

Who Set the Narrative? Assessing the Influence of Chinese Media in News Coverage of COVID-19 in 30 African Countries

The size of China's State-owned media's operations in Africa has grown significantly since the early 2000s. Previous research on the impact of increased Sino-African mediated engagements has been inconclusive. Some researchers hold that public opinion towards China in African nations has been improving because of the increased media presence. Others argue that the impact is rather limited, particularly when it comes to affecting how African media cover China-related stories. This paper seeks to contribute to this debate by exploring the extent to which news media in 30 African countries relied on Chinese news sources to cover China and the COVID-19 outbreak during the first half of 2020. By computationally analyzing a corpus of 500,000 news stories, I show that, compared to other major global players (e.g. Reuters, AFP), content distributed by Chinese media (e.g. Xinhua, China Daily, People's Daily) is much less likely to be used by African news organizations, both in English and French speaking countries. The analysis also reveals a gap in the prevailing themes in Chinese and African media's coverage of the pandemic. The implications of these findings for the sub-field of Sino-African media relations, and the study of global news flows is discussed.

Keywords: China-Africa, Xinhua, news agencies, computational text analysis, big data, intermedia agenda setting

Beginning in the mid-2010s, Chinese media began to substantially increase their presence in many African countries, as part of China's ambitious going out strategy that covered a myriad of economic activities, including entertainment, telecommunications and news content (Keane, 2016). In a way, this was a "return" to the continent (Alden, Large, & Oliveira, 2008), as Chinese media used to have a substantial footprint in Sub-Saharan Africa during the 1950s and 1960s (Z. Huang, 1996). The widespread reach of Chinese media in most African countries today, from State-controlled news organizations such as CGTN (China Global Television Network) and Xinhua, a news agency, to StarTimes, a privately-owned pay TV operator, is undeniable, and has thus received a fair share of scholarly attention (Zhang, Wasserman, & Mano, 2016), as well as interest from news media around the world (AP, 2016; BBC World, 2012). Nonetheless, there's limited evidence about the actual impact that this increased presence is having on local audiences' news consumption habits (Gorfinkel, Joffe, Van Staden, & Wu, 2014; Guyo & Yu, 2019; Wasserman & Madrid-Morales, 2018), on the content of local news media (Madrid-Morales & Wasserman, 2018; Wasserman, 2016), and, more generally, on domestic narratives about China, and Africa-China relations (Skjerdal & Gusu, 2016; Yeboah-Banin, Tietaah, & Akrofi-Quarcoo, 2019). This paper represents the first attempt at quantifying the last two at scale.

Previous research has shown that coverage of Sino-African relations tends to be somewhat episodic (Madrid-Morales & Gorfinkel, 2018), mostly read through a domestic perspective (Wasserman, 2015), and is often framed in terms of uncertainty regarding the actual benefit or possible harm of closer engagement between China and African countries (Řehák, 2016; Yeboah-Banin et al., 2019). While some themes, such as those related to loans, infrastructure and debt, or multilateral exchanges within the Forum on China-Africa Cooperation

or FOCAC, might generate enough interest across the continent at certain points in time, the volume of news coverage on a day to day basis tends to be somewhat limited. Because of the episodic nature of news coverage about China's engagement with Africa, the outbreak in late 2019 of COVID-19, the coronavirus disease caused by SARS-CoV-2, presents an excellent case study for a paper, like this one, aimed at measuring news coverage about China in Sub-Saharan Africa. The COVID-19 "news event" had a global impact (including all African countries), it was prolonged in time, it included multiple news sub-events, and it showcased many dimensions of China's engagement with the continent (Gabore, 2020).

Using COVID-19 as a case study, this paper seeks to quantify how much news content generated by Chinese media makes its way into African media, and examines the extent to which Chinese narratives shape the news agenda about China on the continent. To do so, I apply two computational text analysis methods (a text similarity detection algorithm and structural topic modeling or STM) on a corpus of approximately half a million news items published by hundreds of news organizations in 32 African countries, as well as those distributed by global news producers such as Xinhua, Reuters and CNN among others. The analysis presented in this paper, as well as the discussion, are anchored on academic literature about global information flows, intermedia agenda setting theory, as well as in previous studies on Sino-African mediated engagements. The next two sections provide an overview of said literature.

Global News Flows and Intermedia Agenda Setting

The impact of global news agencies from the Global North on the news media of the Global South, including those in Sub-Saharan Africa, has long been a preoccupation of scholars of global communication (Boyd-Barrett, 1980; Paterson, 2011). The quasi-monopoly that some news agencies had in the production and distribution of information, and the negative

consequences of a unidirectional flow of information from the North to the South became contentious issues in the 1970s and 1980s, not only in academia, but also in political discourse, particularly within the walls of UNESCO, the United Nations Educational, Scientific and Cultural Organization (Hamelink, 2015; Padovani & Nordenstreng, 2005). These discussions led to the publication of the McBride report, a set of policy recommendations for a more just flow of information globally, as opposed to the free flow that was in place during most of the Cold War (Hannah, 2018). Since then, empirical academic studies on global news flows have declined, but the interest on global news agencies, and their impact on the news agendas of countries on the periphery of the world system has remained (Boyd-Barrett, 2000; Paterson, 2013).

Interest in the ability of well-established news organizations, such as news agencies, to influence on the salience of themes or the way certain issues are discussed in smaller or less-established news organizations is what McCombs (2004) termed as “intermedia agenda setting.” Studies on this topic have mostly focused on domestic media (Guo, 2019; Heim, 2013), but some have begun to look at global cases. For example, Guo and Vargo (2020) use the term “transnational intermedia agenda setting” to refer to a) the ability of news media in a given country to “transfer the salience of issues associated with their own country to foreign media, thus influencing how foreign media portray the country” (p. 3); and, b) “the capability of a country’s news media to push their perspectives on international politics outside of their own country to the world” (p. 3).

For most of the twentieth century the interest of scholars of global news flows was centered around the possible effect that privately-owned transnational media corporations would have on the media industries in the South (Robinson, 2002; Tomlinson, 2002). Since the mid-2000s, however, interest in the private sector has shifted towards the possible impact of State-

owned media on global news narratives (Cushion & Lewis, 2010). The interest in the renewed centrality of the State in global communication (Sparks, 2012) was first spurred by the arrival of Qatar's Al Jazeera English (Seib, 2005), and has been increasing as other partly or fully State-funded television networks and news agencies have become more prominent globally. Many of the "new players" in the global news market are authoritarian regimes, such as Russia, Iran or China, which are now competing for influence with long-established players like France, Germany or the UK (Hernández & Madrid-Morales, 2020). One characteristic shared by all these State-backed media enterprises is their willingness to increase their intermedia agenda setting capabilities in a few countries, regions, linguistic communities, or worldwide. In the case of China, efforts to increase its "discursive power" (Lee, 2016) have had a global reach, but it is probably in Africa where the impact has been thought to be most palpable, as news headlines such as "Chinese media make inroads into Africa" (McKenzie, 2012) and "Live From Nairobi, China Puts Its Stamp on News in Africa" (Jacobs, 2012) would seem to suggest. In the next section, however, I discuss the inconclusive evidence found in the literature to support such claims.

