

ARTICLE

Media's Influence on LGBTQ Support Across Africa

Stephen Winkler* 

Department of Political Science, University of Washington, Seattle

*Corresponding author. E-mail: winklers@uw.edu

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Abstract

Political leaders across Africa frequently accuse the media of promoting homosexuality, while activists often use the media to promote pro-LGBTQ (lesbian, gay, bisexual, transgender and queer) narratives. Despite extensive research on how the media affects public opinion, including studies that show how exposure to certain information can increase support of LGBTQs, there is virtually no research on how the media influences attitudes towards LGBTQs across Africa. This study develops a theory that accounts for actors' mixed approach to the media and shows how different types of media create distinct effects on public opinion of LGBTQs. Specifically, the study finds that radio and television have no, or a negative, significant effect on pro-gay attitudes, whereas individuals who consume more newspapers, internet or social media are significantly more likely to support LGBTQs (by approximately 2 to 4 per cent). The author argues that these differential effects are conditional on censorship of queer representation from certain mediums. The analysis confirms that the results are not driven by selection effects, and that the relationship is unique to LGBTQ support but not other social attitudes. The results have important implications, especially given the growing politicization of same-sex relations and changing media consumption habits across Africa.

Keywords: LGBTQ; gay; political behavior; Africa; public opinion; media; censorship; communications

Public attitudes and legal protections regarding lesbian, gay, bisexual, transgender and queer (LGBTQ)¹ identified persons are changing rapidly in many regions, including the United States, Europe and Latin America (Asal, Sommer, and Harwood 2013; Ayoub 2016; Brewer 2003; Kollman 2007). However, across Africa, the gay community continues to face physical and rhetorical threats.² Most of this backlash comes from government and religious leaders who claim that foreign, pro-gay norms are spreading across the continent. In response, governments frequently censor the media³ to limit the marketplace of ideas and prevent exposure to pro-LGBTQ representation. For example, a governmental board in Kenya recently banned six cartoons for 'glorifying homosexual behavior' (Dahir 2017). Critically, because a single cable company often provides services in several African countries, censorship in one country affects dozens of markets. At the same time, LGBTQ activists across Africa often view the media as an important tool to advance their cause. The Pan African International Lesbian, Gay, Bisexual, Trans and Intersex Association describes the media as a 'key target group' and conducts media training for member organizations (Lusimbo and Oguaghamba 2017). Activists often use online mediums to positively shift the national dialogue about same-sex rights, or to call

¹The language used to identify sexual minorities can affect public perceptions of these individuals (Smith et al. 2017). I use 'LGBTQ,' 'gay,' 'homosexual' and 'queer' interchangeably to avoid arbitrarily selecting an imprecise identifier.

²There are exceptions, including the legalization of same-sex marriage in South Africa and movements to remove colonial-era penal codes that criminalize same-sex sexual acts in Mozambique and Namibia.

³I use 'media' to refer to radio, television, newspaper, internet and social media.

attention to violence against LGBTQs. The persistent accusations about the media's role in spreading pro-gay attitudes, the prevalence of media censorship across the continent, and activists' use of media as a tool all raise important questions about the media's influence on public opinion of gays across Africa.

I study if, and how, media consumption explains individual support for homosexuality in thirty-three African countries. A robust literature argues that the media plays a role in shaping public opinion (Iyengar and Kinder 1987; McCombs and Shaw 1972), partially because it exposes individuals to new information (Mutz 2002). However, others note that the media's effects may be limited to nonpartisan topics (Barberá et al. 2015), and that the media may not facilitate exposure to new information if its consumption is driven by ideology (Sunstein 2001) or if it is easily manipulated by the government (Roberts 2018). More specific to LGBTQs, recent work by Ayoub and Garretson (2016) shows that increased access to diverse media explains some of the growing global support of same-sex relations. However, there is scarce research on public opinion of LGBTQs in Africa, and virtually no research on the relationship between media use and gay support across the continent.⁴

I develop a theory that accounts for the variety of ways in which pro- and anti- gay-rights actors engage with the media, which generates clear expectations about how different types of media create distinct effects on public opinion of LGBTQs. I argue that increased overall media consumption enhances support for LGBTQs, but that this effect is driven by consumption of newspaper, internet and social media. This is because government censorship of queer content is often directed at television programs that contain positive representations of LGBTQs. However, because governments actively promote their censorship of queer content, it may actually increase discussion of LGBTQs in other mediums such as newspaper and the internet. This effect is compounded by the fact that newspapers and the internet are more difficult to censor than radio and television (Cottle 2011; Lynch 1999), and that these mediums, particularly the internet, contain more international content.⁵

My argument draws from, and contributes to, the literatures on political behavior, communications, social psychology and LGBTQ politics. I build on extensive research debating the connection between information exposure (Ferraz and Finan 2008; Lupia and McCubbins 1998), including from the media (Farrell 2012; Iyengar and Kinder 1987), and political behavior and beliefs. I extend this debate to Africa and provide new evidence that the media can have an independent effect on beliefs, but that the effect varies across mediums. While some of this variation may be driven by how individuals select into media diets (Sunstein 2001), government censorship also influences the media's effects on public opinion (Roberts 2018). However, while prior studies argue that governments intentionally conceal their censorship (Lorentzen 2014; Roberts 2018), I show that governments proudly publicize their crackdowns on queer content in TV, and develop a new theory of how this increases discussion of LGBTQ identity in other mediums. Finally, I contribute to an important debate about how exposure to out-groups affects prejudicial beliefs (Enos 2017; Pettigrew and Tropp 2006). While scholars have found mixed evidence on the effects of inter-ethnic exposure across Africa (Miguel and Gugerty 2005; Scacco and Warren 2018), I provide some of the first evidence on the effects of exposure to LGBTQs and explain why it is different than other types of out-group contact.

I apply these theories on the African continent, where gay rights are increasingly politicized and where there are rapid changes in media consumption habits (see Table 1). To test hypotheses, I use cross-national survey data from Afrobarometer Round 6 conducted in 2014 and 2015.

⁴Ayoub and Garretson (2016) do include a handful of African countries in their cross-national, cross-regional study, and Dulani, Sambo and Dionne (2016) use descriptive data to discuss general correlations between media consumption and social tolerance in Africa.

⁵Foreign cultural and political forces do not always promote *pro-gay* attitudes. Institutions such as colonialism (Ireland 2013) and fundamentalist churches (Grossman 2015) may increase the politicization of sexuality and motivate *anti-gay* attitudes across the continent.

At baseline levels, I find that 78 per cent of respondents report negative attitudes towards homosexuality. However, individuals who consume more media overall are 4–8 per cent more likely to express pro-gay beliefs. As expected, the size and significance of this effect differs across mediums. Radio and television have no, or a negative, significant effect on pro-gay attitudes, whereas individuals who consume more newspapers, internet or social media are significantly more likely to support LGBTQs (by approximately 2 to 4 per cent). These results are stable across a number of sensitivity analyses that address concerns such as selection effects. Finally, through content analysis of radio, newspaper and the internet, I provide preliminary evidence that the mechanism driving these effects is increased access and exposure to positive LGBTQ representation.

