reference to the *Oxford English Dictionary* and its definition of ethnicity was the only reference to a Western organization in the BOSCO Uganda blog post. The definition provided by this source, in particular, supports a concept of identification provided by an institution rooted in the very country whose identity assignment negatively impacted the people the blog post refers to. Therefore, on its face, the use of this reference supported a conception of identity rooted in the same system, which diminished the sense of identity among Acholi people. However, upon examining how it was used in the BOSCO Uganda blog post, the author used the Western definition to prove how the Western understanding of ethnicity “results in complex implications” when associated with people from a non-Western background. While examining how the source was used showed that it was meant to contrast epistemologies rather than support the Western view, this analysis only looks at the references and their content. Therefore, while being used to

support the precolonial conception of identity, this content still did not include any precolonial history of the Acholi.

5.5.2.3 Western Authors

The utilization of Western authors in a blog post from a community network about the identity of that community can be a controversial choice. A Western source can have an implicit bias that will work to continue to damage the credibility of information provided from a non-Western epistemology. Therefore, in the context of a culture and a rural community that had gone through decades of turmoil and war where elements of traditional culture were lost, it is essential to see if the blog post's author utilized sources of information that diminished the value of non-Western epistemology.

The book *The Roots of Ethnicity: Origins of the Acholi of Uganda*, written by Ronald R. Atkinson, was the one Western source referenced in the BOSCO Uganda blog post and was also the only source that the Wikipedia article and the blog post had in common. As stated in the earlier analysis of this book in the section dedicated to sources used in the Wikipedia article, Atkinson has conducted in-depth analyses on the Acholi people in particular and has utilized oral histories in this book as well as other articles that he has published. This source was utilized to provide a background on the Acholi people and provided additional context to the information obtained from the interview with the Paimol Cultural Director. As stated in the previous analysis of this book, Atkinson met the criteria that suggested that he included precolonial Acholi history.

5.5.3 Metrics from Source Content Analysis

The final analysis of the content of the sources according to the criteria which, as established in the methodology, consisted of counting whether sources included the precolonial history of the Acholi, did not portray the British being detrimental to precolonial history or did not mention precolonial history at all. The results displayed a clear difference between the BOSCO Uganda blog post and the Wikipedia article.

5.5.3.1 Wikipedia Article

The sources in the Wikipedia article “Acholi People” had seven sources, which included the precolonial history of the Acholi. Two sources did not portray the British as detrimental to

precolonial Acholi history. Finally, the article had 11 sources that did not include precolonial Acholi history—a pie chart representing this finding as percentages is depicted in figure 5.

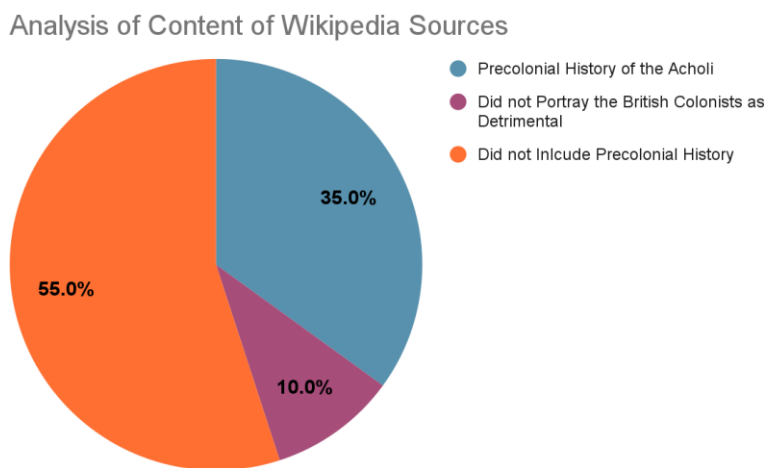


Figure 5.4: Pie chart depicting the proportion of sources referenced in the Wikipedia article that discussed precolonial history and the percentage, the percentage that did not include precolonial history, and the percentage that did not portray the British colonists as detrimental to Acholi development.

5.5.3.2 BOSCO Uganda Blog Post

The sources in the BOSCO Uganda blog post titled "Complexities of Identity: Clan, Chiefdom, and Ethnic Group Identity in Northern Uganda" had four sources that included the precolonial history of the Acholi. No sources referenced in the BOSCO Uganda blog post did not portray the British colonists as detrimental to Acholi's precolonial history. Finally, there was one source referenced that did not include the precolonial history of the Acholi—a pie chart representing this finding as percentages is depicted in figure 6

Analysis of Content of BOSCO Uganda Sources

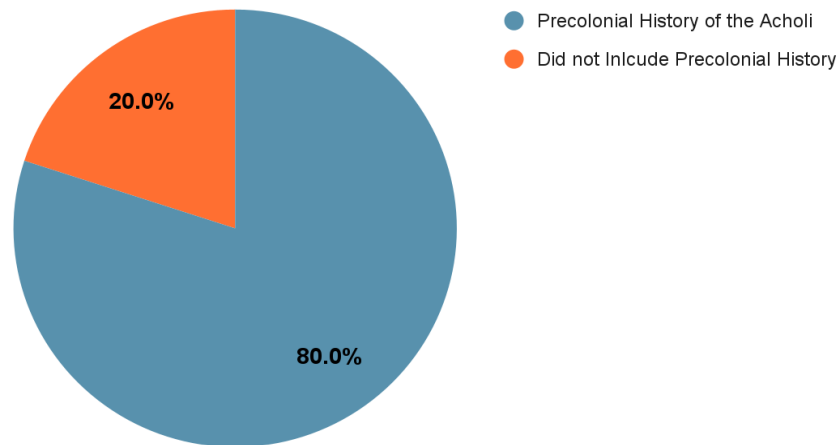


Figure 5.5: Pie chart depicting the proportion of sources referenced in the BOSCO Uganda blog post that discussed precolonial history and the percentage, the percentage that did not include precolonial history, and the percentage that did not portray the British colonists as detrimental to Acholi development.

5.6 Difference in Content

The analysis of the content of the BOSCO Uganda blog post titled “Complexities of Identity: Clan, Chiefdom, and Ethnic Group Identity in Northern Uganda” and the Wikipedia article titled “Acholi People” consisted of the second and final part of my comparative analysis. As stated in the methodology section, there are three historical periods of the Acholi that both websites discussed. These historical periods were identified as precolonial history, colonial history, and history after independence. Since these periods are covered in the Wikipedia article and the BOSCO Uganda blog post, they were central in this comparison. By counting how many paragraphs were used to describe a particular historical period proportional to the total number of paragraphs used and then visualizing it in a pie chart, I presented an overall display of how much each website dedicated to a particular historical period.

Furthermore, in counting the number of words within each paragraph dedicated to a historical period, I displayed how many words were dedicated to each period proportional to the total words used through a pie chart. The visualization of the number of paragraphs dedicated to each historical period and the number of words associated with each historical period are contained within the background metrics subsection below to provide more context to the subsequent analysis. It is important to note that the Wikipedia article contained information on four

additional facets of the Acholi history, including their language, location, population size, religion, and rebellions within the country. This coverage of a wider range of historical events was represented in the background metrics subsection following this introduction to visualize this broader representation of Acholi history in the Wikipedia article.

Additionally, it is important to note that the blog posted on the BOSCO Uganda community network website is just part of a much larger report on the Paimol contained in an alternate website. Therefore, the information, while referring to Acholi history, specifically refers to the identity of the Acholi. This means that rather than being focused on telling the whole story of the Acholi, the blog post was focused on explaining the unique aspects of how the Paimol and other smaller clans, a part of the Acholi ethnic population, identify themselves. However, as explained in the introduction to this chapter, I am only analyzing information published on the community network website to remain unbiased and true to the goal of my research question. Following the background metrics, I examined the similarities and differences within each historical period shared between the article and blog post and how each source represented the cause, development, and outcome of the events covered. The result of this examination revealed critical differences within the portrayal of certain historical periods by both the Wikipedia article and the BOSCO Uganda blog post.