China-Africa Mediated Relations

In 2006, China's State-owned news agency, Xinhua, moved all of its editorial offices for Sub-Saharan Africa from Paris, where they had been for decades, to Nairobi (Xin, 2009). China's Central Television had been expanding its operations in Sub-Africa for some time when, in 2012, launched a production and broadcasting center in Kenya's capital (Zhang, 2013). China Radio International (CRI), which has been broadcasting in the continent since the 1960s, now operates a multilingual FM station in Kenya, and has a significant presence in other parts of the continent, including French-speaking West Africa (Mihoubi, 2019). *China Daily*, a newspaper, and

Chinafrica, a magazine, also launched African operations in 2012 (Wasserman & Madrid-Morales, 2018). All of this was the culmination of a broader strategy by then Chinese president Hu Jintao to give China a louder voice in global discussions around China's development, its engagement with the world and, even more specifically, the nature of Sino-African relations. At the opening of CCTV's bureau in Nairobi, the Chinese Ambassador was very specific about the objectives: "tell Africa a good 'story of China'" (Liu, 2012).

While the reach of Chinese media in Africa has never been larger than it is now, the actual extent of Chinese media's impact on African audiences and content remains a rather elusive question. Bailard (2016) has suggested that, in countries where Chinese media have the largest presence, attitudes towards China improved over time. However, Madrid-Morales and Wasserman (2018) have shown that few media professionals, policy makers and journalism students in Kenya and South Africa, the two markets where Chinese media presence is most felt, would agree with the assertion that Chinese media are having an impact on their countries editorial agendas. An analysis of focus group data and in-depth interviews revealed that very few are exposed to Chinese content, and that those that are, make a very critical reading of the content (Madrid-Morales & Wasserman, 2018). Their findings concur with other audience studies in Africa (Gorfinkel et al., 2014; Guyo & Yu, 2019; Xiang, 2018).

While direct influence might be limited, Wasserman and Madrid-Morales (2018) and Madrid-Morales (2018) did find that it is through indirect means that Chinese media might actually have a certain degree of influence on the content to which African audiences are exposed. They found evidence of Kenyan journalists relaying on Xinhua news wire, and also noted that, through content exchanges and syndication agreements, a significant amount of news content might be making its way through local media. While evidence of this practice has been

identified by others (Serwornoo, 2019b), and is often publicized by Chinese media themselves, no study has attempted to quantify the extent of said influence across the continent, particularly vis-à-vis other international news agencies.

In this paper, I explore Chinese media's transnational intermedia agenda setting capabilities in Africa at two levels. First, I consider content from Chinese media that is used—word by word—by African media through text reuse or *churnalism* (Nicholls, 2019). Second, there's the possibility that broader Chinese efforts to shape news narratives (e.g. press conferences, use of social media, influence on opinion leaders....) are having an impact on the selection of topics related to China that are covered by African media, or the way these topics are discussed. With the aim of exploring both of these levels, and using the COVID-19 outbreak as a case study, this paper is guided by the following research questions:

RQ1: How prevalent were news stories about China and COVID-19 in African media between January and May 2020?

RQ2: How much content from global media do African news organizations reuse in their reporting?

RQ3: Are there differences in the extent of Chinese media's influence on Francophone and Anglophone Africa?

RQ4: How much of China's narrative during the crisis was reflected in African media's coverage of the pandemic?

Methods

This paper uses computational content analysis to answer the questions presented above. With computational tools, researchers are able to explore general patterns in large volumes of textual data (De Grove, Boghe, & De Marez, 2020; Lewis, Zamith, & Hermida, 2013), and tackle

questions that might have been difficult to address with manual content analysis (Trilling & Jonkman, 2018). The approaches employed in this paper, a) using document similarity algorithms to identify text reuse (Nicholls, 2019; Vogler, Udris, & Eisenegger, 2020), and b) fitting structural topic models to uncover themes in news texts (Barberá, Boydston, Linn, McMahon, & Nagler, 2020; Kananovich, 2018) have been shown to produce reliable data to answer similar questions in the past.

Data collection

For this study, I compiled a bilingual (English and French) corpus comprising ca. 500,000 news articles about China, and about COVID-19 published by African Chinese, French, British and U.S. media organizations. The corpus covers the period from January 1, 2020 to May 31, 2020. To build the corpus, data was retrieved from two sources. First, using Nexis Uni—a database that includes full-text news content in multiple languages—I retrieved 207,227 items from 142 sources in 34 countries. Because African countries are severely underrepresented in commercial databases such as Nexis Uni (Author, 2020), I retrieved additional content via the Global Database of Events, Language, and Tone (GDELT) project database, an initiative that monitors and analyzes content published online, mostly from news organizations (Hopp, Schaffer, Fisher, & Weber, 2019).

Using the project’s Global Knowledge Graph database, I first selected all items labelled as having “PANDEMIC” as a theme. I then restricted the list of 14 million URLs found in the database, to those published by relevant global Chinese media (Xinhua, *China Daily*, CGTN, *Global Times* and *People’s Daily*), international news agencies (AFP, Associated Press, Reuters), other influential non-Chinese international media (CNN, BBC, *Le Monde*, *Libération*, *La Croix*), and those included in a personally-curated list comprising 2,000 African news

websites in French and English (out of which around 400 had a match in the GDELT database). To retrieve content from each URL (GDELT does not provide access to the full text of items it analyzes), a web scraper was built on Python, using a combination of three libraries—justtext, trafilatura and goose3—that are able to remove non-relevant text content (e.g. boilerplates) from scraped webpages. The scripts used for data collection, as well as those employed in the analysis are available at [link to be provided upon publication].