While existing studies have similarly found that out-group exposure, including from the media, reduces prejudicial beliefs, it is critical to understand how this finding translates to other settings. This is especially true for public opinions of sexual minorities because, unlike other forms of social diversity such as race or ethnicity, LGBTQs are a minority in every country. In addition, because LGBTQ identity does not determine political coalition formation, and because LGBTQ politics is not (yet) a partisan issue in most of Africa, I argue that increased exposure to queer identity is unlikely to spark the types of backlash or ideological retrenchment that are common with other forms of out-group exposure. Ultimately, my results suggest that, although governments may effectively suppress LGBTQ content from television, increased discussion of LGBTQ identity in other mediums alongside expanding internet access may help to increase public support of LGBTQs.

Theoretical Motivation

Media, Public Opinion and Support of LGBTQs

Prior studies have long argued that the media shapes public opinion (Iyengar and Kinder 1987; McCombs and Shaw 1972), including on a number of socio-political issues such as the death penalty (Baumgartner 2008), civil liberties (Swigger 2013), and religion, gender and sexual activity (Norris and Inglehart 2009). Increased usage of the internet and social media, in particular, creates new questions about the media's effect on political behavior. While many studies are optimistic about the internet's role in politics, including its positive effect on political engagement and intergroup trust (Jennings and Zeitner 2003; Kittilson and Dalton 2011; Lupia and Philpot 2005; Robertson 2017), others have raised concerns about its negative effects on democracy (Persily 2017; Sunstein 2001). I discuss these arguments and identify two mechanisms through which the media may affect public opinion of LGBTQs: by exposing individuals to positive representations of LGBTQs, and by exposing individuals to new information in general.

First, increased representation of openly gay persons in television, movies and the news exposes viewers to LGBTQs and can induce positive attitudinal change. This builds on the idea that exposure to social out-groups reduces prejudicial attitudes towards those groups (Pettigrew and Tropp 2006). While many studies on social diversity focus on the effects of inter-ethnic (Kasara 2013; Scacco and Warren 2018) or inter-religious exposure (Raymond 2016), there is mounting evidence that exposure to LGBTQ persons via interpersonal contact has an especially strong effect on pro-gay attitudes (Broockman and Kallah 2016; Flores 2015; Flores et al. 2017; Herek and Capitano 1996; Lewis et al. 2017; Lewis 2011; Tadlock et al. 2017). Critically, exposure to LGBTQs via the media, or parasocial contact (Schiappa, Gregg, and Hewes 2005), can produce similar positive effects on attitudes (Garretson 2015; Jones et al. 2018; Schiappa, Gregg, and Hewes 2006). Television shows such as *Queer as Folk* and *Will and Grace* are cited as examples of gay representation that helped shift the tide towards pro-gay attitudes in the United States (Gross 2001). Today, several shows such as *Pose*, *Empire* and *Sense 8* are lauded for providing representation of transgender and non-white LGBTQs.

While others have found that exposure to social out-groups can increase bias beliefs (Enos 2014; Forbes 1997), leading to increased violence (Lim, Metzler, and Bar-Yam 2007) and the

discriminatory (Lieberman 2009) and inefficient (Habyarimana et al. 2007) provision of resources, there are at least two key reasons why exposure to LGBTQ identity may create different outcomes. First, many of the studies that predict negative effects from intergroup contact focus on social identities, such as ethnicity or religion, that are intertwined with the formation of political coalitions and, therefore, decisions regarding the distribution of scarce resources. However, LGBTQs transcend these ethnic and religious factions (meaning that all LGBTQ individuals are not either Catholic or Muslim, Kikuyu or Luo, etc.), and are not aligned with major political power centers in Africa. In other words, heterosexuals can adopt pro-gay attitudes without concern that LGBTQs will threaten their access to public goods. Secondly, the ways in which out-group exposure affects prejudiced beliefs is likely to be conditional on local levels of segregation. Enos (2017) shows that when segregation is high, exposure to an out-group is more likely to increase prejudice, whereas where segregation is low, exposure is likely to decrease prejudice. However, gay and non-gay identity is rarely, if ever, segregated in ways similar to other identities such as race, ethnicity or religion. Therefore, while increased politicization of LGBTQ rights is often framed as a moral threat, it is unlikely that increased exposure to LGBTQs will be seen as a threat to political and economic power, as is often the case with religious and ethnic groups.

Secondly, media consumption can induce attitudinal change by serving as a conduit of new information. Here, exposure still matters, but it is less about exposure to out-groups and more about exposure to information that contradicts existing beliefs. Exposure to new information often prompts additional information seeking (Marcus, Neuman and MacKuen 2000), and has been shown to increase public discourse (Habermas 1989) and the diversity of political views (Manin, Stein and Mansbridge 1987; Mutz 2002). This argument assumes, first, that increased media consumption does expose individuals to new information and, secondly, that individuals update their beliefs when confronted with this new information. However, an individual's frequency and type of media consumption may not be orthogonal to their social attitudes. Research shows that individuals often select into information that confirms existing beliefs (Kroh and Neiss 2009). This may be especially true among social media users and could create a situation in which increased media consumption actually leads to decreased contact between people with opposing views (that is, echo chambers) (Prior 2007; Sunstein 2001).⁶ However, others have found that the presence of echo chambers varies by political topic and over time (Barberá et al. 2015), and that ideological segregation is much lower on the internet than it is among in-person social networks (Gentzkow and Shapiro 2010). Even if individuals select into homogeneous online communities, there is evidence that incidental exposure to cross-cutting views is common online (Flaxman, Goel, and Rao 2016). Regardless, in the analysis, I take seriously this mixed evidence on media effects and include a number of robustness tests to guard against selection bias.

To fulfill the second assumption, individuals must not only be exposed to new information but must also be willing to update their beliefs. While experimental evidence suggests that citizens do change their opinions when presented with information that contradicts previously held beliefs (Gilens 2001; Kuklinski et al. 2000), others have found that citizens are resistant to new information. Nyhan and Reifler (2010) find that when individuals are presented with corrective information about their political misperceptions, they often double down on their existing beliefs. This could be because individuals often interpret new information through an ideological lens (Taber and Lodge 2006). However, unlike recent years in the United States and in some European countries, LGBTQ politics is not a highly partisan issue across Africa. There are few, if any, major political parties in Africa that list LGBTQ rights as part of their platform. This makes it less likely that exposure to queer identity will motivate anti-gay attitudes.

⁶This point may also help to explain recent evidence showing that individuals who consume news from social media do not experience the same learning effects as those who consume news from more traditional sources such as newspapers or online news sites (Shehata and Strömbäck 2018).

Media, Norm Diffusion and Censorship of Queer Content

For either of the two mechanisms outlined above to influence LGBTQ-related attitudes, citizens must have access to media that contains gay representation and/or new information. Several factors, including the diffusion of international media, the capacity and strategy of government censorship, and the ways in which local gay-rights organizations utilize the media, all affect the degree to which this content is available across Africa. International relations scholars have long argued that a variety of instruments, including non-state actors (Keck and Sikkink 1998), institutions (Finnemore and Sikkink 1998) and epistemic communities (Adler 1992), diffuse dominant norms around the world. Today, increased access to diverse mediums raises new questions about the ways in which norms spread. Scholars have argued that both television and the internet generate cross-border norm diffusion that facilitates democratic transitions (Huntington 1991; Linz and Stepan 1996) and the spread of progressive liberalism (Norris and Inglehart 2009). Similarly, Ayoub and Garretson (2016) find that LGBTQ representation, coupled with the diffusion of media across borders, has led to growing global support for homosexuality.⁷

The degree to which pro-gay and/or diverse content is diffused across borders is also a function of government censorship. Despite important scholarly work on the strategic nature of government censorship (Lorentzen 2014), we know very little about how governments censor queer content in particular. Recent studies on censorship in authoritarian contexts show that, rather than apply sweeping restrictions, governments often target their censorship on information that is likely to spark mobilization (King, Pan and Roberts 2013), or choose more discrete approaches such as spreading propaganda and misinformation online (King, Pan, and Roberts 2017; Roberts 2018). Governments use these strategic, discrete approaches because when censorship is obvious citizens are more likely to find ways to circumvent the restrictions (Roberts 2018). This suggests that governments can employ sophisticated censorship of queer content and effectively prevent exposure across all mediums.

