led by Illinois Digital Environment for Ac

Harnessing Social Media for Promoting Tourism in Africa: An Exploratory Analysis of Tweets

Daniel Gelaw Alemneh¹, Shimelis Assefa², and Abebe Rorissa³ ¹University of North Texas ²University of Denver ³University at Albany

Abstract

Tourism has the potential to be the engine of a country's economic development. Some developing countries, especially those in Africa, rely on tourism for their citizens' employment. Consequently, the rise and fall of their unemployment rates are closely associated with that of tourist numbers. Hence, they need to constantly find ways to promote their cultural heritage in order to attract more tourists. Some of the key promotion tools are social media such as Twitter and an investigation to understand the nature of tweets about cultural heritage institutions is an important undertaking. However, investigations into the nature of tweets about African cultural heritage are non-existent. Our research aims to shed some light on the broad characteristics of tweets about African cultural heritage. We also identify possible implications and suggest potential strategies for tourism stakeholders in their use of Social Media in general and Twitter in particular.

Keywords: tourism; social media; Twitter; Africa; cultural heritage doi: 10.9776/16455 Copyright: Copyright is held by the authors. Contact: Daniel.Alemneh@unt.edu

1 Introduction

Tourism has proven to be one of the economic engines in places such as Africa. Globally, tourism is estimated to account for over 5% of gross domestic product (GDP) (United Nations Conference on Trade and Development, 2010). In order to attract more tourists, African countries are constantly looking for ways to promote their cultural heritage sites and institutions. Recently, social media tools such as Twitter have opened new avenues for countries to conduct marketing campaigns.

Often, tourists themselves are the ones who generate some of the publicity because they are likely to share their experiences after visiting a country and/or cultural heritage. However, the nature and types of tweets by tourists or visitors about their experiences with and opinions of a country's cultural heritage could have implications for the country's future reputation, not to mention its ability to attract more visitors. In the African context, investigations into the nature of cultural heritage institutions as well as tweets about the institutions are lacking. Therefore, our work attempts to:

- · identify the source and location of tweets about African cultural heritage
- characterize visitors who tweet about African cultural heritage and their information flow network
- identify sentiments, trending topics and popular subjects discussed with respect to African cultural heritage

Based on our findings, we identify possible implications and suggest potential strategies for tourism administrators and other stakeholders in their use of Social Media in general and Twitter in particular.

2 Overview of Tourism and Destinations in Africa

Countries around the world have benefited from tourism as international global arrivals have grown. From 1980 to 2000, arrivals in the Asia Pacific region grew from 8% to 22% contributing to economic growth and improved livelihoods. During the same period, Africa's market share for global tourism grew from 3% (1980) to 5% (2010). According to the World Bank report, the number of tourists arriving in Sub Saharan Africa has grown over 300% since 1990, with 2012 marking a high of 33.8 million tourists. Income generated from tourism has also climbed: Receipts from hotels, tours and other attractions in 2012 amounted to over US\$36 billion and directly contributed over 2.8% to the region's GDP (World Bank, 2013).

3 Tourism Information via Social Media

Rogerson (2007) and Srinivasan (2015), among others, agree that Africa is a small but expanding region of the global tourism economy. At the same time, the expansion of tourism in Africa faces a number of challenges, including lack of security/safety, poor infrastructure, publicity, and lack of proper marketing strategies.

Africa is one of the few places in the world where heritage sites such as rock-hewn churches exist. But not many people know that the Axum Kingdom of East Africa was one of the four great empires comparable to those of China, Persia, and Rome. Although existing cultural heritage and unique resources can be a big draw for tourists, Africa is also a continent with a long, rich, fascinating, and mysterious history known only to the locals or curious wanderers. Several African historical masterpieces remain hidden from the outside world. Another demonstration of lack of awareness about Africa by potential tourists is the fact that not many people know that the Danakil Depression (in the East African Afar triangle) is the lowest place on the planet (Elevation: 125 meters below sea level). The Afar region is often referred to as the cradle of hominids after archeologists found, the famed Lucy fossils dated 3.2 million years (Andrews, 2014).

Traditionally, marketing campaigns used to require a significant amount of investments. Over the past few years, the media landscape has changed dramatically. While traditional methods still exist, the Internet and social media have opened new avenues for anyone to market any products and services practically for free. In fact, social media tools enable users to broadcast their everyday lives in detail and now (in mid-2015) accounts for more than 50 million monthly streams in the US alone. According to Hirschhorn (2015), by the end of the decade, many traditional networks will be shocked to find they've been supplanted in the minds of many Millennials and Generation Zs.