Analysis

This paper uses both country and linguistic region as levels of analysis. 30 African countries are included in the analysis, and are divided in two linguistic regions: sixteen are in English speaking countries, or in countries with a relatively established English-language media landscape (Botswana, Cameroon, Egypt, Gambia, Ghana, Kenya, Liberia, Malawi, Namibia, Nigeria, Sierra Leone, South Africa, Tanzania, Uganda, Zambia, Zimbabwe) and fifteen are in French speaking Africa, or in countries with a significant amount of media outlets in French (Algeria, Benin, Burkina Faso, Cameroon, Congo, Democratic Republic of Congo, Gabon, Guinea, Ivory Coast, Madagascar, Mali, Morocco, Senegal, Togo and Tunisia). These countries represent a wide geographic spread, as well as diverse stages of development of their domestic media markets, and have seen different levels of influence of Chinese media organizations.

To answer RQ1 and RQ2, I measured the amount of content published in the news media of the countries listed above that was originally created by news organizations in the U.S., U.K, France and China. These countries are home to the world's four largest news agencies, and their media organizations have had a sustained influence/presence in Africa for decades (Paterson, 2016). The influence of France and the U.K. is a legacy of their colonial past, while the presence of media from the U.S. and China goes back to the early days of the Cold War, when both

countries—alongside the former U.S.S.R.—where involved in global propaganda efforts, including in Africa (Pradet, 1963).

To measure the volume of text reuse, I rely on R's RNewsflow package (Welbers & van Atteveldt, 2020). Each article published by an African news organization was compared to articles published in one of the four non-African countries using a 48-hour sliding window. In other words, each article published by Reuters on January 1 was compared to all articles published between January 1 and January 3, to account for possible delays in re-publication. RNewsflow relies on R's *quanteda* (Benoit et al., 2018) package's text similarity functions, which, for any two given documents, uses matrices of word frequencies to compute pairwise cosine similarity values ranging from 0 (completely different articles) to 1 (identical articles). In this paper, articles with a score above 0.97 are considered as text reuse. To determine this threshold, a human coder inspected a random sample of 100 articles from one single day (January 18), and determined whether each pairwise comparison included identical/very similar articles or not. The results of the human coder were compared to those of the algorithm at different values of cosine similarity. The best match was 0.970, which rendered an F1 score of 0.98, indicating very high precision and recall for the model.

With RQ4, instead of estimating direct text reuse, the goal is to compare the distribution of themes. In other words, it is possible that African journalists paraphrase and repurpose content from foreign sources (as is standard practice in newsrooms), but retain some of the key narratives that come with them. To extract themes, I fit two structural topic models (STM), one for each language (French and English). The STM algorithm allows researchers to estimate the probability of each news item belonging to k number of topics (or themes), while accounting for

document-level metadata (e.g. news source, country of publication and date). Details about the steps taken in fitting the STM model are presented in the findings section below.

Findings

Coverage of COVID-19 in most of the African countries (RQ₁) included in the corpus was rather low at the beginning of 2020, began to increase in March, and peaked around April. The only two exceptions to this trend are Tanzania, where the peak came in May, and South Africa, which reached its highest level in March. The evolution of the amount of news coverage in South Africa, the country most affected by COVID-19 in Sub-Saharan Africa during the first half of 2020, is similar to that of three of the non-African countries in the corpus: China, France and the United Kingdom. In Figure 1, I present a break down by country of the number of stories by type of content. Overall, the corpus includes 345,505 news stories that refer to the virus but do not mention China (69% of all news items); 117,763 that discuss COVID-19, but do not mention China (24%); and, 34,009 stories about China that are not related to the outbreak. Most of these stories unrelated to the pandemic were published during the month of January when, particularly Chinese media, were not widely discussing the situation in Wuhan. Starting in February 2020, news coverage about China across the African continent was focused, almost exclusively on coronavirus-related stories.

[FIGURE 1]

If we take the month of January as an example of “normal” news coverage of China in most countries (i.e. a benchmark of how often China is featured in the news when there’s no unusual newsworthy event), we can then conclude that, during the height of the COVID-19 crisis, the majority of countries in Africa were talking about China significantly more than usual. For example, in January, 292 stories published in Kenya mentioned China, the number increased

to 567 in February, and peaked in March (1,134). Similar patterns are observable elsewhere, particularly in countries where China is rarely on the news. In Cameroon, for instance, there were 28 stories about China in January, the number increased to 150 in February, went up to 186 in March, and was still at 151 in April. Of these, 98% in February, 96% in March, and 97% in April were about China and COVID-19.

The main drivers of news coverage of China in Francophone Africa were two online-based media, *seneweb.com* in Senegal (484), and Mali's *mali-web.org* (440), and Algeria's newspaper *L'Expression* (452). In English-speaking Africa, we find two online portals, South Africa's *iol.co.za* (2,986) and *onlinenigeria.com* (2,307) on top of the list. It is worth noting, however, that in both linguistic contexts, there's a very significant gap in the amount of content about China generated by global news players, and the amount published by local media. In French-speaking Africa, seven of the top 10 news outlets ranked by the number of news items about China are not based in the continent, and account for 65% of total news coverage about China. In Anglophone Africa, the top 7 news content producers (all of which are non-African) represent 62% of the total coverage.

Global News Agencies' Text Reuse in African Media

Excluding text reuse between African media, I identified 15,991 news stories published by media in Africa that were very similar or identical (with a cosine similarity score of 0.98 and above) to those published by non-African media (RQ₂). The vast majority of these stories were originally published by French news outlets (67.1%), followed by British (21.9%), Chinese (6.9%), and U.S. media (4.1%). When these data are disaggregated by news organization, France's AFP is revealed as the most influential foreign source. Approximately 3.6% of all items in the corpus come from the French agency. Next comes Reuters with 1.1%, and then, at a significant distance,

Xinhua 0.2%. In Table 1, I present a summary of text reuse by type of content. Overall, content from Chinese media is significantly less likely to be used by African media than content published by French and British global news media such as Reuters, AFP or the BBC ($\chi^2 = 148.73$; $df = 6$; $p < .001$). This is very clear in the amount of news stories about COVID-19 that mention China. There were 5,862 such stories that were identified as instances of text reuse in the corpus. Of these, 66% had a French news organization as the original source, 24% had a British origin, and just 7% came from a Chinese source. The percentages are very similar for stories about COVID-19 that do not mention China ($n = 9,864$). The rank of influential sources shifts slightly when we look at the much smaller category of reused news about China that do not address COVID-19 ($n = 265$). In this case, Chinese sources (13.2%) outperform British sources (2.26%), but still trail behind French ones (70.2%).