5.7 Background Analysis of Content

This subsection contains the count of the number of paragraphs and subsequent count of the number of words dedicated to each of the historical periods proportional to their respective total in the Wikipedia article and the BOSCO Uganda blog post. Therefore, there will be two separate pie charts for the metrics of the historical period of the Wikipedia article and the BOSCO Uganda blog post. Additionally, in this section, I will include the proportional inclusion of all of the sections of the Wikipedia article within the metrics to properly represent the broad range being covered by the article.

Wikipedia Article

Within the Wikipedia article "Acholi People," the metrics for each historical period related to the number of paragraphs dedicated to each historical period are represented below. It should be noted that several paragraphs within the "Religion" section of the Wikipedia article refer to events that took place after independence. However, they also include precolonial traditions. For

this reason, I kept religions a separate category to represent this blend of modern history and precolonial traditions. I further explored this difference in representation in the subsection concerning the similarities and differences within each historical period.

In starting with the historical periods which overlap with the BOSCO Uganda blog post, the Wikipedia article included three paragraphs and three-hundred-twenty-five words concerning precolonial history, four paragraphs and two-hundred-forty-one words on colonial history, and nine paragraphs and seven-hundred-twenty-eight words on history after independence.

Regarding the history included about the Acholi by the Wikipedia article and not the BOSCO Uganda blog post, the Wikipedia article contained two paragraphs and seventy-three words on language, four paragraphs and one-hundred-forty-six words on location and population, and finally, four paragraphs and four-hundred-sixty-two words on religion. All of these metrics are represented in figure 7 and figure 8 below.

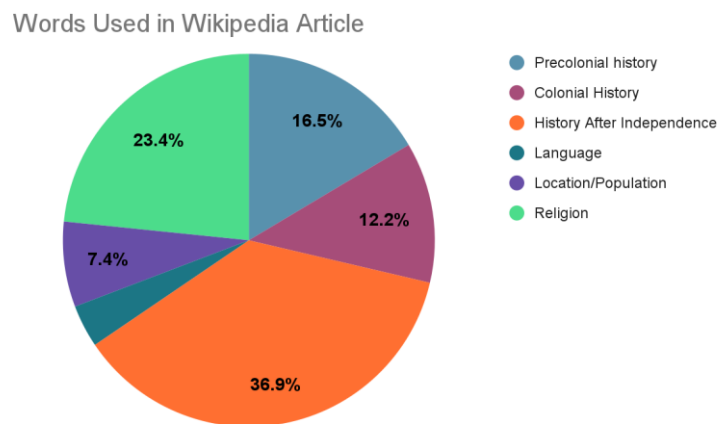


Figure 5.6: A pie chart depicting the percentage of words used in the Wikipedia article used to discuss precolonial history, colonial history, history after independence, language, location/population, and religion.

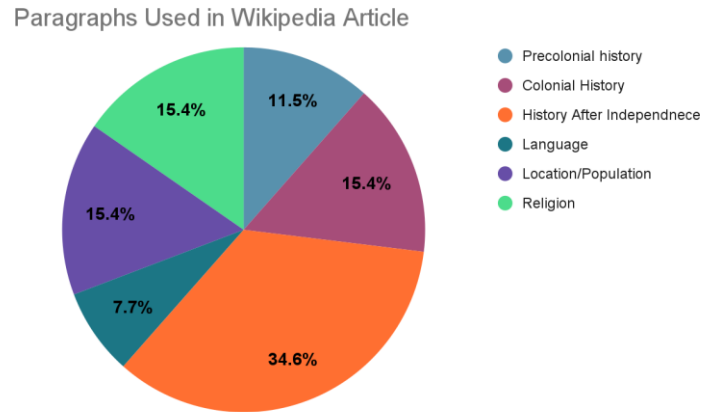


Figure 5.7: A pie chart depicting the percentage of paragraphs used in the Wikipedia article used to discuss precolonial history, colonial history, history after independence, language, location/population, and religion.

BOSCO Uganda Blog Post

Within the BOSCO Uganda blog post “Complexities of Identity: Clan, Chiefdom, and Ethnic Group Identity in Northern Uganda,” the metrics for each historical period related to the number of paragraphs dedicated to each historical period are represented below.

The blog post included four paragraphs and eight-hundred-thirty words concerning precolonial history, one paragraph and ninety-one words on colonial history, and finally, two paragraphs and one-hundred-seventy words regarding history after independence. All of these metrics are represented in figure 9 and figure 10 below.

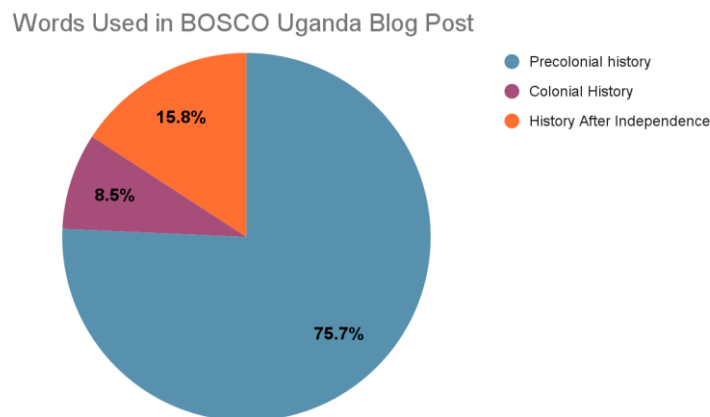


Figure 5.8: A pie chart depicting the percentage of words used in the BOSCO Uganda blog post used to discuss precolonial history, colonial history, history after independence, language, location/population, and religion.

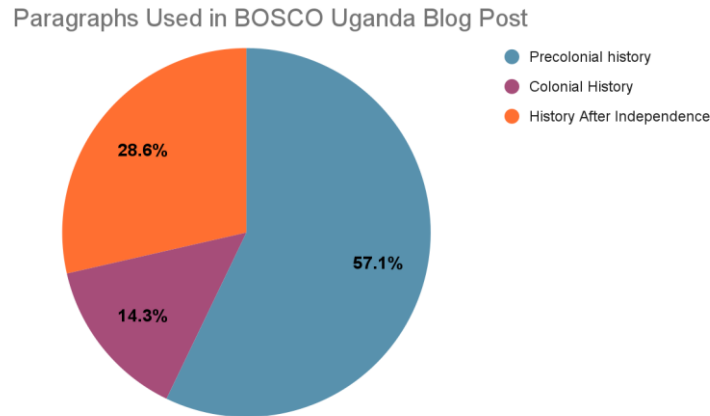


Figure 5.9: A pie chart depicting the percentage of paragraphs used in the BOSCO Uganda blog post used to discuss Acholi precolonial history, colonial history, history after independence, language, location/population, and religion.

5.8 Analysis of Content of the Article and Blog Post

This section closely analyzed the historical periods of the Acholi that both the Wikipedia article and the BOSCO Uganda blog post discussed and examined how each period was presented using three criteria: the cause, development, and outcome associated with the particular historical period.

The historical periods of the Acholi used in both texts were precolonial history, colonial history, and finally, history after independence. As seen in the section above, there is a significant disparity between the focus of each historical period. Therefore, in cases where one criterion used for analysis, either cause, development, or outcome, was not discussed, I stated that the specific criteria were missing. This ensured that the analysis was free of any potential bias that would result if I were to assume the intention of the article or blog post in framing a certain historical period.

In this section, I started my comparison by analyzing how the blog post and article framed precolonial history. Following this, I examined how each website presented colonial history. Finally, I examined how the article and blog post described history after independence. In this analysis and each subsequent analysis, I created two subsections dedicated to the BOSCO Uganda blog post and the Wikipedia article. I categorized information into different criteria based on points of information that comprised new information describing that particular historical period.