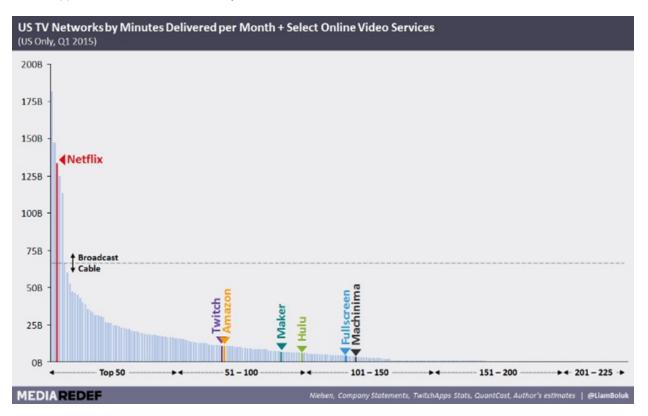


Figure 1. The growing market share of online video services vs. the eroded ratings of tradition TV in the US (*Source: Hirschhorn, 2015*)

As can be seen from Figure-1, the emerging social media based next generation video entertainment networks (e.g., Maker, Fullscreen and Machinima) are already delivering enough content to US viewers and audiences to challenge major TV networks. Web 2.0 is a cluster of web-based services with social collaboration and sharing component. One of the key tools for promoting a service, product, or anything for that matter, is social media such as tagging and Twitter.

Xiang and Gretzel (2010) noted the growth of social media within a travel information search setting, including, blog sites (e.g., travelpost and blogspot) and social networking sites (e.g., meetup). Certain social media Websites such as TripAdvisor, VirtualTourist and travel specific sites are becoming increasingly popular and are likely to evolve into primary online travel information sources. In addition, the idea of user tagging systems that allow the community to tag information in ways that would be more easily predicted by the user since it was tagged by another user of that online community. This type of tagging system would be ideally suitable to implement in smaller communities such as local tourism websites or fan sites that have a common theme or similar mindsets between the users.

Twitter offers countries new platforms for connecting their resources with potential users, customers, and/or visitors in a more personal way. Tourists' or visitors' tweets about their experiences could positively or negatively affect the host countries' or institutions' images, future reputations, and abilities to attract more visitors.

4 Methods

The procedures and methods in this study involved text analysis of publicly available tweet messages. Tweets were acquired via twitter API and Apigee services using combinations of broad search terms such as – Africa and cultural heritage, Africa and museum, Africa and safari, Africa and tourism, and Africa and holiday destinations. The tweet datasets were prepared and organized into categorical variables to reflect the – actual tweet messages, tweet usernames, hashtags, retweet counts, location, and user mentions. About 20,000 tweet messages were downloaded and saved as textual documents.

Using statistical and linguistic text analysis software called T-LAB (http://tlab.it/en), the textual document was transformed into corpus files for processing.

5 Results and Discussions

Figure 2 shows a word association diagram where "Tourism," is selected and placed in the center to identify what other words are associated with it and the degree of association. Every time the key-term "Tourism," is mentioned in the tweet messages, the context within which it occurs include – mentioning of the idea that tourism is related to – unemployment, boost the economy, business, earning, revenue, promotion, and how in some countries the industry defies slump, and in others there is a downturn due to, conflict, war, and terrorist attack, as well as the threat on elephant tusk exports.

Countries frequently mentioned in connection with the key term "Tourism," include – Kenya, Tanzania, Zimbabwe, Egypt, Tunisia, and Seychelles. The countries seem to correlate with few successful countries in tourism in Africa that are thriving due to a variety of factors. For example, tourism in Egypt is based on the rich history of Ancient Egypt, the pyramids, and other artifacts. Others with rich wild safari expeditions, like Kenya and Tanzania are attracting tourists to see the wildlife of Africa. Countries such as Tunisia benefit from their beautiful beaches and, their relative proximity to Europe.

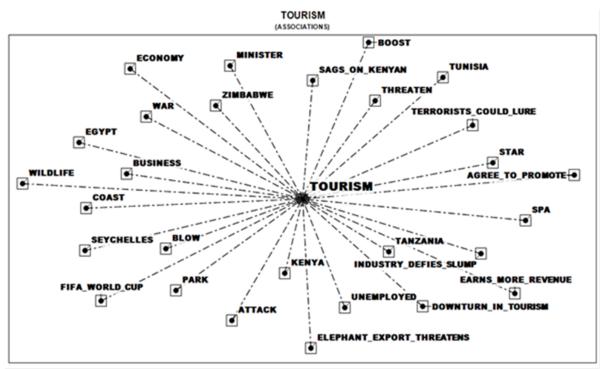


Figure 2. Word Association diagram around "Tourism"

Figure 3 depicts results of a sequence analysis where by choosing "Africa," as a node, an attempt has been made to illustrate the predecessors and successors (as in graph theory) of the node "Africa". The arrows pointing towards the node (in-degree) are types of predecessors and the arrows pointing away from the node (out-degree) are types of successors. The sequence analysis utilizes Markovian chain algorithm where TLAB calculates the transition probabilities between predecessors and successors.