[TABLE 1]

Next, let us examine RQ₃, which is interested in differences between English (Figure 2) and French (Figure 3) speaking countries in Africa. Text reuse appears to be more common in the former than the latter. Approximately 3.9% of news stories in the English corpus were flagged as text reuse, as opposed to 1.2% in the French corpus. In both Anglophone and Francophone media, out of the 14 non-African media organizations included in the corpus, France's AFP is the most often used source of news content. As shown in figure 2b, over 10% of news stories published by Kenyan and Ugandan media could be traced back to French sources (AFP to be precise). Chinese sources appear to be much less influential across the board. Text reuse from Chinese media averaged 0.4% in the French corpus, and 0.7% in the English one. These percentages are much lower than those of French media (1.5%; 4%), but at par with British (0.2%; 0.9%), and better than U.S. sources (0.2%; 0.5%). China's media influence

operations in English-speaking African media appear to be most “impactful” in Sierra Leone (Figure 2a), and in the Republic of Congo (Figure 3a) in Francophone Africa. In both contexts, Xinhua is overwhelmingly the primary source of content (100% in the French corpus, and 82% in the English corpus).

[FIGURE 2]

[FIGURE 3]

Theme Salience in African Media’s Coverage of China and COVID-19

To address RQ4, concerned with the prevailing themes in news coverage of China and COVID-19 in African media, I worked with a subset of the sample: all news stories that included at least three mentions of China (Chine in French), Chinese (Chinois/Chinoise), Beijing (or Pékin) or Wuhan, and at least three mentions of coronavirus, COVID-19, pneumonia (pneumonie) or influenza (grippe). With these restrictions, I was able to capture stories that discuss China and COVID-19 more than in just passing. I used these smaller corpora ($N_{French} = 6,044$; $N_{English} = 31,560$) to train two structural topic models using R’s stm package (Roberts, Stewart, & Tingley, 2019), with the date and the country of origin as covariates. The French model was fitted with $k = 35$ topics, and the English model with $k = 45$. To validate the accuracy of the models, I used R’s oolong package (Chan & Sältzer, 2020), to perform word and topic intrusion tests using two external coders. The French’s model average precision for each test was 0.77 and 0.79, respectively, while the English model’s was 0.86 and 0.82.

Amongst French speaking countries in Africa, Chinese global media appear to have had limited influence in shaping media narratives, measured in terms of the most salient issues in news coverage. Table 2 provides a summary of the top seven most frequent themes by country in the French corpus, ranked by the value of θ , which represents the country aggregate mean

proportion of each document belonging to a topic. The gap in narratives occurs at two levels. First, several of the most frequent themes in China’s coverage, such as “Chinese Global Cooperation” ($\theta = 0.181$) or “Xi Jinping Messages” ($\theta = 0.068$) are marginal in the news agenda of the countries in the region. Second, key themes that Chinese media seemed to have tried to ignore or downplay, given the potential negative impact on the country’s image (e.g. accusations of racism against Africans in Guangzhou, debates around Africa’s debt with China...) are quite prominent in several French-speaking countries, but absent in China’s news coverage. There is, nonetheless, one theme that appears often in Chinese media, which is also among the top 7 in seven French speaking countries: China’s donations of medical and personal protection equipment.

[TABLE 2]

[TABLE 3]

The gap in media narratives that can be observed in the French corpus, is also evident in English-speaking media, where pairwise comparisons between the top ranked themes in China and sixteen African countries reveal no significant similarities in issue salience. While the two language corpora are not comparable side by side, given that each model was estimated independently, it seems that there’s some overlap, as could be expected, in content published by Chinese media in both languages. As was the case in the French dataset, “Chinese Global Cooperation” is the most frequent theme in English-language Chinese media ($\theta = 0.078$), but this theme isn’t found in the top seven of any English-language African media. We do find, again, that issues like the cases of discrimination against Africans in the Southern Chinese city of Guangzhou are very prominent in some countries ($\theta_{Gambia} = 0.217$; $\theta_{Kenya} = 0.154$; $\theta_{Cameroon} = 0.215$), but much less common in Chinese media ($\theta = 0.024$). Neither the media in Egypt nor in

Sierra Leone, the two countries where most text reuse from Chinese sources was observed in RQ₃, appear to be adapting the most common themes in Chinese media.

Conclusion

Increased Sino-African media relations have attracted notable academic interest in recent years. Most work on the topic has tended to associate increased presence with increased influence, without there being significant continent-wide empirical evidence of such relationship. This paper, the first to quantify the direct and indirect influence of Chinese media on the news content of multiple African countries, provided compelling evidence of the limited impact that China's ambitious media influence operations are having on the editorial agendas of the news media on the continent. In this sense, the findings presented here resonate with qualitative data compiled by Wasserman (2016) and Wasserman and Madrid-Morales (2018), and with evidence collected in Ghana (Serwornoo, 2019b, 2019a). More specifically, in this paper I demonstrated that a) coverage of China in most African countries tends to be relatively modest when no significantly newsworthy (e.g. FOCAC, COVID-19...) "news event" is taking place; b) the direct use of content from Chinese sources (e.g. Xinhua, *China Daily*...) is very marginal in both English and French-speaking Africa, particularly when compared with the reuse of France's Agence France Presse and, to a lesser extent, Reuters; and, c) there is a very significant gap between the prevailing themes found in news coverage about China and COVID-19 in Chinese media, and the most common themes in African media.

Taken together, the findings presented here would seem to suggest that Chinese media have limited transnational intermedia agenda setting capabilities in Africa, as they are not able to "transfer the salience of issues associated with their own country to foreign media, thus influencing how foreign media portray the country" (Guo & Vargo, 2020, p. 3). This is shown

rather clearly in the data used to address RQ4. While Chinese media's stories around COVID-19 often featured themes such as "Xi and CCP's Response" (characterized by the use of words such as, "Xi") and "Traditional Chinese Medicine" (described in the topic model by words such as "TCM"), these themes are largely absent from the 300+ African media organizations included in the corpus. This noticeable gap in prevailing themes cannot be attributed to lack of accessibility to Chinese narratives by African journalists. After all, Xinhua content is available at no cost—or at a reduced price—to many newsrooms, and it is distributed through syndication agreements by African news agencies such as Ghana's News Agency (GNA) and South Africa's African News Agency (ANA). In addition, there are other ways in which Chinese narratives are propagated: press events organized by diplomatic missions, press visits to China offered at no cost to journalists, trainings and workshops on about China...