5.8.1 Precolonial History

5.8.1.1 Wikipedia

5.8.1.1.1 Cause

The Wikipedia article "Acholi People" described the actions of the "nominal forebears of the present Acholi," which they stated took place in 1000 AD. Additionally, the article included the region, Bahr el Ghazal, in South Sudan, from which the nominal forebears migrated. This information was contained within one sentence and can be categorized within the criteria of cause. None of this information was included in the BOSCO Uganda blog post.

5.8.1.1.2 Development

Concerning Wikipedia's description of Acholi precolonial history within the criteria of development, the editors included the most information, which I organized into nine key points of information with three supporting points of information.

The editors' first point began in the late seventeenth century and described how the Acholi developed a new sociopolitical order among the "luo" of Northern Uganda. They included that the Rwodi or Rwot was the head of the chiefdom. Several key aspects of this first point are shared in the BOSCO Uganda blog post, which included the fact that the Acholi began to develop in the 17th century; they were structured in chiefdoms. However, the blog post did not include the organization around the "luo" and the concept of the Rwodi or Rwot.

The second point of the Wikipedia article concerns how the chiefs belonged to one clan, and each chiefdom had multiple villages made up of different patrilineal clans. The information within this point shared with the blog post is that each chiefdom was composed of various clans, but the blog post did not include the term villages or mention that the clans were patrilineal.

The third point made by the Wikipedia article about Acholi precolonial history was that there were sixty small chiefdoms in eastern Acholiland in the mid-nineteenth century. The BOSCO Uganda blog post did not refer to any information in this third point.

The fourth point included in the article about the precolonial history of the Acholi was that in the second half of the 19th century, contact with Arabic-speaking traders from the north led to the traders referring to the Acholi as "Shooli." There were several similarities in this point with the blog post, which included that contact with Arabic traders led to the name Acholi. However, the blog post did not include that the Arabic traders initially referred to the Acholi as "Shooli."

The fifth point made by the article to Acholi precolonial history was the description of the organization of the traditional communities and the style consistent with their homes, furniture, and containers, including intricate descriptions of their unique design. Furthermore, this point contained information regarding the traditional roles of men and women in society, including the livestock they would keep and the food they would grow. The BOSCO Uganda blog post did not include any information related to this point. It should be noted that this point of information encompasses one out of two paragraphs and about one-third of the words used in the description of Acholi's precolonial history.

The following four main points were contained in the Wikipedia article " Religion " section and, while not directly associated with the history of the Acholi, did contain precolonial traditions. None of this information was discussed in the following four main points, and three supporting points were contained within the BOSCO Uganda blog post.

The first main point in the "Religion" section quoted James Latigo explaining the supernatural religious powers associated with the anointed chiefs or the "rwodi moo." Three subsequent supporting points of information provided more context to this quote. Two supporting points explained that while the chiefs were believed to have supernatural powers, a council of clan elders would-be representatives to help mediate issues and rule. The final supporting point of information to this main point clarified that it was a system of governance that integrated religion and cosmology.

The second main point in the "Religion" section of the article relating to precolonial traditions stated that all Acholi believed in a superior being named YA Lawter.

The third main point in the "Religion" section of the article explained a negotiation for blood money and subsequent rituals that took place after a killing since it was not permitted.

The final main point of information in the "Religion" section of the Wikipedia article that pertained to the development criteria within the reference to precolonial history was the description of important rituals meant to clear spirits away of a location when people returned to a location after being away for a long period of time, returned from being held captive, and after killing has taken place on that land.

5.8.1.1.3 *Outcome*

Regarding the final criteria of analysis of the Wikipedia article's description of precolonial history, which is the outcome of events, there was no point that spoke to the subsequent transition of this pre-colonial historical period to the colonial period.

A pie chart representing the number of overall points of information dedicated to each criterion is depicted in figure 11 below.

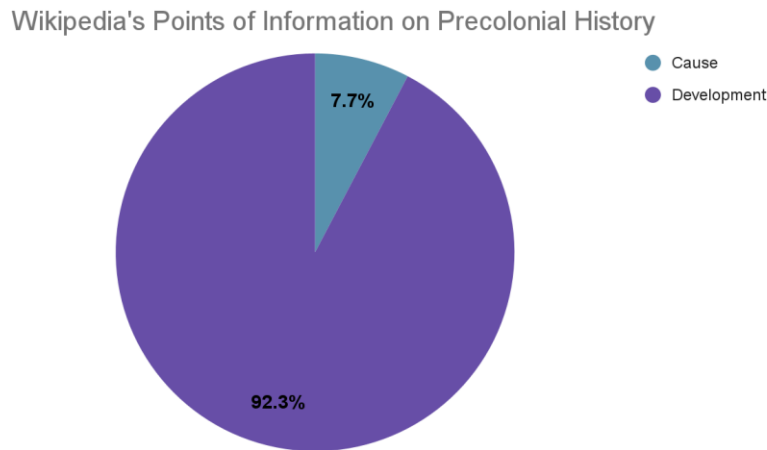


Figure 5.10: A pie chart depicting the percentage of points of information contained in the Wikipedia article that represented the cause, development, and outcome criteria, as defined in the methodology, concerning the Acholi precolonial historical period.

5.8.1.2 BOSCO Uganda

5.8.1.2.1 *Cause*

The BOSCO Uganda blog post titled “Complexities of Identity: Clan, Chiefdom, and Ethnic Group Identity in Northern Uganda” mentioned the precolonial history of the Acholi that was attributed to the criteria of cause. This was the singular sentence that stated the “concept of Acholi as a singular identity is relatively recent.” As seen in the subsection above, this position was not included in the Wikipedia article.

5.8.1.2.2 *Development*

Information relating to the development criteria of assessment of Acholi precolonial history was most utilized by the BOSCO Uganda Blog post and organized into two main points, each with additional supporting points attached.

The first main point of information stated that in the late seventeenth and early eighteenth centuries, as the chiefdoms began to develop, while they were not wholly independent of each other, the people within the chiefdoms did not see themselves as sharing a common identity. As

seen in the earlier analysis of the Wikipedia article, there were shared points between these two accounts.

However, the main difference was that the Wikipedia article never described the people within the chiefdoms as considering their identity separate from that of others within that chiefdom. This was a principle point that was supported by six other points of information, of which I will mention the three most impactful.

The most relevant supporting point to the main point regarding the individuality of the clans within each chiefdom was the case example of the Paimol community, which was represented heavily in the blog post. The case example of the Paimol clan displayed how a clan can be composed of, and even founded by, in this case of Paimol, outsiders to the region.

Further supporting evidence to this main point of the mix of identities within the Acholi chiefdom was again seen in the case example of Paimol, where other clans from regions now classified as different ethnic groups were brought within the Paimol chiefdom.

A final supporting point that clarified the distinct differences present in chiefdoms is when the author included that the clans retained their separate identities when joining the chiefdom and simply adopted an additional, more general, identity.

The second main point addressed the shift in the identity of the Acholi in the nineteenth century triggered by Arab traders. As addressed in the previous subsection, the Wikipedia article also included that Arab traders' assigned the name Shooli to the group due to their shared language, which was then advanced by the British.

However, one supporting point of information to this main point included in the blog post also included that the traders were known as Kutoria and that they ignored the distinctions between the different chiefdoms and simply classified them as a common ethnic group based on their shared language.

5.8.1.2.3 Outcome

The BOSCO Uganda blog post also included a significant amount of information regarding the precolonial history of the Acholi that fell into the outcome criteria.

Eight points of information functioned to support one main point: the arrival of the British solidified the identity of the Acholi, but the individual distinctiveness between the chiefdoms continued. As shown in the analysis of Wikipedia, none of this information is included in the Wikipedia article.

The author of the blog posted on the BOSCO Uganda community network website quoted Ronald Atkinson to support this main point of information, where he stated that the individual chiefdom remained the primary sociopolitical unit and that there were no examples of Acholi-wide organization in that period of transition.

In continuing an observation made in the analysis of the sources referenced in the Wikipedia article, this same book quoted in the blog post is also referenced within the article yet has key pieces of information within the book not included in the Wikipedia article itself.