However, I argue that queer censorship in Africa differs from other forms of censorship in three ways. First, whereas much of the research on censorship is focused on explicitly political content that could undermine the regime (that is, negative information about political leaders), queer censorship tends to focus more on stories, images and other representations of gay life. In turn, the most obvious target for queer censorship is television. Secondly, unlike other forms of censorship where governments prefer that citizens not know about their actions (Roberts 2018), African politicians often make bold public statements about their crackdown on gay content. This can create the opposite effect by increasing newspaper, internet and social media discussion of LGBTQs – including positive coverage that is driven by LGBTQ activists – and encouraging citizens to find information online (Hobbs and Roberts 2018). Increased media coverage will not necessarily induce empathy for LGBTQs if citizens interpret the coverage through a partisan lens (Taber and Lodge 2006); however, because LGBTQ support is not a partisan issue across Africa, this type of ideologically motivated reasoning is less likely. Finally, governments in general have more power to censor traditional forms of media such as radio and television than they do to censor new media such as the internet (Cottle 2011; Lynch 1999). Although African governments do successfully manipulate online content, this censorship is typically focused on political content near elections (Matfess 2016). In sum, I argue that the media's effect on LGBTQ-related attitudes is conditional on the degree of norm diffusion and queer censorship, and that these conditions vary across mediums.

⁷International diffusion of pro-gay content is less consequential if LGBTQ representation and diverse content is widespread in the domestic media. This is increasingly true in some African countries, but, as I describe in 'Setting: Media Censorship & LGBTQ Support in Africa', it is far from the norm. Recent studies demonstrate that when Africans use internet search engines they are consuming information that is overwhelmingly produced in the United States or France (Ballatore, Graham and Sen 2017).

Setting: Media Censorship and LGBTQ Support in Africa

Expanding internet access, the persistence of government censorship and heightened politicization of sexuality make Africa an especially critical region for this study. Many believe that homophobia is rampant on the continent. Descriptive data, reported in Figure 1, confirms that support for homosexuality is low across Africa. However, there is extensive documentation of diverse same-sex practices over time, and across cultures and regions in Africa (Epprecht 2013; Tamale 2007). Today, gay-rights groups are organizing social movements and pride events, pursuing litigation and lobbying their governments to end colonial-era anti-gay penal codes. Further, same-sex marriage is legal in South Africa, and public support for homosexuality is above 50 per cent in Cape Verde, Mauritius, Mozambique, Namibia and South Africa.

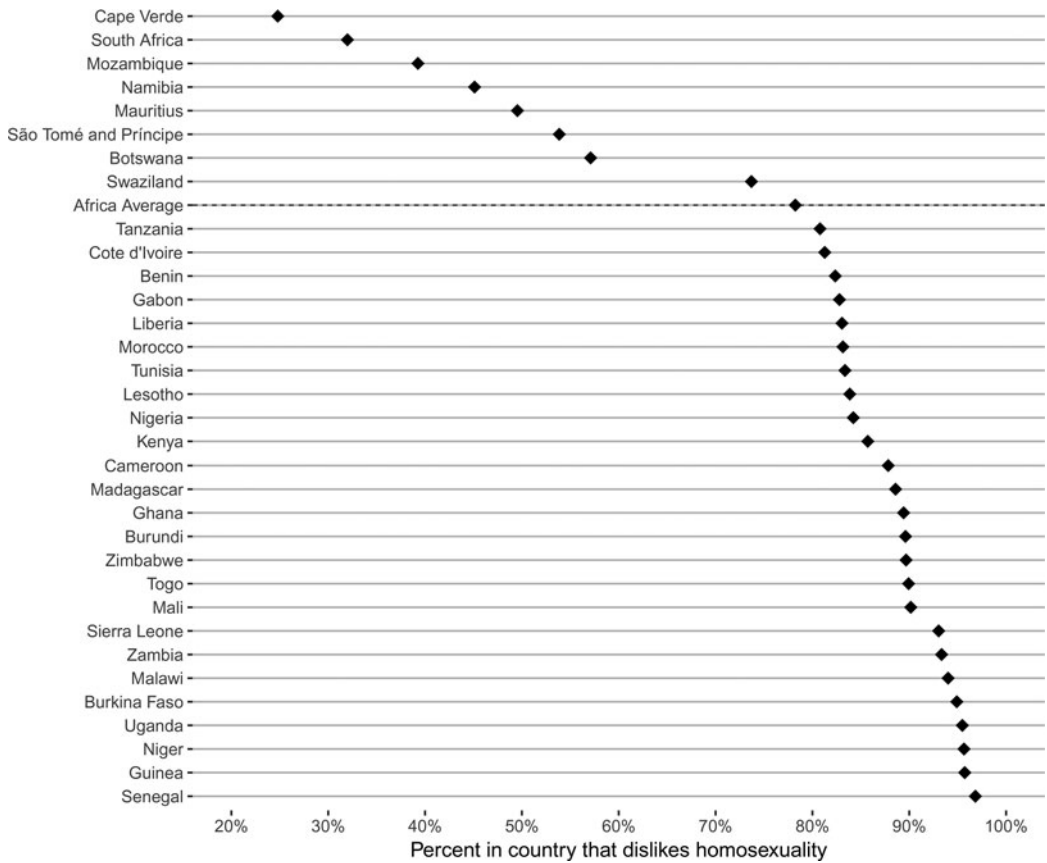


Figure 1. Support for homosexuality in thirty-three African countries

There has been little research on public attitudes regarding sexuality in Africa, mostly because of a lack of comprehensive data. Dionne, Dulani and Chunga (2014) provide some of the first cross-national analysis of public opinion regarding homosexuality on the continent and report that baseline levels of support are low across all demographics. Others have focused on religion’s effects, including the role that international religious groups play in shaping the political salience and public opinions of LGBTQs (Dreier 2018; Grossman 2015). Meanwhile, qualitative analysis shows that increased politicization of sexuality, including in the media, may actually diminish support for homosexuality (Awondo, Geschiere and Reid 2012). Finally, preliminary descriptive analysis has looked at the relationship between the media and social tolerance in general (Dulani,

Sambo and Dionne 2016). However, I am not aware of any study that uses cross-national, quantitative analysis to examine the degree to which individual-level media consumption explains individual attitudes regarding homosexuality in Africa. This is surprising both because scholars have long noted the important role that the media plays in attitude formation and change over time, and because of the changing dynamics of media consumption across Africa. Table 1 shows reported media consumption rates from Afrobarometer's Round 5 and Round 6 data. Although the percentage of respondents who consume radio, TV and newspapers is largely stable, the number of respondents who use the internet increased by nearly 50 per cent within just 2–5 years.