Some plausible explanations for the narrative gap described in this paper have been identified in qualitative and ethnographic studies in the past. Some African journalists hold a critical view of the Chinese media system (Diakon & Rösenthaler, 2016; Madrid-Morales & Wasserman, 2018); some feel closer to "Western" narratives and journalistic (Serwornoo, 2019a; Umejei, 2018), and might prefer sourcing their stories with content from the BBC, Reuters or AP; some might be put off by the tone and convoluted language of Chinese officialdom... The full array of plausible explanations hasn't been thoroughly explored and would grant further study. The need for more research on local adoption or resistance is particularly acute in French speaking Africa, where there is a very significant dearth of research on the topic. Future studies should also consider a longitudinal approach to the study of China's transnational intermedia agenda setting efforts in Africa. The case study presented here, although prolonged in time and heavily focused on China, had in most instances a more local angle, which might have made

African media less dependent on foreign sources, and more reliant on their own on-the-ground reporting. An analysis comprising a larger period of time might reveal patterns that could not be uncovered with this case study. However, as this paper has shown, the use of computational tools, which have not been widely used in the study of China's global mediated engagements, can provide insights across countries, and offer nuanced descriptions of individual countries, thus widening the geographic scope of studies on Africa-China mediated relations.

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Tables

Table 1. African News Media's Text Reuse by News Sources and Type of Content

Source Country	Stories about COVID but not China	Stories about COVID and China	Stories about China but not COVID
China	672 (6.81 %)	389 (6.6 %)	35 (13.2 %)
France	6,676 (67.7 %)	3,873 (66.1 %)	186 (70.2 %)
United Kingdom	2,107 (21.4 %)	1,395 (23.8 %)	6 (2.26 %)
United States	409 (4.15 %)	205 (3.50 %)	38 (14.3 %)

$\chi^2 = 148.73; df = 6; p < .001$

Table 2. *Most prevalent themes in news about China and COVID-19 by country in French-speaking media.*

Algeria		Benin		Burkina Faso	
Topic	θ	Topic	θ	Topic	θ
China's Donations to Africa	0.145	China-US Tensions	0.139	Situation in North/West Africa	0.320
Testing and Detection in Africa	0.083	Situation in North/West Africa	0.079	China's Donations to Africa	0.099
Emergency in Europe	0.072	Origins of COVID-19	0.065	Testing and Detection in Africa	0.061
Airline Industry	0.066	International Response	0.057	China's Multilateral Cooperation	0.046
Stock Exchange	0.062	Overview of Cases	0.050	Situation in West/Central Africa	0.045
Overview of Cases	0.059	Daily Life in Wuhan	0.045	Situation in French Hospitals	0.040
International Response	0.059	Airline Industry	0.040	International Response	0.036
Cameroon		China		Côte d'Ivoire	
Situation in Early Affected Areas	0.089	Chinese Global Cooperation	0.181	Chinese Medical Support	0.119
African Debt Relief	0.077	China's Global Responses	0.137	Overview of Cases	0.089
Testing and Detection in Africa	0.073	Chinese Medical Support	0.085	Airline Industry	0.089
Origins of COVID-19	0.068	China's Multilateral Cooperation	0.084	Situation in West/Central Africa	0.087
China-US Tensions	0.060	China, Russia, ASEAN	0.074	Testing and Detection in Africa	0.062
Discrimination against Africans	0.060	China's Support for WHO	0.073	Discrimination against Africans	0.058
Cruise Ships in Asia	0.057	Xi Jinping Messages	0.068	African Debt Relief	0.047
Republic of Congo		Democratic Republic of Congo		France	
Situation in Early Affected Areas	0.088	Situation in West/Central Africa	0.091	Emergency in Europe	0.078
Testing and Detection in Africa	0.060	Testing and Detection in Africa	0.066	Situation in Europe/Middle East	0.077
Daily Life in Wuhan	0.059	Treatments and Vaccines	0.065	Cruise Ships in Asia	0.065
Situation in West/Central Africa	0.057	Daily Life in Wuhan	0.061	Stock Exchange	0.063
China's Support for WHO	0.056	Stock Exchange	0.053	Daily Life in Wuhan	0.061
Cruise Ships in Asia	0.055	Explaining COVID	0.052	Situation in French Hospitals	0.054
Overview of Cases	0.052	Chinese Medical Support	0.043	Situation in Early Affected Areas	0.050

Table 2. (continued)

Gabon		Guinea		Madagascar	
Situation in West/Central Africa	0.121	China's Support for WHO	0.091	Situation in Madagascar	0.389
China's Support for WHO	0.090	China-US Tensions	0.077	Testing and Detection in Africa	0.110
Chinese Medical Support	0.075	Explaining COVID	0.056	Airline Industry	0.060
Overview of Cases	0.072	China's Multilateral Cooperation	0.050	International Response	0.038
Testing and Detection in Africa	0.067	Xi Jinping Messages	0.049	Chinese Medical Support	0.034
China's Multilateral Cooperation	0.054	Discrimination against Africans	0.048	Treatments and Vaccines	0.032
African Debt Relief	0.049	Overview of Cases	0.045	Situation in French Hospitals	0.031
Mali		Senegal		Togo	
Situation in West/Central Africa	0.097	Testing and Detection in Africa	0.076	Situation in West Africa	0.136
Testing and Detection in Africa	0.070	Situation in North/West Africa	0.062	Testing and Detection in Africa	0.112
China's Support for WHO	0.065	International Response	0.060	Situation in North/West Africa	0.084
International Response	0.062	Daily Life in Wuhan	0.058	Chinese Medical Support	0.071
China-US Tensions	0.059	Overview of Cases	0.057	COVID as Zoonotic Virus	0.065
China's Multilateral Cooperation	0.054	Explaining COVID	0.056	African Debt Relief	0.057
African Debt Relief	0.045	Discrimination against Africans	0.048	US attacks WHO	0.049
Tunisia		United Kingdom		United States of America	
International Response	0.123	Stock Exchange	0.382	Situation in the US	0.308
G20 and COVID	0.068	Daily Life in Wuhan	0.059	Stock Exchange	0.073
Airline Industry	0.060	Explaining COVID	0.057	Testing and Detection in Africa	0.067
Testing and Detection in Africa	0.059	Overview of Cases	0.045	Situation in Early Affected Areas	0.056
African Debt Relief	0.057	China's Support for WHO	0.041	Cruise Ships in Asia	0.044
Stock Exchange	0.055	Situation in French Hospitals	0.036	China-US Tensions	0.042
Situation in North/West Africa	0.050	Cruise Ships in Asia	0.033	Hong Kong and Taiwan politics	0.036

Table 3. Most prevalent themes in news about China and COVID-19 by country in English-speaking media.