A supporting note that provided more context to the individuality of these chiefdoms was seen through history told by Paimol’s Cultural Director. The Cultural Director recited an oral history taught to the children of Paimol of battles between Paimol and neighboring chiefdoms that took place in the twentieth century, a point of information used to contextualize the differences perceived between chiefdoms who were considered to be one people at the time.

A final point of supporting information used to clarify this main point is that when the Acholi identity was solidified after the British arrival, the author described that the “grouping of people under a common tribal name was nothing more than an artificial identity.”

A pie chart representing the total number of points of information dedicated to each criterion is depicted in figure 12 below.

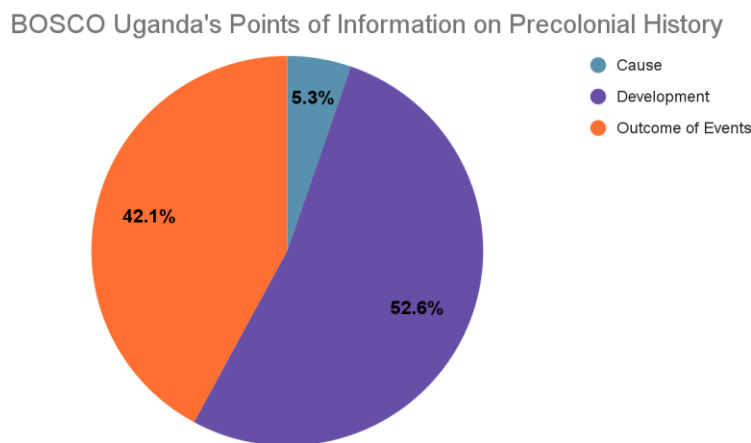


Figure 5.11: A pie chart depicting the percentage of points of information contained in the BOSCO Uganda blog post that represented the cause, development, and outcome criteria, as defined in the methodology, concerning the Acholi precolonial historical period.

5.8.2 Colonial History

5.8.2.1 Wikipedia

5.8.2.1.1 Cause

Within the cause criteria for colonial history, the Wikipedia article "Acholi People" did not include any points of information. Similar to its coverage of precolonial history, the Wikipedia article had the most points of information on colonial history that fit within the criteria of development.

5.8.2.1.2 Development

In the development criteria, the article included two main points of information and three subsequent supporting points. The first main point of information that fit this criterion stated, "During Uganda's colonial period, the British encouraged political and economic development in the south of the country, particularly among the Baganda." None of the information within this main point was included in the BOSCO Uganda blog post. Furthermore, it should be mentioned that this was the only referral to the British colonial administration within the Wikipedia article. The second main point, which provided some additional context to the first main point, explained that ethnic groups in northern Uganda, Acholi included, mainly supplied the manual labor and comprised the military and stated that it created what "some have called a "military ethnocracy." Additionally, none of the information within this second main point was included in the BOSCO Uganda blog post. The Wikipedia article supplied three additional supporting points of information to this second main point. In reference to the British colonial army in the Second World War, two supporting points of information explained that many Acholi soldiers joined and fought bravely. The final supporting point of information included that after the 1950s, the changing economy triggered a decrease in the number of Acholi recruited to the armed forces, yet the mythology and stereotype that the Acholi were good soldiers remained.

5.8.2.1.3 Outcome

The Wikipedia article included one main point and two subsequent supporting points of information referring to colonial history that fell into the criteria of outcome.

The main point of information was a reference to "James Ojent Latigo," found to be a reference to James Ojera Latigo in my analysis of the sources, and his belief that "Uganda's social problems [are] based on the way the political elites have used ethnicities to divide the country."

As detailed in the separate analysis below, the BOSCO Uganda blog post has framed this division of ethnicity and the problems it has led to differently in Uganda.

This main point of information is followed by two supporting points of information that all reference Latigo. One supporting point of information stated that Latigo emphasized that the distinction among ethnic groups was a part of the internal government dialogue. The second point of supporting information used a quote where Latigo referred to the root of conflict within Uganda as being in the different levels of socio-economic development in the different ethnic groups.

A point of observation made in this chapter's "Difference of Sources" section was that Latigo specifically attributed the use of ethnicity to divide the country with the British colonial administration. What was evident in the examination of the source itself was that the Wikipedia page editors framed his work differently than how Latigo framed his own work. An example of this can be seen in the use of a quote by Latigo which states:

"Part of the structural causes of the conflict in Uganda has been explained as rooted in the ethnic groups which were at different levels of socio-economic development and political organization" (Report of the Parliamentary Committee on Defense and Internal Affairs on the War in Northern Uganda, 1997).

This quote was utilized in the Wikipedia article. However, the context in which the Wikipedia editors used this quote can be seen as different from how Latigo himself contextualized this quote in the same work that is being referenced and linked to the quote in the Wikipedia article. The Wikipedia article stated, "In the 2000s, James Ojent Latigo described some of Uganda's social problems as based on the way the political elites have used ethnicities to divide the country". The Wikipedia article referenced a book titled *Reconciliation and Traditional Justice: Learning from African Experiences: The Northern Uganda Case Study* by James Ojera Latigo. In this book, directly before using the exact quote utilized by the Wikipedia article, Latigo stated:

"The colonial entity called Uganda was forged out of diverse nationalities and ethnic groups. To manage this diversity to suit imperial interest, mechanisms were put in place to make the different ethnic groups and nationalities see each other as manifestly distinct, and at times, as enemies" (Latigo, 2007).

Latigo references British colonial policy an additional four times in the same paragraph where the quote referring to the structural causes of the conflict in Uganda was utilized. A key difference in the contextualization is when the Wikipedia article stated that the "political elites" created this division. However, James Ojera Latigo stated that it was due to the "Imperial interest" and the "colonial entity."

A pie chart representing the total number of points of information dedicated to each criterion is depicted in figure 13 below.

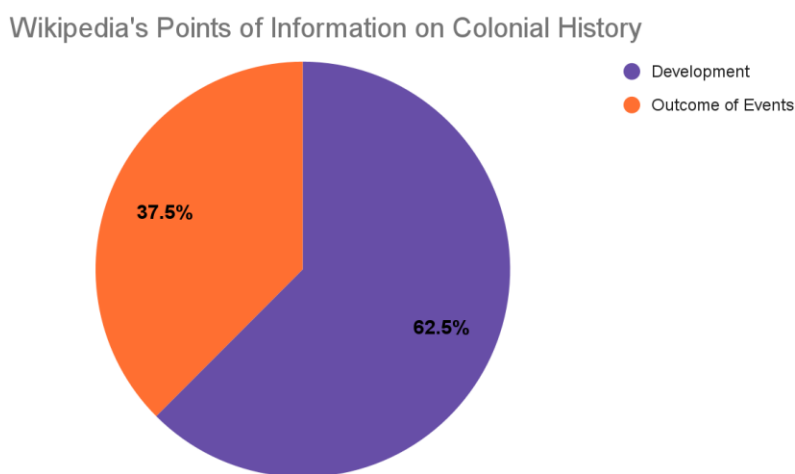


Figure 5.12: A pie chart depicting the percentage of points of information contained in the Wikipedia article that represented the cause, development, and outcome criteria, as defined in the methodology, concerning the Acholi colonial historical period.

5.8.2.2 BOSCO Uganda

5.8.2.2.1 Cause

In the description of the colonial history of the Acholi, the BOSCO Uganda blog post did not have any points of information that fit within the criteria of cause.

5.8.2.2.2. Development

The blog post had one central point of information followed by three supporting points of information that fit within the criteria of development.

The main point of information stated that the British forced the Acholi identity onto the chiefdoms during the solidification of their control. The Wikipedia article acknowledged points of information in the development criteria that the political elites have used ethnicities to divide the country. However, the difference here is that the blog post directly correlated the assignment of ethnic identity with the increase in British colonial control.

Two supporting points of information included that the British colonial government set up an indirect rule through Acholi chiefs and made them servants of the state, and if the chiefs were to resist, which was the case with Paimol, they would be suppressed militarily.