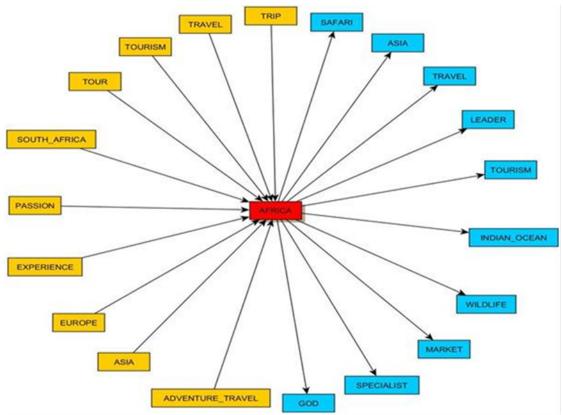


Figure 3. Predecessors and Successors of the node "Africa"

According to graph theory if the ratio (successors/predecessors) is greater than 1, the node is defined "source"; if the ratio is equal to 1, the node is defined "relay"; and if the ratio is lower than 1, the node is defined "well." The partial summary table shown in Figure 4, the nodes with the ratio above in connection with the selected node "Africa" are – cultural heritage; Celebrate; World; View; BBC; World heritage sites; and people. It is worth noting that UNESCO and Facebook are relay nodes with ratio score of 1 each.

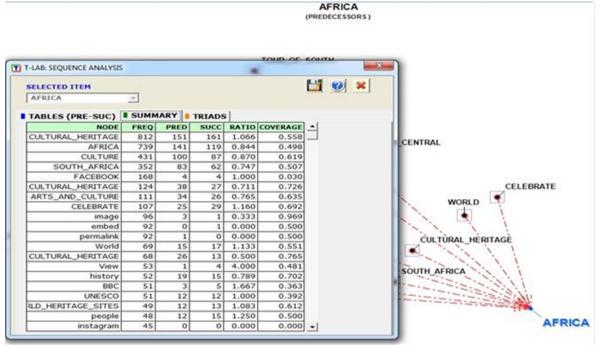


Figure 4. Summary, predecessors/successors for selected node "Africa"

5.1 Summary

In these times of rampant globalization, as noted by the UNESCO High Panel, if it is to rise to these global challenges, 21st century humanism will have to be based on principles of interculturality (UNESCO 2011). Tourism can help promote peace and stability by creating mutual understanding among nations, cultures, ethnic groups, and religions. With the help of digital telecommunications, social media can be another medium for communications and building bridges to reach the unreachable.

6 References

- Andrews, E. (2014). Famed "Lucy" fossils discovered in Ethiopia, 40 years ago. Retrieved June 24, 2015 from http://www.history.com/news/famed-lucy-fossils-discovered-in-ethiopia-40-years-ago.
- Hirschhorn, J. (2015). 7 Deadly sins: Where Hollywood is wrong about the future of TV. Retrieved June 24, 2015 from https://www.linkedin.com/pulse/7-deadly-sins-where-hollywood-wrong-future-tvjason-hirschhorn
- Rogerson, C. (2007). Reviewing Africa in the global tourism economy. *Development Southern Africa*, 24(3), 361-379.

Srinivasan, S. (2015). Ethiopia: 'Ger'alta', Ethiopian sacred homeland of Christian heritage - a tourism viewpoint. In *AllAfrica Global Media*. Retrieved June 24, 2015 from http://allafrica.com/stories/201506151078.html

UNESCO (2015). Rock-hewn churches. Retrieved June 24, 2015 from http://whc.unesco.org/en/list/18

UNESCO (2011). The meeting of high panel on peace and dialogue among cultures. New York: United

Nations. Retrieved June 24, 2015 from http://unesdoc.unesco.org/images/0019/001923/192362e.pdf United Nations Conference on Trade and Development. (2010). *The contribution of tourism to trade and development*. Retrieved June 24, 2015 from http://unctad.org/en/docs/cid8_en.pdf.

World Bank (2013). *Tourism in Africa: Harnessing tourism for growth and improved livelihoods*. Retrieved June 24, 2015 from http://www.worldbank.org/afr/tourism.

Xiang, Z., and Gretzel, U. (2010). Role of social media in online travel information search. *Tourism Management*, *31*, 179–188.