Botswana		Cameroon		China	
Topic	θ	Topic	θ	Topic	θ
Situation in Southern Africa	0.097	Discrimination against Africans	0.215	Chinese Global Cooperation	0.078
Impact on Economic Growth	0.078	Nigeria's Response	0.097	Situation Wuhan, Hubei	0.076
Nigeria's Response	0.072	Negative Impact on Africa	0.063	China is in Control	0.067
Geopolitics	0.054	Drug Clinical Trials	0.058	Chinese Medical Support	0.061
Early days of outbreak	0.048	Commodity Prices	0.056	China's Reopening	0.052
People most affected	0.046	COVID Zoonotic Virus	0.047	Traditional Chinese Medicine	0.051
Life under lockdown	0.044	Impact on Economic Growth	0.040	Xi and CCP's response	0.050
Egypt		France		The Gambia	
Situation in Iran and Middle East	0.181	Reopening Worldwide	0.119	Discrimination against Africans	0.217
Impact on Economic Growth	0.075	Situation in East Asia	0.099	China is in Control	0.172
Early days of outbreak	0.074	Stock Exchange	0.092	Nigeria's Response	0.077
Nigeria's Response	0.060	Situation in Europe	0.078	Chinese Medical Support	0.063
COVID and Supply Chains	0.058	Disinformation and US	0.062	Geopolitics	0.048
Situation in East Asia	0.049	Impact on Economic Growth	0.046	WHO and multilateralism	0.046
Situation in Europe	0.047	Early days of outbreak	0.040	Negative Impact on Africa	0.044
Ghana		Kenya		Liberia	
Discrimination against Africans	0.150	Discrimination against Africans	0.154	Negative Impact on Africa	0.158
Nigeria's Response	0.077	Situation in East Asia	0.069	Nigeria's Response	0.138
Situation in East Asia	0.060	Sports	0.064	Early days of outbreak	0.083
Reopening Worldwide	0.049	Nigeria's Response	0.062	Geopolitics	0.051
Negative Impact on Africa	0.047	Airlines and COVID-19	0.054	Discrimination against Africans	0.037
Early days of outbreak	0.044	People most affected	0.044	Life under lockdown	0.037
People most affected	0.041	Early days of outbreak	0.044	Chinese Medical Support	0.036

Table 3. (continued)

Malawi		Namibia		Nigeria	
Situation in Southern Africa	0.176	Situation in South Africa	0.124	Nigeria's Federal Response	0.130
Nigeria's Response	0.138	Nigeria's Response	0.116	Nigeria's Response	0.111
Discrimination against Africans	0.079	Early days of outbreak	0.090	Nigerian Politics and COVID	0.070
Religion	0.071	COVID and Supply Chains	0.066	Situation in East Asia	0.048
Situation in Europe	0.042	Discrimination against Africans	0.058	Situation Worldwide	0.044
Chinese Medical Support	0.040	Impact on Economic Growth	0.052	Religion	0.034
Early days of outbreak	0.040	Situation in Europe	0.044	Early days of outbreak	0.032
Sierra Leone		South Africa		Tanzania	
Negative Impact on Africa	0.089	Situation in South Africa	0.159	Nigeria's Response	0.098
US Domestic Situation	0.059	Situation in East Asia	0.074	Negative Impact on Africa	0.091
Geopolitics	0.048	Impact on Economic Growth	0.055	Discrimination against Africans	0.077
Reopening Worldwide	0.046	People most affected	0.053	China is in Control	0.070
Life under lockdown	0.042	Early days of outbreak	0.048	Impact on Economic Growth	0.064
Disinformation and US	0.042	Situation in Europe	0.039	Situation in East Asia	0.056
Nigeria's Response	0.041	Stock Exchange	0.039	Early days of outbreak	0.041
Uganda		Zambia		Zimbabwe	
Discrimination against Africans	0.091	Situation in Southern Africa	0.256	Situation in Southern Africa	0.182
Reopening Worldwide	0.082	Life under lockdown	0.135	Nigeria's Response	0.088
Nigeria's Response	0.069	Religion	0.076	Negative Impact on Africa	0.045
Situation in East Asia	0.062	Nigeria's Response	0.065	Situation in East Asia	0.043
Situation in Europe	0.059	Impact on Economic Growth	0.044	Impact on Economic Growth	0.041
Life under lockdown	0.045	Negative Impact on Africa	0.037	Situation in Europe	0.039
People most affected	0.042	Early days of outbreak	0.035	Reopening Worldwide	0.034