Table 1. Percent of Afrobarometer respondents who consume media at least once per month

| | Round 5 (2011–2013) | Round 6 (2015–2016) | % Change |
|-----------|---------------------|---------------------|----------|
| Radio | 82.30 | 81.49 | –0.98 |
| TV | 59.14 | 60.70 | 2.62 |
| Newspaper | 38.30 | 39.66 | 3.55 |
| Internet | 18.94 | 28.17 | 48.77 |

Meanwhile, the actions of both African political leaders and gay-rights activists signal a strong belief in the media's relationship to pro-gay attitudes. Political leaders argue that homosexuality is 'un-African', and that foreign norms are corrupting their citizens' views on sexuality. In turn, governments target what they believe to be the sources of these foreign norms, including a focus on censoring domestic and international media. For example, the Kenyan government banned a Kenyan-made film, *Stories of Our Lives*, about the country's LGBTQ community because it perceived the film to be a threat to 'national values and norms' (Vourlias 2014). The same government has banned cartoons with gay characters and has threatened a total ban of Netflix. In Nigeria, two shows that focus on the lives of transgender individuals – *I am Jazz* and *I am Cait* – were recently banned from television. Importantly, because a single cable company often provides services in several African countries, censorship of TV creates especially large effects because the restrictions are applied to dozens of other countries. For example, censorship of the cartoons in Kenya and the transgender shows in Nigeria forced the cable provider to remove these shows from every sub-Saharan African country.

Although governments frequently censor radio, television and film, citizens and activists often find ways to evade censorship by creating and accessing online material. Organizations often use social media to combat negative stereotypes. For example, LGBTQ activists in Kenya, with the intent of correcting common misperceptions about the queer community, started a podcast in which they respond to anonymous listeners' questions about topics such as religion and sexuality and same-sex sexual practices. Similarly, a gay-rights organization in North Africa created an online campaign to highlight violence against LGBTQs in Egypt, Morocco, Sudan and Tunisia, reaching over 300,000 users (HRW 2018). Meanwhile, despite the focus on banning transgender shows from cable television, 'authentic African transgender stories can live and thrive online' (Chutel 2016). This is the case for *The Pearl of Africa*, a free web series that documents the transition of a Ugandan transgender woman. Internet search trends also suggest that many African citizens seek out gay-related content online. According to Google search trends from 2004–2017, five African countries – Uganda, Ghana, Kenya, Nigeria and South Africa – are among the top ten countries in the world where 'homosexuality' is the most popular search term as a fraction of all search terms (Google 2017).⁸ Although African governments restrict internet access and content, these restrictions are typically related to suppressing political opposition and winning elections (Matfess 2016). Even with growing internet controls, citizens can turn to virtual private networks (VPNs) to access banned online content. For example, when the Ugandan government

⁸I report a more in-depth review of the strengths and limitations of using Google search trends below.

banned social media during the 2016 elections, 1.5 million citizens downloaded VPN software, and Tor (an anonymous browsing service) reported a spike in usage in the country (Phillips and Atuhaire 2016).

Data

I test my hypotheses using cross-sectional survey data from Round 6 of the Afrobarometer collected in 2014 and 2015. The surveys, designed with a sampling technique that allows inferences to all voting-age citizens in a given country,⁹ are based on face-to-face interviews conducted in local languages in thirty-three African countries.¹⁰ Importantly, Round 6 is the first round of Afrobarometer data to include, in the majority of sampled countries, a question on attitudes regarding homosexuality. Therefore, this is the most current and comprehensive data available on Africans' attitudes regarding homosexuality.

My primary dependent variable is a question in the survey that asks how the respondent would feel about having a 'homosexual' as a neighbor.¹¹ There are limitations imposed by the use of the word 'homosexual' in the survey question, mainly because this phrasing may not represent the varied queer practices across Africa. Alternatively, the Afrobarometer could have used local derivations of 'homosexual'. However, because surveys were conducted in over 100 unique languages, this approach would yield more imprecise measurements and introduce further discord about which word is appropriate in each language. Ultimately, though I recognize that 'homosexual' may not capture the diversity of non-heterosexual identities across Africa, I argue that this is the most precise, yet generalizable data available for the majority of African countries. The recorded responses to the question include: strongly dislike, somewhat dislike, would not care, somewhat like and strongly like. I bin these responses to create a binary variable that codes 'strongly dislike' and 'somewhat dislike' as 0 to indicate a negative attitude towards homosexuality, while 'would not care,' 'somewhat like' and 'strongly like' are coded as 1 to indicate an indifferent or positive attitude towards homosexuality.¹² I argue that this binned coding is substantively meaningful because 'not caring' about having a homosexual neighbor is a plausible progressive response. I also replicate my main models on the unbinned version of the dependent variable and get the same results (see Appendix Table A.4).

My primary explanatory variables are questions in the survey that ask how often the respondent gets their news from five different sources: radio, television, newspaper, internet and social media. The recorded responses include: never, less than once a month, a few times a month, a few times a week or every day. I code this as a continuous, numeric variable ranging from one to five, where five equals more frequent consumption of news. I also create a variable that aggregates an individual's consumption of all five media sources.¹³

⁹The sampling process includes the following steps: primary sampling units (PSUs) are randomly selected; a sampling starting point is randomly selected; households are randomly selected (eight households are clustered within each PSU); and within the household, respondents are randomly selected, alternating between female and male respondents.

¹⁰These countries are listed in Figure 1.

¹¹This question is part of a battery of questions designed to measure the respondents' tolerance of different demographic groups. The question reads, 'For each of the following types of people, please tell me whether you would like having people from this group as neighbors, dislike it, or not care: people of a different religion, people from other ethnic groups, homosexuals, people who have HIV/AIDS, immigrants or foreign workers.' I note that respondents may have different perceptions of 'neighbor'. If this is the case, I assume that perceptions of neighbor are most likely correlated by geography, so I control for urban/rural dwelling and include district-clustered standard errors. I also recognize that social desirability might drive respondents to misrepresent their true preferences when responding to this question. However, given the widespread anti-gay sentiment across the continent, I expect that any response bias would result in respondents *under-reporting* their support for homosexuality and therefore my underestimation of the main effects.

¹²Appendix Figure A.1 shows the distribution of the unbinned and binned version of the dependent variable. Figure A.2 shows this distribution by country.

¹³Appendix Figure A.3 shows the distribution of each media consumption variable.

One concern might be that all of these media consumption variables are highly correlated and therefore not unique measures. A correlation matrix (Appendix Table A.2) shows that some variables such as internet and social media are highly correlated, but for the most part they appear to be distinct measures. To further address concerns about collinearity, when testing the effect of a single type of media, I control for consumption of all other sources of media. I also include a number of individual-level control variables to account for common alternative explanations, including, age, gender, income,¹⁴ education, level of religiosity¹⁵ and whether the respondent lives in an urban setting. To address concerns that socially tolerant individuals select into consumption of certain mediums, I also include a control for overall social tolerance by creating a new variable, *Tolerance*, that aggregates each individual's responses to every question in the battery of tolerance questions.¹⁶ Each of these individual-level control measures comes from the same Afrobarometer survey data. Finally, I use the updated *Konjunkturforschungsstelle* (KOF) (Dreher 2006; Gygli, Haelg, and Sturm 2018) index of social globalization to run a set of models that include a country-level measure of press freedom and norm diffusion. Appendix Table A.1 shows the descriptive statistics for each of the primary variables used throughout the analysis.