Finally, the last supporting point explained how the chiefdoms were placed under an administrative "Acholi District," with the chiefdoms designated as sub-counties.

The only reference made by the Wikipedia article that could be attached to these points was that the British government used northern Uganda for manual labor and soldiers; however, in this distinction, the article stated that the British encouraged political and economic growth in the south. Thereby, they attached a positive association with the British colonial rule without including their forcing the Acholi identity and Western administrative systems, which suppressed diversity within the chiefdoms.

5.8.2.2.3 Outcome

Points of information that fit within the outcome criteria in the BOSCO Uganda blog post's description of colonial history included one main point and two supporting points of information. The main point of information stated, "Not only was the Acholi identity solidified during this time, but also a British one as well." This association of the British colonial rule being attributed to the Acholi identity was not included in the Wikipedia article.

However, an interesting observation is that this account of events more closely matched the description given by James Ojera Latigo in his work, which was referenced and quoted from the Wikipedia article.

The two supporting points of information that provided more context to the main point did not have any information mentioned in the Wikipedia article.

One supporting point of information stated that the clan and chiefdom are still vital identifiers, but the ethnic group has taken a prominent place in modern Ugandan identity.

The second supporting point of information that provided more context to this used the Paimol as an example by saying that they have a common identity with the people in Gulu, one-hundred-twenty-nine kilometers or eighty-one miles away, but not their Karamojong neighbors.

A pie chart representing the total number of points of information dedicated to each criterion is depicted in figure 14 below.

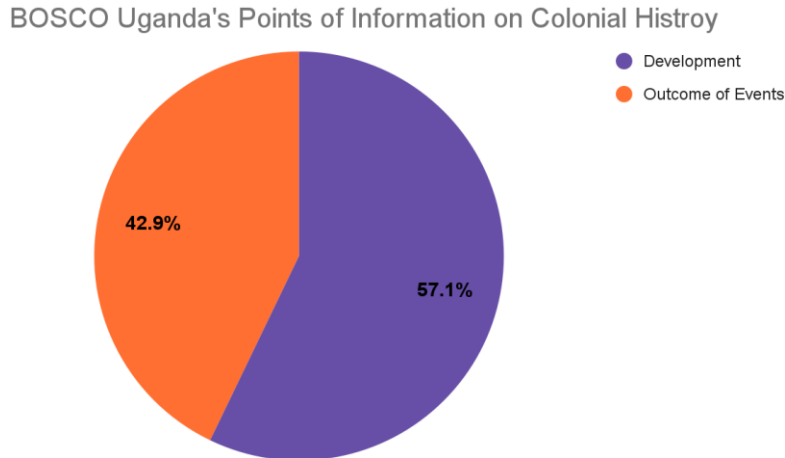


Figure 5.13: A pie chart depicting the percentage of points of information contained in the BOSCO Uganda blog post that represented the cause, development, and outcome criteria, as defined in the methodology, concerning the Acholi colonial historical period.

5.8.3 History After Independence

5.8.3.1 Wikipedia

Information concerning this historical period was included the most in the Wikipedia article, as seen in the subsection above titled "Background Metrics."

5.8.3.1.1 Cause

The article included one point of information that fits within the criteria of cause associated with Acholi history after independence. This point of information was a quote by James Latigo in his book titled *Reconciliation and Traditional Justice: Learning from African Experiences: The Northern Uganda Case Study*, in which he explained that since independence, "ethnically driven, politically manipulated violence" remains at the center of cycles of revenge and mistrust. This quote additionally included that the ethnically driven violence "have been greatly exacerbated by the way in which the country's leadership has developed since independence" (Latigo, 2007).

This quote displayed a lack of proper contextualization of the source initially seen in the analysis of Wikipedia's mention of the colonial history of the Acholi.

The Wikipedia article included a quote by Latigo, which stated the government of Uganda after independence exacerbated the "polarization [that] remain[ed] between different ethnic groups" without including that the British colonial government forced the creation of these ethnic groups as stated by Latigo in this same source. The BOSCO Uganda blog post presented the information

within this point of information included by the Wikipedia article differently. It said that after independence, the identities created by the British remained.

5.8.3.1.2 Development

The development criteria within the history after independence category contained the most points of information from the Wikipedia article. There were eight main points of information with eighteen supporting points of information that pertained to this criterion within this historical period.

The first main point of information concerned the first leader after independence, Milton Obote, and that he relied on the Acholi Luo people and two other ethnic groups in government. None of this information was included in the BOSCO Uganda blog post.

The second main point of information discussed the impact of Idi Amin and how he overthrew Obote and established a dictatorship. It additionally included that despite being a part of the Katwa people from northern Uganda, Amin suppressed and killed many Acholi. The blog post did not include any of this information.

The third main point of information introduced the following leader after Amin, General Tito Okello, who was Acholi but was defeated in 1986. The blog post does not include any of this information.

The fourth main point of information in the Wikipedia article stated that despite these past leaders being from northern Uganda, there were no significant changes to the region's economy, and it had even higher rates of poverty than before. The BOSCO Uganda blog post did not include any of this information.

The fifth main point discussed the current president of Uganda, Yoweri Museveni, and how his National Resistance Army (NRA) defeated Tito Okello and subsequently conducted revenge killings in northern Uganda. Four supporting points of information added more context to this main point of information. The supporting points of information discussed the rebel movements that were created in response to the absolute power being held by Museveni and the revenge killings conducted by his forces. Neither the information in this fifth main point nor the following four supporting points were included in the BOSCO Uganda blog post.

The sixth main point of information in the Wikipedia article discussed basic features of the Lord's Resistance Army (LRA), such as how Joseph Kony, an Acholi from Gulu, led it. This main point had eight supporting points providing additional information on the activity of the

LRA and its impact on the region, such as how it has devastated the Acholiland and led to the creation of internal displacement camps where death from raids by the LRA and government forces as well as from disease was common. The supporting points contextualizing the impact of the LRA also included peace talks that began and that there were still "large numbers" of internally displaced Acholi in the internal displacement camps four years after the beginning of the peace talks. The BOSCO Uganda blog post briefly mentioned the civil war and how it impacted the relationship between two rural Acholi chiefdoms. However, the blog post does not go into as much detail on the impact that it has had on the Acholi region as the Wikipedia article. The seventh main point of information contained within this criterion in the Wikipedia article discussed a 1995 constitutional reform that recognized cultural leaders of the Acholi, acknowledging that their powers still have not been fully restored. Two supporting points of information explained that the cultural leaders played an important role in helping to restore the displaced communities by performing cleanses on locations and villages. The BOSCO Uganda blog post mentioned several important sacred rituals practiced within rural Acholi communities. However, it does not include their relation to help with the civil war or the 1995 constitutional reform recognizing the cultural leaders of the Acholi.

The final main point of information within this criterion on the history after independence pertained to the role played by religious leaders in trying to end the conflict within the country. Three supporting points of information were attached to this main point of information, which provide examples of what these leaders have done. One supporting point discussed how the religious leaders' utilization of the traditional reconciliation processes played a key role in preparing a community to receive former combatants. None of this information was represented in the blog post.

5.8.3.2.3 Outcome

Two main points of information and three supporting points of information referring to Acholi history after independence in the Wikipedia article fit within the outcome criteria. The first main point of information stated that the civil war in the north destroyed much of their society. This was supported by one point of information, which included that the majority of the elected members of parliament in the Acholi sub-region are members of the opposition. The

strain of the civil war on the Acholi society was included in the BOSCO Uganda blog post but only briefly mentioned as it related to two rural communities.

The second and final main point of information that pertained to these criteria referenced James Latigo and his mention that leaders have called for a revival of the indigenous people's traditional processes for accountability and justice. This main point was followed by two supporting points of information that included how the Ugandan Minister of Internal Affairs has noted the success of the traditional processes and, along with others, suggested it could help more than the Western system of the International Criminal Court at the Hague. None of this information was included in the BOSCO Uganda blog post.

A pie chart representing the total number of points of information dedicated to each criterion is depicted in figure 15 below.