Figures

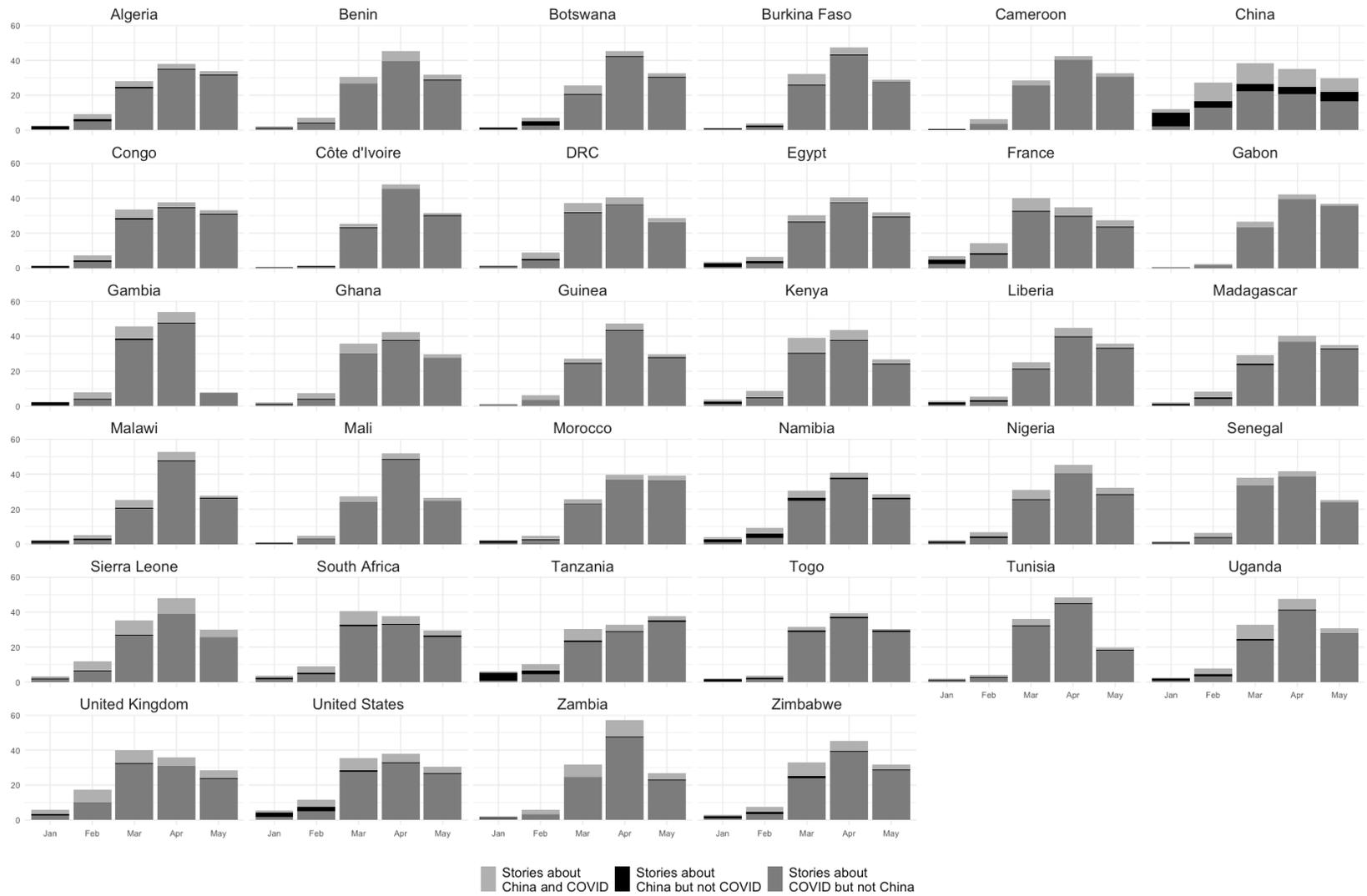
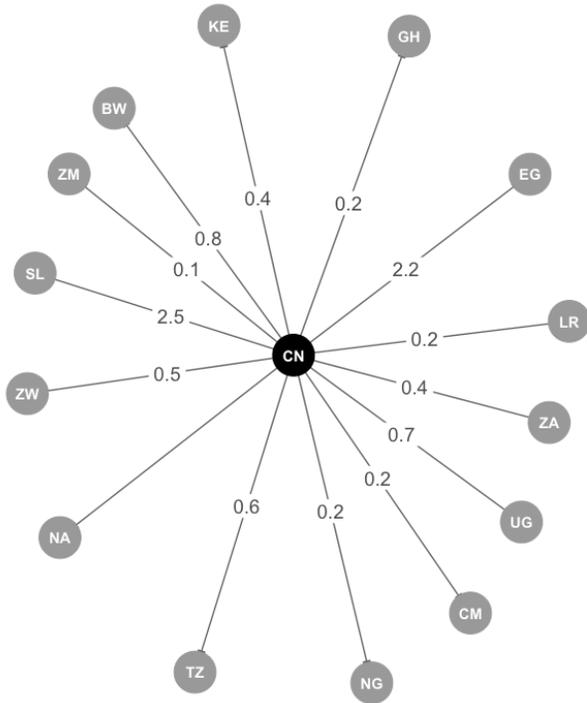
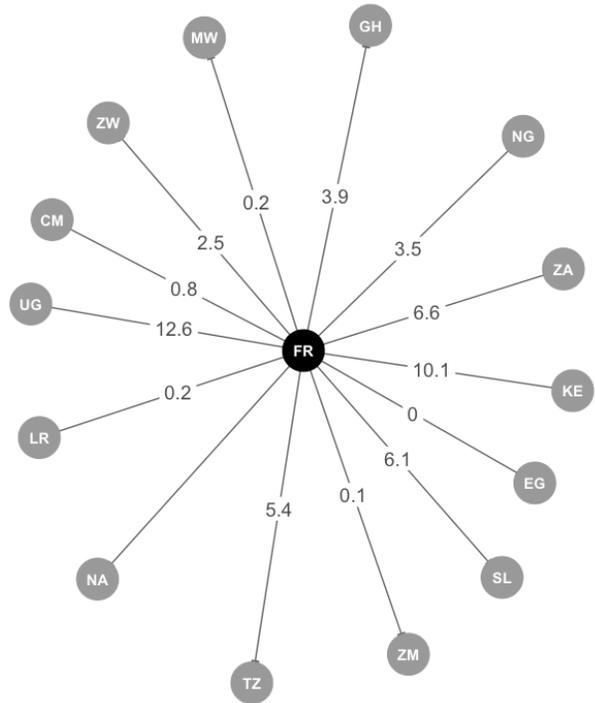


Figure 1. *Percentage of News Stories Related to China and/or COVID-19 by Type of Content in 34 Countries (January-May 2020)*