Models and Results

I begin by estimating six binomial logit models to test the relationship between media consumption and individual attitudes towards homosexuality. In the first model, the explanatory variable is an aggregate of the respondents' consumption of all five mediums. In Models 2–5, I look at the effect of each medium individually. In all models, I include country fixed effects, district-clustered standard errors and the individual-level controls. Country fixed effects help to account for within-country correlations resulting from country-level factors such as economic and institutional development. District-clustered standard errors help to account for further subnational correlations, including those caused by disparate access to some mediums. The individual-level controls account for common alternative explanations described above.

Results for the binomial logit models are reported in Table 2. Column 1 indicates that individuals who consume more media overall are also significantly ($p < 0.01$) more likely to say that they would not mind, or would like, living near a homosexual. Columns 2–6 show the effect of specific types of media, while keeping constant the aggregate consumption of other forms of media. As expected, newspaper, internet and social media consumption are all correlated with a significant ($p < 0.01$) increase in support for homosexuality, while radio and TV consumption have no significant correlation with LGBTQ support. Several individual-level control variables are also correlated with attitudes toward homosexuality. Increased social tolerance, identifying as female, and increased income level are all positively and significantly ($p < 0.01$) correlated with support for homosexuality in every model, while increased religiosity and age are negatively and significantly ($p < 0.01$) correlated with support for homosexuality.

To interpret the substantive effect of these models, Figure 2 plots the expected change in support for LGBTQs when an individual moves from 'none' to 'daily' consumption of each medium. Individuals who consume more newspaper, internet or social media are about 2–4 per cent more likely to report a positive view of LGBTQs. This means that even the largest increase in media consumption results in a relatively small increase in support for homosexuality. However, as I discuss below, the finding is consistent across a number of robustness checks, suggesting that the effect is well estimated. These effects should also be considered in relation to the changing

¹⁴I use access to water as a proxy for income. It is a continuous, numeric variable ranging from 1 (no water in the compound) to 3 (there is water inside the house).

¹⁵In Appendix Table A.6 I also include a control for religious affiliation. The results are nearly identical to the results of only controlling for religiosity.

¹⁶In Appendix Figure A.4, I show that removing social tolerance does not create any substantive change to the marginal effects of any of the models.

Table 2. Effect of media consumption on LGBT attitudes (logit models)

| | Dependent variable: <i>Homosexual as Neighbor</i> (0: dislike, 1: don't care/like) | | | | | |
|-----------------|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Media aggregate | 0.023*** (0.005) | | | | | |
| Radio | | -0.017 (0.012) | | | | |
| TV | | | 0.009 (0.015) | | | |
| Newspaper | | | | 0.061*** (0.013) | | |
| Internet | | | | | 0.046*** (0.014) | |
| Social media | | | | | | 0.046*** (0.013) |
| Other media | | 0.031*** (0.005) | 0.026*** (0.005) | 0.014*** (0.005) | 0.016** (0.007) | 0.016** (0.006) |
| Tolerance | 0.944*** (0.045) | 0.945*** (0.045) | 0.945*** (0.045) | 0.945*** (0.045) | 0.944*** (0.045) | 0.944*** (0.045) |
| Female | 0.145*** (0.029) | 0.140*** (0.029) | 0.147*** (0.029) | 0.149*** (0.029) | 0.145*** (0.029) | 0.143*** (0.029) |
| Education | 0.009 (0.012) | 0.005 (0.012) | 0.008 (0.012) | 0.007 (0.012) | 0.007 (0.012) | 0.008 (0.012) |
| Religiosity | -0.069*** (0.011) | -0.068*** (0.011) | -0.068*** (0.011) | -0.069*** (0.011) | -0.068*** (0.011) | -0.068*** (0.011) |
| Age | -0.010*** (0.001) | -0.010*** (0.001) | -0.010*** (0.001) | -0.010*** (0.001) | -0.010*** (0.001) | -0.010*** (0.001) |
| Income | 0.101*** (0.031) | 0.092*** (0.031) | 0.104*** (0.031) | 0.100*** (0.031) | 0.101*** (0.031) | 0.101*** (0.031) |
| Urban | -0.007 (0.045) | -0.018 (0.045) | -0.001 (0.046) | -0.011 (0.045) | -0.005 (0.045) | -0.004 (0.045) |
| Constant | -4.751*** (0.208) | -4.727*** (0.214) | -4.843*** (0.211) | -4.808*** (0.211) | -4.816*** (0.214) | -4.821*** (0.213) |
| Observations | 46,843 | 46,843 | 46,843 | 46,843 | 46,843 | 46,843 |
| AIC | 35,588 | 35,572 | 35,588 | 35,580 | 35,590 | 35,590 |

Note: *p < 0.1; **p < 0.05; ***p < 0.01

media consumption habits across Africa reported in [Table 1](#). Most importantly, internet consumption increased by nearly 50 per cent in the past three years. If the effects reported in [Figure 2](#) persist alongside the rapid expansion of internet usage across Africa, there is potential for meaningful changes in LGBTQ support across the continent.

Model Sensitivity

My main results hold when I replicate the binomial logit models with ordinary least squares (OLS) and ordered-probit models (see Appendix Tables A.3 and A.4). Each of these models reports the average effect of each medium, keeping constant country-level factors and correcting for clustering at the subnational district level. This fixed-effects method is useful when we are interested in the differences in average effects across units (countries) that may be correlated with the main covariate (media consumption) (Wooldridge 2010).¹⁷ However, a downside to this approach is that it assumes each medium's effect is consistent across each country. Varying levels of censorship and norm diffusion may challenge this assumption. To account for this possibility, I follow Gelman and Hill (2007) and estimate a multilevel model with varying intercepts and varying slopes for media's effect within each country and varying intercepts for

¹⁷This is because introducing random effects into a model where α is correlated with X results in omitted variable bias. There is strong reason to believe that media consumption is indeed correlated with country-level factors.