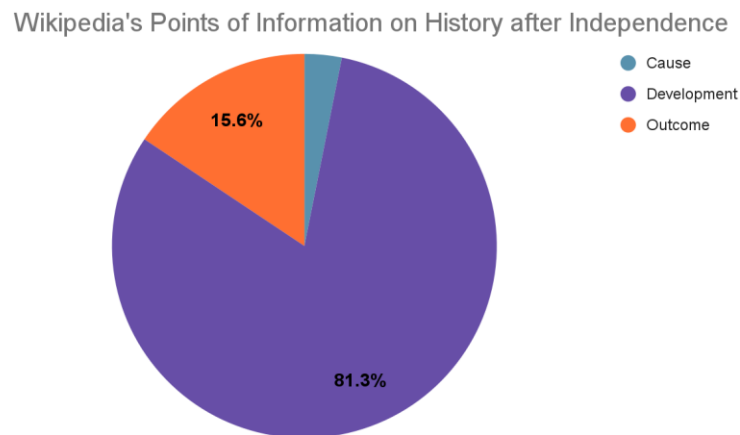


Figure 5.14: A pie chart depicting the percentage of points of information contained in the BOSCO Uganda blog post that represented the cause, development, and outcome criteria, as defined in the methodology, concerning the Acholi history after independence historical period.

5.8.3.2 BOSCO Uganda

Information concerning the history after independence time period was included the least in the BOSCO Uganda blog post, as seen in the subsection above titled “Background Metrics”.

5.8.3.2.1 Cause

There was one main point of information included in this time period that fit within the cause criteria. This point of information stated that after independence the British identity of Ugandans was officially removed, but the identities that were created by the British remained. This was in contrast to what was mentioned in the Wikipedia article regarding information that was included about this same time period that fell into this same criterion. Where the Wikipedia article

mentioned that the Ugandan government exacerbated deep-rooted divisions and polarizations caused by ethnic division, they never included that the ethnicities were created by the British.

5.8.3.2.2 Development

There was one main point of information and four supporting points of information regarding Acholi history after independence that fell within the criteria of development. The main point of information introduced the relationship between the Kudeng clan of Paimol and the separate chiefdom of Karamoja, in that the Kudeng clan were originally from Karamoja but are in charge of multiple important sacred rituals and practices for the chiefdom. The four supporting points of information describe how this clan within the Paimol chiefdom, despite originally being from a region now considered a different ethnicity, is considered Acholi. Additional supporting points of information also explained that when the Kudeng arrived in Paimol the Karamojong were just developing their society but showed how there was a parallel development of the Karamojong and Acholi societies. The final supporting point of information explained that despite being considered two different ethnic groups the Acholi of Paimol and their Karamojong neighbors would share cattle grazing lands up to the start of the civil war. The Wikipedia article presented the information within this period of time differently. Where the article on Wikipedia mentioned the rebellions and the suffering caused by ethnic division, the blog post included how some clans composed of different ethnicities in the north are closely linked.

5.8.3.2.3 Outcome

The one main point of information that fit within the criteria of outcome spoke to the original diversity that composed the chiefdoms and clans as “potential for improved intertribal relations”. None of this information was included in the Wikipedia article.

A pie chart representing the total number of points of information dedicated to each criterion is depicted in figure 16 below.

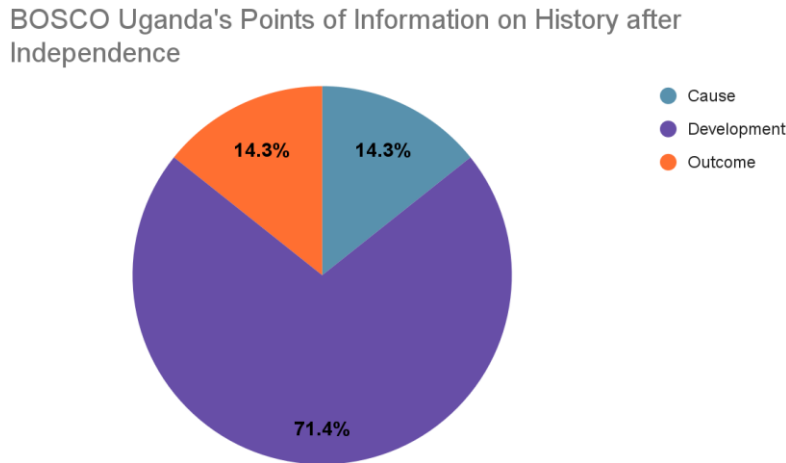


Figure 5.15: A pie chart depicting the percentage of points of information contained in the BOSCO Uganda blog post that represented the cause, development, and outcome criteria, as defined in the methodology, concerning the Acholi history after independence historical period.

5.9 Conclusion

The analysis of the content and sources used in the BOSCO Uganda blog post "Complexities of Identity: Clan, Chiefdom, and Ethnic Group Identity in Northern Uganda" and the Wikipedia article "Acholi People." This analysis revealed several significant differences between the article and the blog post, such as how the blog post is more representative of the precolonial history. In contrast, the Wikipedia article is more representative of modern history. Additionally, several key findings made in framing information gathered from sources spoke to the potential bias present in Wikipedia.

5.9.1 Analysis of the Sources

5.9.1.1 Perspective and Age of the Sources

The analysis of the sources revealed that of the sources utilized by Wikipedia, 57.1% were from Western authors, and another 23.8% were from Western organizations. This means that only 23.8% of sources were written from a non-Western perspective. In comparison, the BOSCO Uganda blog post had 60% of its sources from non-Western authors or organizations, with 20% from Western authors and 20% from Western organizations.

Additionally, when analyzing the years that the sources were published in the Wikipedia article and the BOSCO Uganda blog post, I found that the average year the collection of sources used in the blog post published was 2013 as opposed to the average year the collection of sources used in

the article was 2000.76. This displayed that while both included information about the Acholi history, the Wikipedia article used sources that were over 12 years older on average.

5.9.1.2 Perspective of Content of the Sources

Analysis of the content within the sources referenced counted the number of times a source referred to the precolonial history of the Acholi, did not portray the British colonists as detrimental to the Acholi development, and did not include the precolonial history of the Acholi. This analysis of the content of the referenced sources in the Wikipedia article revealed that 55% did not include precolonial history, 10% did not portray the British colonists as detrimental to the development of the Acholi, and 35% included precolonial history. The results of the analysis of the sources referenced in the BOSCO Uganda blog post showed that 20% did not include the precolonial history of the Acholi, none portrayed the British colonists as detrimental to the development of the Acholi, and 80% included the precolonial history of the Acholi. This indicated that the sources included in the Wikipedia article are less likely to include precolonial history and more likely to not portray British colonists as detrimental to the development of the Acholi. This is significant because student researchers will look to the list of sources used by Wikipedia as a starting place for their research, as Fresno Pacific University Library suggested. The Fresno Pacific University's library is an academic institution dedicated to helping students conduct academic research and has a page dedicated to "Using Wikipedia for Academic Research" (Fresno Pacific Library, 2021). This indicates that the sources cited and referenced in Wikipedia are a conduit to academic research.

5.9.2 Analysis of the Content

5.9.2.1 Representation of Different Historical Periods

When comparing the content of the Wikipedia article and the BOSCO Uganda blog post, I was able to proportionally see how much attention was paid to each historical period by counting how many paragraphs and words were attributed to three key historical periods of the Acholi which were precolonial history, colonial history, and history after independence.

The Wikipedia article had 11.5% of paragraphs and 16.5% of words composing information on the precolonial history of the Acholi, 15.4% of paragraphs and 12.2% of words dedicated to the colonial history of the Acholi, and 34.8% of paragraphs and 36.9% of words dedicated to history after the independence of Uganda. As noted in the "Difference of Content" section, the

Wikipedia article had paragraphs and words dedicated to facets of the Acholi population, including language, location/population, and religion.