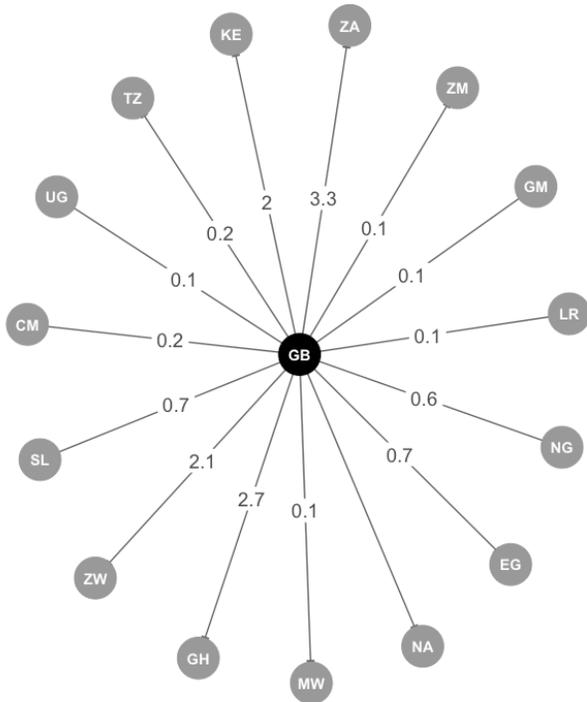
a. China



b. France



c. United Kingdom



d. United States

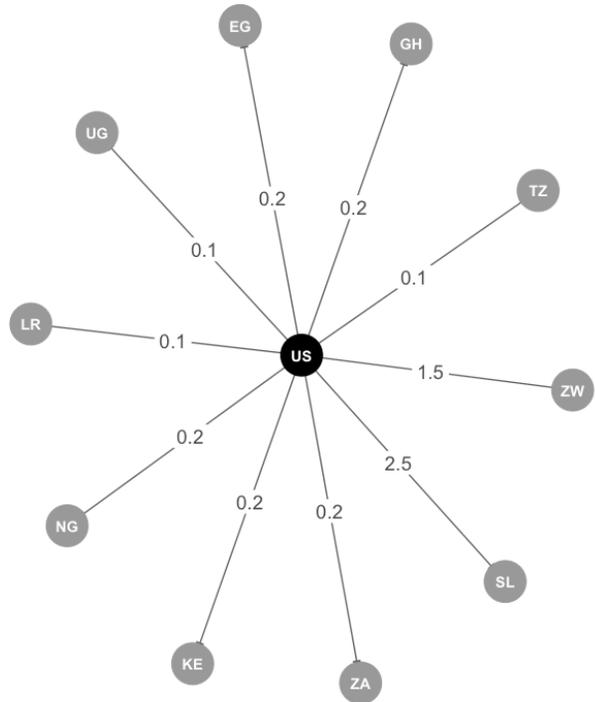
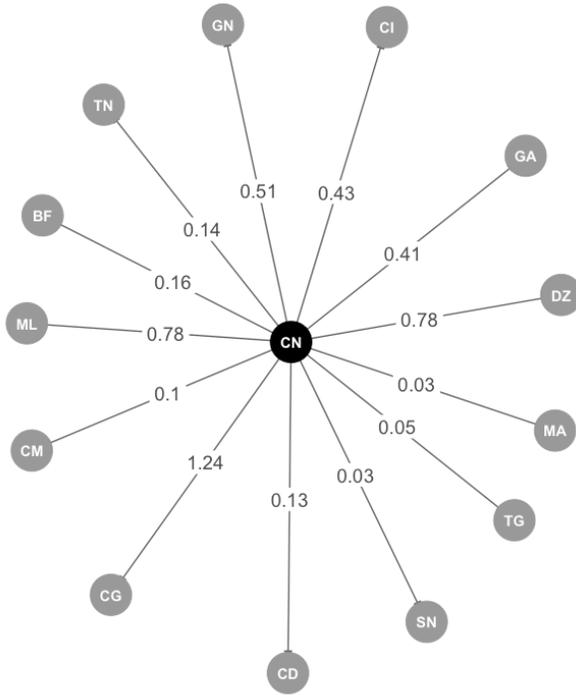
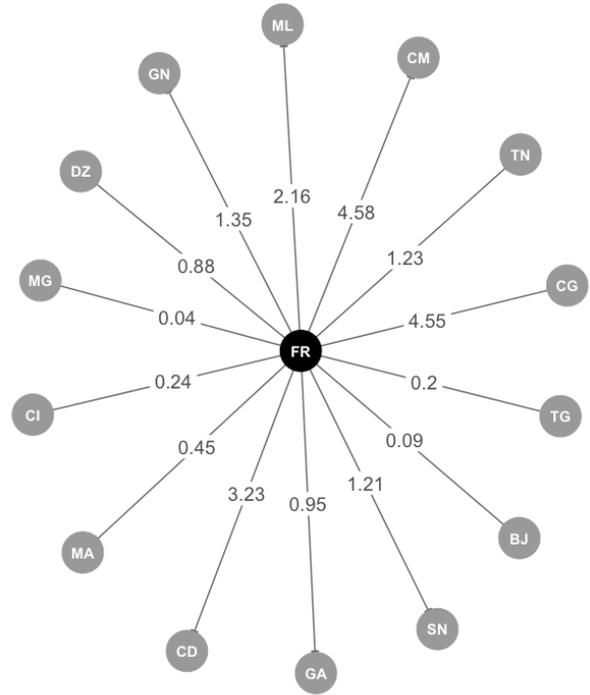


Figure 2. Percentage of News Text Reuse in English-speaking African Countries

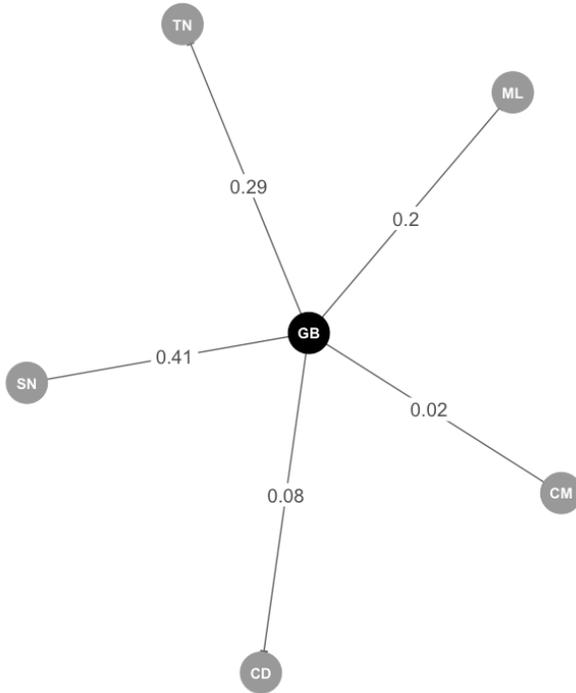
a. China



b. France



c. United Kingdom



d. United States

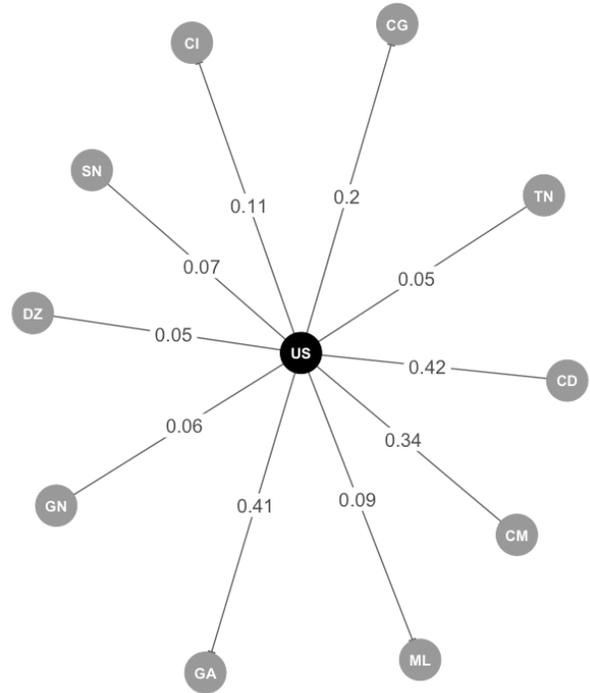


Figure 3. Percentage of News Text Reuse in French-speaking African Countries