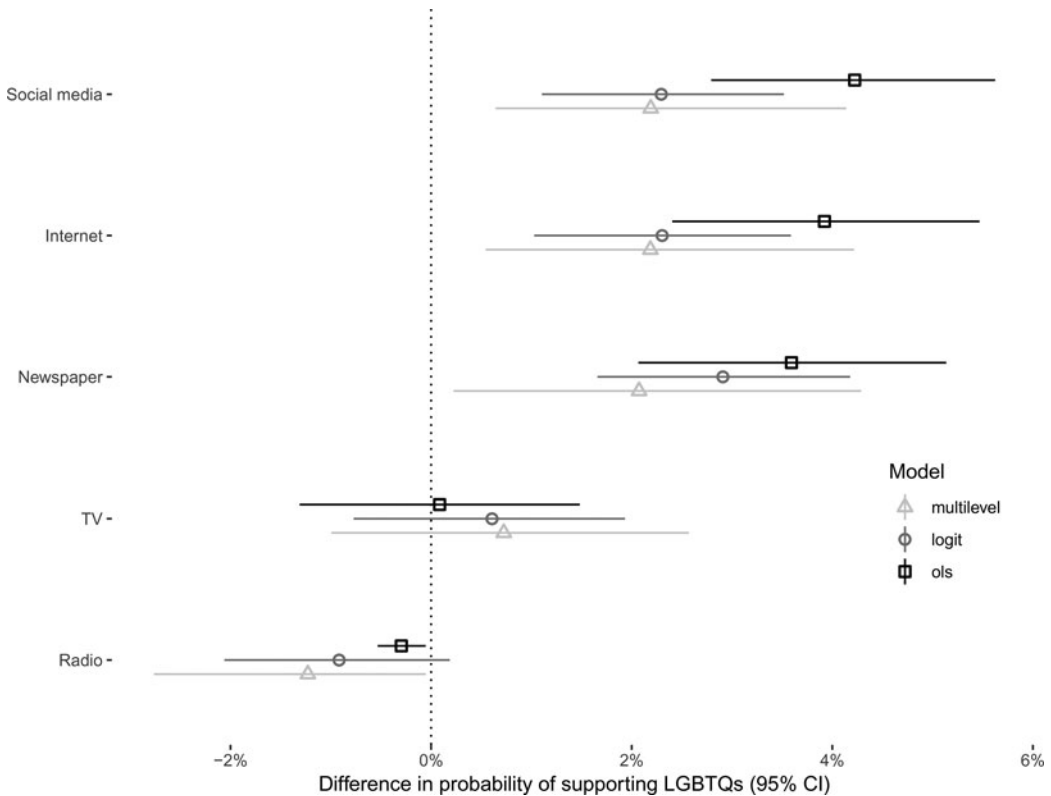


Figure 2. Change in support of LGBTQs when moving from 'none' to 'daily' media consumption

each subnational district. The main effects from this multilevel model are reported in Appendix Table A.5, and the overall marginal effects are included in Figure 2.¹⁸ My main results hold in this multilevel model and the marginal effects of each medium, reported in Figure 2, are similar to those from the logit model (though with slightly larger confidence intervals).

Placebo Tests

To interrogate whether my results are driven by an endogenous relationship between general social tolerance and media consumption habits, I perform placebo tests of media consumption on other measures of social tolerance. I replace the homosexuality dependent variable with four other demographic variables from the same battery of questions: religion, ethnicity, HIV/AIDS and foreigner/immigrant. If my results are driven by the fact that socially tolerant individuals tend to consume more of certain types of media, then we should expect this media consumption to have a similar relationship with other measures of out-group tolerance. Figure 3 shows the effect that each type of media consumption has on the different demographic out-groups. The effects reported in Figure 3 are derived from the same logit equation used in my main models and include all of the individual-level controls, country fixed effects and standard errors clustered at the district level. The only change is in the dependent variable.¹⁹

¹⁸I discuss the country-level results in 'Free Press and Norm Diffusion'.

¹⁹Appendix Tables A.7, A.8, A.9 and A.10 show the full regression results from these models.

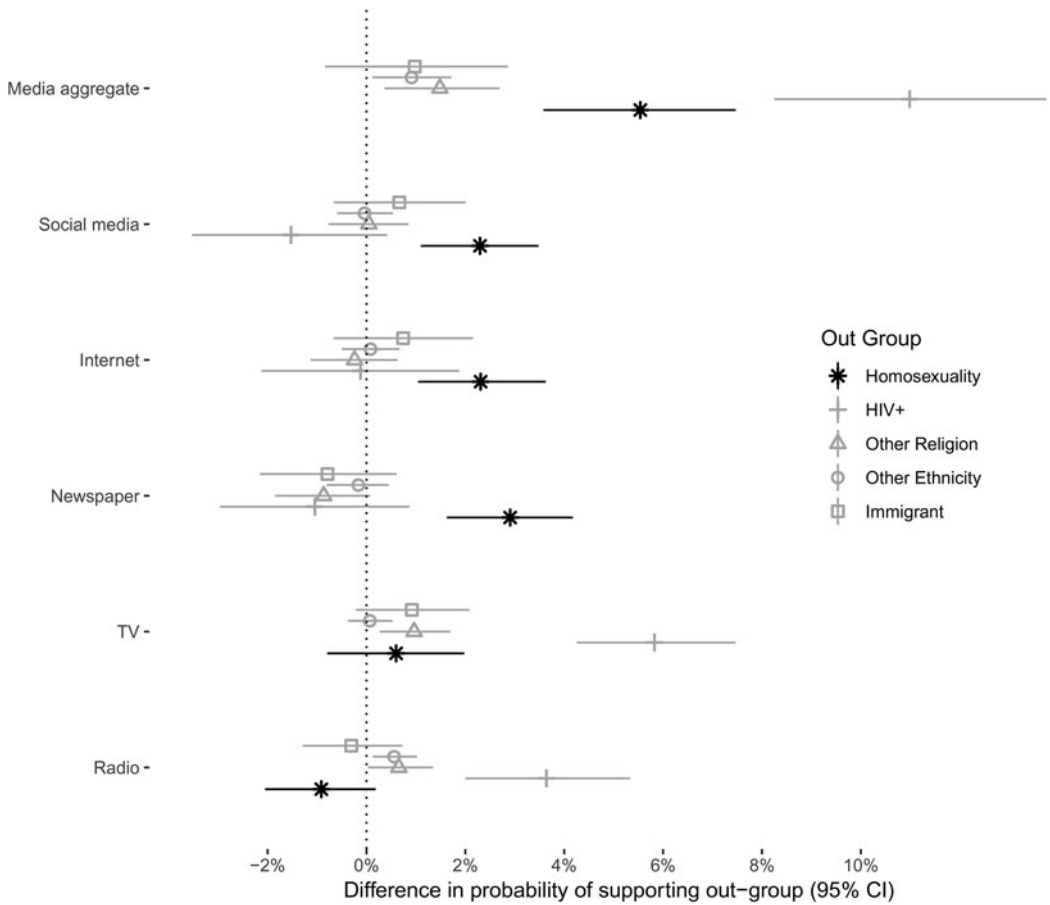


Figure 3. Change in out-group support when moving from 'none' to 'daily' media consumption (logit)

Figure 3 reveals that there is clearly something unique about the relationship between media consumption and attitudes regarding homosexuality. Most notably, increased internet consumption – which is the media source that is most likely to be endogenous to socially tolerant individuals – does not correlate with a significant increase in support for any out-group other than homosexuals. The same is true for increased newspaper and social media consumption. Meanwhile, although increased radio and television consumption have no significant effect on LGBTQ support, they do have a positive, significant effect on support of people living with HIV. This aligns with evidence that campaigns aimed at reducing the stigma of HIV are common on radio and television (Benton 2015; Dionne 2017)²⁰ and provides further evidence that it is the content of these mediums that drives public opinion. Finally, the consistently small or null effect of media consumption on out-groups that typically form strong political coalitions (that is, religion and ethnicity) aligns with theories that I outlined above suggesting that any effects from increased exposure to these out-groups are conditional on partisan ideologies (Nyhan and Reifler 2010; Taber and Lodge 2006) and/or levels of segregation (Enos 2017). In sum, the placebo tests reveal a unique relationship between certain mediums and support for homosexuality,

²⁰For example, Dionne (2017) notes that HIV has at times been referred to as the 'radio disease' in parts of Africa because of how often it is discussed on the radio.

lending support to the theoretical mechanisms outlined above, while also mitigating concerns that my results are driven by any systematic differences in the types of mediums that tolerant and intolerant individuals consume.