The BOSCO Uganda blog post comparatively had 57.1% of paragraphs and 75.7% of words dedicated to precolonial history; 14.3% of paragraphs and 8.5% of words dedicated to colonial history; and 28.6% of paragraphs and 15.8% of words dedicated to history after independence. These metrics indicated that the BOSCO Uganda blog post was disproportionately focused on the precolonial history of the Acholi, while the Wikipedia article was more balanced and focused more attention on history after Uganda's independence.

5.9.2.2 Similarities and Differences in How Information was Framed

The last part of my analysis analyzed which part of each historical period was being discussed and evaluated through the criteria of cause, development, and outcome of events. The criteria represented how balanced the content within the information of each historical period was.

The results for the precolonial historical period showed that for the Wikipedia article, 7.7% of the points of information fell into the criteria of cause, and the remaining 92.3% of the points of information fell into the criteria of development. Regarding the portrayal of the precolonial history in the BOSCO Uganda blog post, 5.3% of the points of information fell into the criteria of cause, 52.6% of the information fell into the criteria of development, and 42.1% of the points of information applied to the criteria of outcome of events.

The results of the analysis for the colonial period showed that the Wikipedia article had 62.5% of the points of information relating to the criteria of development and the remaining 37.5% of the points of information concerning the criteria of the outcome of events. The BOSCO Uganda blog post comparatively had 57.1% of points of information that pertained to colonial history fall in the criteria of development, and the remaining 42.9% of points of information for this historical period concerned the criteria of the outcome of events.

The results of the analysis of the history after the independence historical period revealed that the Wikipedia article had 3.1% of points of information that fell within the cause criteria, 81.3% of points of information that related to the development criteria, and 15.6% of points of information concerning the outcome criteria. Regarding the results for this same historical period for the BOSCO Uganda blog post, 14.3% of the points of information related to the cause criteria, 71.4% of points of information concerning the development criteria, and 14.3% of points of information fell within the outcome criteria.

This analysis indicated that the BOSCO Uganda blog post was consistently more balanced in its representation of the different historical events. Additionally, it should be noted that Wikipedia's points of information concerning the outcome of events criteria for both the colonial history period and the history after the independence period did not contextualize information represented by their source accurately. As noted in each respective section of the analysis, the points of information concerning the outcome of events in the Wikipedia article's portrayal of the colonial period of history and the history after independence never directly acknowledged faults by the British colonial administration as was represented in the sources it was quoting and referencing.

6. Discussion

The results indicate that the difference in the control of how information is framed and presented, from a Western framework in the Wikipedia article to a Ugandan community network in the BOSCO Uganda blog post, led to a different representation of Acholi ethnicity.

The BOSCO Uganda blog post had more sources from non-Western perspectives that portrayed British colonial rule as detrimental, and its content discussed more precolonial history than history after independence. The Wikipedia article, on the other hand, had more sources from Western perspectives and discussed a wider range of Acholi historical periods, however, was mainly centered around history after independence, and never mentioned the British colonial rule as detrimental.

The collective results of the four sets of analysis performed on the sources referenced, and the content of the Wikipedia article and the BOSCO Uganda blog post demonstrated a correlation between the participation and ownership of a network located in a rural African community and the increased portrayal of non-Western history of the community.

6.1 Interpretation of the Finding

When discussing how this analysis relates to the research question: Does the notion of participation and ownership in a network have any influence on how you critically engage with information on the internet? The results of this analysis infer that the notion of participation and ownership in a network impacts the ability of a rural community in Africa to make aspects of their history not accurately represented by Wikipedia more accessible to the public. While this might seem insignificant, it suggests that through utilizing community network connectivity, a population that has been historically underrepresented for hundreds of years can finally have their perspective be represented to a wider audience. What is more, it is the incorrect ethnic identity of the Acholi created by the British colonial administration that continues to be represented by Wikipedia.

The Wikipedia article and the BOSCO Uganda blog post discussed the ethnicity of the Acholi and the British colonial administration, and even referenced the same source in presenting this information. However, only the blog post included information that explained how the Acholi ethnicity, from its inception, was forced upon the population it now represents. Sources referenced by both the Wikipedia article and the blog post included that there were distinctive

differences in the identities of the clans within the chiefdoms that are considered Acholi today. Where the blog posted on the website of an Acholi-run community network explicitly highlighted the distinctive difference in the identity of the clans as being important to include, the Wikipedia article, on the other hand, did not mention it.

It can be inferred that due to Wikipedia's rules of reliability of sources and largely Western base of editors that this difference in the information presented can be attributed to the framework from which the Wikipedia and the BOSCO Uganda website was established. While the author of this blog post, Olivia Ortega, was a student at a Western university in the United States and had a Western perspective, as explained in the introduction to the "Analysis and Findings" chapter. The critical observation is that it was posted on the BOSCO Uganda community network website. Since the BOSCO Uganda community network was able to create their own website, they were able to choose what information they wanted to post. This is the control missing from the local Indian populations in the Ganga/Ganges edit war on Wikipedia.

This implies that directly due to the participation and ownership in a network, rural Acholi community members further advanced a non-Western portrayal of their history not included in one of the most visited websites in the world (Statistics & Data, 2021).

6.2 Implications of the Findings

These results build on existing evidence from research discussed in various sections of the literature review. This finding spoke to the difference in information presented and controlled by different perspectives and inferred that the community network method of connectivity can promote non-Western epistemologies.

Therefore, this finding builds on existing research linked to alternative methods of connectivity that look to restrict access to the internet as well as research suggesting that the dominant Western knowledge production on the internet restricts the ability of non-Western knowledge from entering the flow of online information.

Presented in paragraphs below, I describe the connection of the findings in this thesis to past research presented in the literature review, working in the same order as presented in the aforementioned chapter.

6.2.1 Continuity of Colonization Through Connectivity

Regarding the impact of different forms of connectivity, these results suggest that community networks can positively utilize the online space to advance precolonial history not accurately represented in a popular source of information online. Additionally, it is indicative of what could be lost if big tech companies such as Facebook were to continue to connect rural communities in Africa to the internet.

Existing research has spoken to the detrimental effect that Facebook's Free Basics can have on users (Couldry & Mejias 2023; Couldry & Mejias 2019; Pei et al., 2021; Nothias, 2020) through notions such as data colonialism, net neutrality, and the colonization of new markets. However, the inference in this thesis builds on these findings by suggesting a way in which this restriction takes away the users or the communities' ability to represent their own history.

Furthermore, rather than identify how Western institutions are harming connectivity efforts in countries within Africa and other regions of the global south, this thesis used two examples of community networks who each utilized assistance from a university. Therefore, making an additional inference into a possible way that Western institutions could provide constructive support to rural communities in African countries.

6.2.2 How Community Networks Differ from Traditional Forms of Connectivity

The International Telecommunication Union created criteria for 'meaningful connectivity' which would allow "users to have a safe, satisfying, enriching and productive online experience at an affordable cost." These criteria ostensibly established distinctly different ways of categorizing connectivity to the internet and, in doing so, implied that not every form of connectivity is equal. Nevertheless, they also explicitly stated that they deliberately did not recommend a form of connectivity to achieve 'meaningful connectivity' since "It is neither possible nor desirable to propose a one-size-fits-all policy mix to all countries" (ITU, 2022). Despite this I later found that research suggested that the Zenzeleni Community Networks met more of the criteria, three out of five, than Facebook's Free Basics, one out of five.

Furthermore, as stated in the UNHCR report, "Community-led Connectivity: Assessing the Potential of Community Network Models in the Context of Forced Displacement in East Africa," this UN agency included a list of five potential benefits to community network connectivity among forced displaced communities. One of which stated that community networks:

“Foster a sense of agency within the community which can amplify their sense of capability in being able to help improve the quality of life of the community members.”

This thesis, in focusing on the BOSCO Uganda community network, run by an ethnic population in East Africa that was forced to live in internally displaced persons camps, directly relates to the content within this report.