Free Press and Norm Diffusion

Finally, I add to the models a country-level indicator that captures both press freedom and globalization. Unfortunately, because this is a country-level measure, the dependent variable is also aggregated, leaving me with variation across only thirty-three countries. The KOF globalization index captures the economic, political and social components of globalization and has been used by others as a measure of the degree of diffusion of queer content.²¹ I focus on the social globalization index of KOF, which includes measures of both de facto and de jure interpersonal (that is, international voice traffic, international tourism), informational (international students, press freedom, international internet bandwidth) and cultural (civil freedom) globalization.²² The KOF social globalization index is a numeric variable in which a higher score represents a country that is more socially connected internationally.

I replicate my main models with an interaction between media consumption and the KOF score. [Figure 4](#) shows how each medium's effect on LGBTQ support changes across different levels of the KOF score.²³ The effect of increased media consumption on support for LGBTQs is greater in countries with higher levels of social globalization (KOF score) than it is in countries with low levels of social globalization. This trend holds across all mediums, but is more prominent for radio, TV and newspaper than it is for internet and social media (as shown by the variation in slopes in [Figure 4](#) and the results in Table A.16). In other words, in countries where queer content is more easily diffused and less likely to be banned (that is, high social globalization), consumption of traditional media (radio, TV, newspaper) increases support for LGBTQs more than it would in countries with low social globalization. While this is also true for new mediums (internet and social media), the positive effect of internet and social media on LGBTQ support is less dependent on high levels of social globalization.

This finding supports my theoretical argument in two ways. First, it indicates that the media's effect on LGBTQ support is likely linked to the content that is available on each medium. Secondly, it upholds my contention that internet and social media are more difficult to censor of queer content, and therefore the effects of these mediums are less conditional on high levels of social globalization.²⁴

While the results in this section suggest that the media's positive effect on support for LGBTQs is connected to both a free press and norm diffusion, I urge caution in overinterpreting these results. More work needs to be done to ensure that measures of press freedom accurately capture the ways in which censorship of queer content differs from more traditional types of censorship.

²¹See Ayoub and Garretson (2016). While it is common to use Freedom House to measure government censorship, it focuses primarily on access to free and diverse news rather than access to content such as television shows, and is therefore not the best measure of access to queer content. Appendix Tables A.11, A.12 and A.13 show the OLS, logit and multilevel results when I interact the Freedom House measure with media consumption. The results are mixed across the models, suggesting that the interaction effects are poorly estimated.

²²For a complete list of the components of this index see Appendix Table A.14.

²³[Figure 4](#) was estimated with a logit model; Appendix Table A.16 displays the full results. The results are stable when estimated using both OLS and multilevel models (Tables A.15 and A.17). [Figure 4](#) was created using the margins package (Leeper, Arnold and Arel-Bundock 2018).

²⁴Appendix Figures A.5 and A.6 show the country-specific marginal effects of each medium relative to the country's Freedom House and KOF scores. Though there is wide variation and several outliers, these figures also suggest a general trend between increased press freedom/social globalization and more positive effects from media consumption. As with [Figure 4](#), the trends appear to be stronger within the mediums that are easier to censor (radio, television and newspaper), suggesting that the effects of internet and social media persist regardless of censorship.

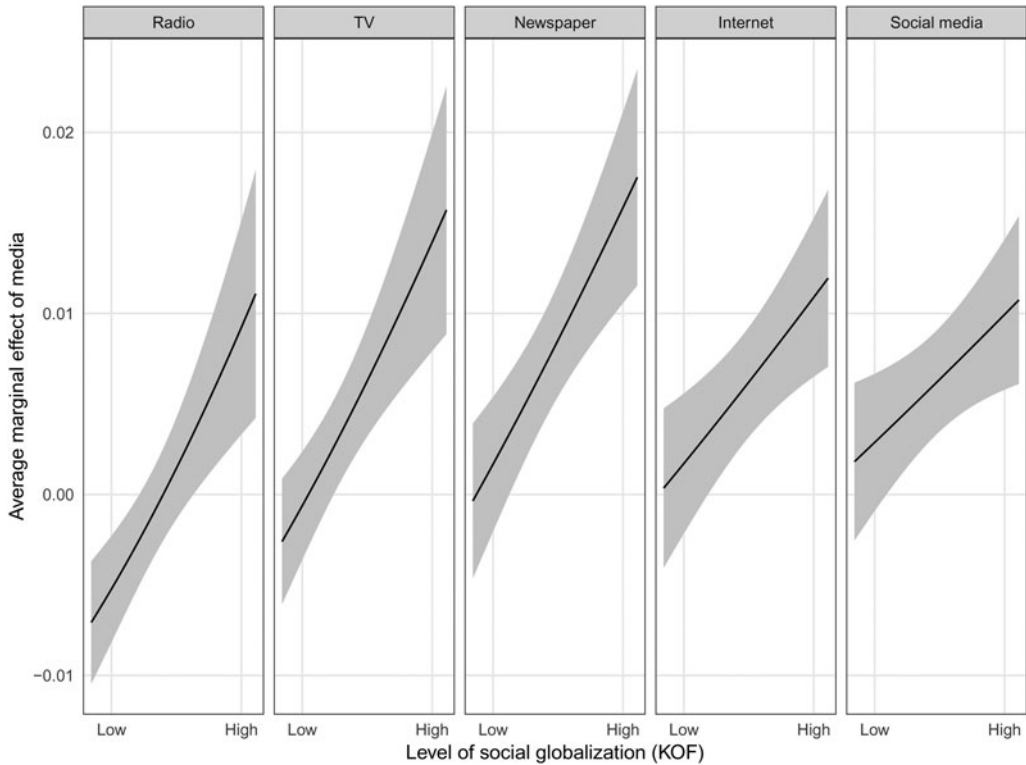


Figure 4. Average marginal effect of media on LGBTQ support across levels of social globalization
 Note: 95 per cent CI. ‘Low’ represents lowest KOF score in the data (35); ‘High’ represents the highest KOF score in the data (73).

Exploring the Mechanism

Radio, Newspaper and Internet Content in Kenya

To systematically test the mechanism driving my results, and to avoid the limitations of using media consumption as a proxy for media exposure (Fazekas and Larsen 2016), I would need data not just on the *frequency* of media consumption, but also on the *media content*. While content of some mediums is archived and relatively easy to access, other mediums, including radio and television, are rarely archived, making it difficult to conduct a systematic comparison. In turn, I leverage the data that is available and provide insight on the mechanism through a descriptive analysis of radio, newspaper and internet content.

In my data, radio is the most frequently consumed medium, with 71 per cent of respondents stating that they consume news from the radio at least a few times per week. Despite this, there is virtually no archived data on vernacular radio’s content. A project in Kenya called *RadioKikuyu* attempts to fill this void by tweeting English translations of news shows on Kikuyu-language radio stations.²⁵ While these transcriptions are not a representative sample of the entire universe of radio content in Kenya, let alone across Africa, they do provide a rare opportunity to examine a snapshot of radio discourse.

²⁵The first transcript is on 23 January 2017 and the project is ongoing as of October 2017. The project started on a personal account on 23 January before migrating to the *RadioKikuyu* handle on 17 February. For more information, see <https://twitter.com/RadioKikuyu>.