From the results of analysis in this thesis, that the BOSCO Uganda community network promoted elements of their history not displayed by one of the most utilized online information sources in the world (Statistics & Data, 2021), it can be inferred that this supports the aforementioned benefit identified in the UNHCR report. In doing so, the findings in this thesis advances the research in the UNHCR and connects it to the criteria for meaningful connectivity created by the ITU to suggest that community network connectivity is the best method of connectivity for displaced populations in East Africa.

6.2.3 The Lack of Intersectionality on the Internet

This thesis combined the research of Boaventura de Sousa Santos, Dr. Clifford Meesua Sibani, and Dr. Sangeet Kumar and their assessment of the impact of Western epistemology on non-Western epistemologies to see how it translates to sharing information online. The results of the analysis infer that community network connectivity increased the amount of non-Western epistemology on the internet.

Boaventura de Sousa Santos established the concept of the abyssal line, which explained how Western thinking is abyssal and consists of a line that divides social society in such a way that whatever lies on the other, non-Western side of the line remains invisible or simply irrelevant (Sousa Santos, 2007). This research is supported by Dr. Sibani who stated that the increased presence of Western culture diminished traditional African society, and included that rural communities, due to being the least exposed to Western culture, is where it is practiced the most. Nevertheless, Dr. Sibani suggested that the increased presence of Western technology is an additional diminishing factor on African traditional society. Additionally, Dr. Kumar found a specific connection between the dominant presence of Western culture and knowledge online and how it has a significant impact on non-Western cultures.

All of this research is particularly impactful in regard to its connection to the Acholi ethnic population. Existing research has shown that the decades of violence and displacement have greatly affected the traditional knowledge within rural Acholi communities due to the displacement from their traditional land and the death of a generation of elders (Okot, 2013). This suggests that significant elements of the non-Western traditional knowledge and culture attached to the rural Acholi communities is at risk of being lost. In being consistent with the research by the three authors presented above, the fact that the Acholi became connected to the internet suggests that their non-Western traditional knowledge and culture would be diminished even more due to this connection to the internet.

However, what was found in this analysis was that the BOSCO Uganda community network website was able to increase the presence of non-Western knowledge online and include a transcription of an oral history told by the Paimol Cultural Director. This analysis builds on this research by inferring that community network connectivity is able to reverse a trend of subversion of non-Western content observed when non-Western cultures connect to the internet.

6.3 Limitations of Research

The methodological choices of this study were constrained by my inability to interview the members of the BOSCO Uganda community network. This would have been able to provide a more direct link to the intentions of posting the section of the report on Paimol within their blog and would be able to provide more context to how their ownership and participation in a network impacts how they interact with information online. These limitations are principally due to the lack of funding for this research, the language barrier between the subjects and myself, and a lack of response from the BOSCO Uganda community network via email. Additionally, the fact that this case study was limited to one community network limits the overall generalizability of its findings.

Despite these limitations, an interview with Dr. Shaun Pather, a board member of the Zenzeleni Community Networks, where we discussed the constraints surrounding the inability to interview members of the network, led to his assurance that it would still be an effective study.

Furthermore, since the BOSCO Uganda community network and the Acholi ethnic population was able to apply to existing research on the topic it proved to be a good case study on the impact of community network connectivity on rural communities in Africa.

6.4 Recommendations

As outlined in the results of this study, connectivity to the internet through community networks changes how rural communities in the global south interact with information online, which makes information about that population more expressive when directly compared to Wikipedia's coverage of the same subject. However, due to the limitations of this research listed in this thesis was unable to make causal relations with community network connectivity and its benefits to rural communities in Africa or the global south more broadly. The essential function of this thesis is bridging existing research to infer that there can be a causal relationship between the two factors if researched further without the same constraints. Therefore, each section of research (continuity of colonization through connectivity, how community networks differ from traditional forms of connectivity, and the abyssal line) can serve as foundations for future research to make a causal relation.

Furthermore, since Wikipedia is one of the most utilized corpora, or data sources, that large-language models such as Chat GPT-3, LaMDA, and LLaMA are being trained on (Zhao et al., 2023). The inference made that community network connectivity can increase the presence and representation of non-Western communities and their epistemologies not properly represented by Wikipedia, can be used to research Wikipedia's impact on algorithmic bias. Therefore, this new technology that is estimated to replace the equivalent of three-hundred million full-time jobs and subsequently have a massive impact on society (Vallance, 2023), is being developed in the West and being trained off of Western information sources. The finding in this thesis inferred that one of the primary sources utilized in training this new technology does not accurately portray how the Acholi people view their own ethnicity. This inference suggests that training AI on Wikipedia, and other Western sources of information just like it, could be at the root of the algorithmic bias we see today.

7. Conclusion

This thesis aimed to further contextualize the impact of connecting the remaining 37% of the world that is now unconnected to the internet through community networks and how this connectivity impacts how the new users critically interact with information online (International Telecommunication Union, 2021). Through a qualitative analysis of a blog post on the website of a community network and a Wikipedia article it can be inferred that a rural African communities' ownership in a network increases their ability to make aspects of their history not accurately represented by Wikipedia more accessible to the public. While this might seem to be an obvious conclusion, it suggests that through community network connectivity, a population that has been historically underrepresented can control how they are represented to a global audience.

The BOSCO Uganda community network, through its utilization of sources and content written in a blog posted on their website, was able to promote more non-Western perspectives which led to a different portrayal of information when compared to the Wikipedia article. Additional analysis in the content and sources of both the blog post and article suggested that the Wikipedia article inaccurately represented the ethnicity and identity of the rural communities that make up the Acholi ethnic population.

The methodological choice for this analysis was inspired by the research of Dr. Sangeet Kumar, who found that Wikipedia favors Western sources and restricts non-Western epistemology. This research sparked a desire to test if community networks would provide a pathway to mitigate this subversion of non-Western epistemology.

At the start of this research, I hypothesized that the strong communal bond linked to the creation and maintaining a network connection would effectively mitigate some of the challenges associated with connecting to a digital landscape dominated by Western culture. While my results did not directly prove that strengthened communal bonds were directly attributed to the increased portrayal of local community history, my results did include a digital transcription of an oral history told by the Cultural Director of the rural Paimol Acholi community. This inclusion of an oral history from a community leader infers that the community network increased the portrayal of pre-colonial history containing non-Western epistemology.

Based on the findings, practitioners should consider building upon these inferences to find a causal connection. As stated in the discussion, this thesis can be a foundation for research into

the impact of training large language models on Wikipedia articles and how it contributes to algorithmic bias seen in AI. This issue has been highlighted as a critical issue within President Biden's "Executive Order on Safe, Secure, and Trustworthy Artificial Intelligence," which stated that "Irresponsible uses of AI can lead to and deepen discrimination bias." Furthermore, a key point in addressing this concern is that the President directed large language models to "Address algorithmic discrimination through training" (White House, 2023). This thesis can help to outline the root cause of the bias that exists on the internet and how it can be addressed in a way linked to increased development of misrepresented and displaced communities.

Moreover, this thesis builds upon and connects significant research on current issues relating to connectivity, neo-colonization, and subversion of non-Western epistemology by examining them through the lens of community network connectivity. Research surrounding the exploitation of the global south for increased profits of tech companies, can be critically examined through a restriction in self-expression through restricting full access to the internet. Additional research explored the concept of 'meaningful connectivity' yet did not include recommendations for specific methods. In advancing existing research by the UNHCR on displaced populations in East Africa, this thesis can be utilized to further research how to reach the 'meaningful connectivity' criteria in a less restrictive manner than Free Basics, currently operating in thirty-two African countries (Nothias, 2020).

Research that displayed Western epistemology suppressing non-Western epistemology through the internet and increased interaction with Western content can be explored further due to the Acholi involved with BOSCO Uganda increasing the presence of non-Western content. While the existing research identified the problems, the inferences in this thesis could start the process of finding pathways for solutions. To extend the metaphor initially provided by Dr. Sangeet Kumar on the *Digital Frontier*, I push for a *Digital Sequoyah* to introduce connectivity that would mirror the path the Cherokee Nation took in successfully preserving their language.

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