I searched all *RadioKikuyu* transcripts between 23 January and 15 October 2017 for any dialogue regarding same-sex relations.²⁶ The only mention of same-sex activity is on 11 April 2017 on CORO FM radio. The transcript reads, in part: ‘Now that men have taken up with men and women with women, where will future generations come from? God said that men should marry women and yet these things are happening even in church.’²⁷

While I underscore the limitations of this data – it is a non-systematic and non-random sample of nine months of content from a subsection of Kenya’s radio universe – the available data suggests that homosexuality is rarely mentioned on Kenya’s Kikuyu radio stations. An interview with Nyambura Mutanyi, the owner of the *RadioKikuyu* account who listens to and transcribes radio content in Kenya, confirms this finding. Mutanyi reports that radio broadcasts rarely mention LGBTQ issues, and that the content overall tends to reinforce heteronormativity by encouraging reproduction and emphasizing the importance of large nuclear families formed by heterosexual marriage.²⁸

To compare this radio content to newspaper content from the same time period in Kenya, I conducted a search of the *Daily Nation*, Kenya’s most widely circulated newspaper. I searched for any stories related to homosexuality for the period 23 January to 15 October 2017 (the same period for which I assessed *RadioKikuyu* transcripts). This search returned over fifty domestic and international LGBTQ-related stories, including coverage of the arrests of alleged homosexuals in Zanzibar, Tanzania and Chechnya, a Kenyan court order that the Anglican Church must reinstate priests accused of homosexuality, and the legalization of same-sex marriage in Germany.²⁹ Importantly, these results include coverage of both positive (legalization in Germany) and negative (arrests in Zanzibar, Tanzania and Chechnya) LGBTQ-related events, and the negative events are covered with largely factual statements. There are important limitations associated with any comparison between this newspaper content and the radio content – mainly that the *Daily Nation* provides data on the universe of the newspaper’s stories for the given period, while *RadioKikuyu* only provides a snapshot of content for the same period. Still, the available data suggests that LGBTQs are covered more frequently and in a more neutral tone in Kenya’s major newspaper than they are on its Kikuyu radio stations.

Finally, I compare this radio and newspaper content with internet search trends for gay-related content during the same time period. Google provides data on the relative popularity of searches for keywords over time, along with the most popular topics searched in association with the keyword. Scholars across multiple disciplines have used Google search trends as a measure of the information individuals seek out online (Askitas and Zimmermann 2009; Ginsberg et al. 2008). Both Ripberger (2011) and Mellon (2013) find evidence that Google search trends converge with other measures of issue salience, indicating that it can be a valid measure of public interest over time.³⁰

Data from these search trends show that, overall, there were internet searches for gay-related content between January and October of 2017, and that searches in Kenya follow the same

²⁶To do this, I used advanced search tools on Twitter to search for the key words ‘gay,’ ‘homosexual,’ ‘shoga’ (Swahili for gay) and ‘gayism’ (a common word used to describe same-sex activity in Kenya). I also searched through mentions of ‘men’ and ‘women’.

²⁷See <https://twitter.com/RadioKikuyu/status/852020630866190336> for the full transcript.

²⁸Email message to the author, 24 October 2017.

²⁹For comparison, a search of France’s *Le Monde* for the same period returned 405 stories with the word ‘gay’ or ‘homosexual’.

³⁰There are limitations to the use of Google search trends. The data may not be representative of trends among non-internet users. This is a limitation in settings where internet use is limited to a small percentage of the population, as is true across most of Africa. However, my aim in using this data is not to make generalizations about the entire population, but rather to describe trends only among internet users. Secondly, words have multiple meanings, which raises questions about the validity of the data across time and space. I argue that data on the topics searched alongside ‘gay’, which I discuss below and is shown in Appendix Tables A.18 and A.19, validates that users who search for ‘gay’ are primarily interested in same-sex sexuality.

temporal trend as those in the United Kingdom (see Appendix Figure A.8). To assess whether this online content provides positive representations of LGBTQs, I examine the most popular topics searched alongside ‘gay’. The most popular topic searched alongside ‘gay’ in Kenya is ‘black’. Not only is this the most popular topic, it is nearly two times as popular as the next most popular topic.³¹ Other popular topics searched alongside ‘gay’ in Kenya during the study period include ‘Wattpad’ (an online storytelling platform where users can post non-fiction and fiction stories) and ‘Pride’. While some of these topics suggest that online searches for queer content are related to pornography, other topics suggest that individuals are seeking out information about gay pride and searching for stories about gay men who look like themselves. None of the top topics searched alongside ‘gay’ in Kenya suggest that internet users are seeking negative content about LGBTQs.

Internet Searches of LGBTQ Content across Africa

Finally, to provide more detail on the LGBTQ-related content individuals search for online outside of Kenya, I expand the analysis of internet search trends to include several countries included in the Afrobarometer data. Appendix Table A.19 shows the most popular topics and the rising topics searched alongside the word ‘gay’ over the past five years in a random sample of the countries included in my analysis.

As was true in Kenya, some of the topics indicate that internet searches of ‘gay’ content are tied to pornography. However, another important trend is that many of the rising topics include popular culture figures who have recently come out as non-heterosexual. Jussie Smollet, an actor who plays a black, gay character in the television show *Empire* and who also identifies as gay in real life, is the top rising topic in two of the sampled countries. Sam Smith, a singer and songwriter who publicly identified as gay in 2014, is also a rising topic in two of the sampled countries. Michael Scofield, the name of a character in the television show *Prison Break* that is played by actor Wenworth Miller who publicly came out as gay in 2013, was a rising topic in Senegal over the past five years. In other words, when popular cultural figures, including those from non-African countries, come out as non-heterosexual, internet searches for content related to those figures’ sexual orientation surges in some African countries. Other notable topics indicating that internet users are seeking out positive representation of LGBTQs include: ‘same-sex marriage,’ ‘cartoon,’ ‘short film,’ and ‘pride’. Out of the 100 top and rising topics listed in Table A.19, only two (‘rape’ and ‘monster’) are explicitly negative.

In sum, despite limitations, I argue that the available data provides evidence that *representation* is the mechanism driving media consumption’s differential effects on support for homosexuality. The fact that not all mediums correlate with increased social tolerance across the board (as shown in Figure 3) further suggests that it is representation, rather than exposure to new information in general, that drives my results.

Conclusion

It is important to understand if (and how) media relates to public opinion regarding diverse sexualities, especially in regions where governments consistently restrict LGBTQ representation while at the same time pro-LGBTQ activists leverage the media to reshape narratives about the queer community. In this article, I find that increased overall media consumption correlates with a significant increase in support for LGBTQs across Africa, but that newspaper, internet and social media consumption drive this relationship. I use a multi-methods approach, which combines cross-sectional survey data with content analysis and descriptive data from across Africa, to show that this effect is likely not driven by individuals selecting into certain types of media

³¹Appendix Table A.18 reports the full list of top and rising topics searched alongside ‘gay’ in Kenya.

consumption. Rather, the evidence suggests that the media's effect on pro-gay support is driven by increased consumption of mediums that contain more exposure to LGBTQ identity.

These results are largely consistent with existing research in other contexts showing that the media affects public opinion (Iyengar and Kinder 1987; McCombs and Shaw 1972), and that exposure to social out-groups can reduce prejudicial attitudes (Broockman and Kallah 2016; Pettigrew and Tropp 2006). However, I provide the first evidence of this at the individual level across the majority of African countries. My analysis also provides new evidence in support of the argument that, regardless of echo chambers, the media's effects on political beliefs are not explained solely by individuals selecting into media diets that align with their ideological beliefs. Finally, I deviate from research showing that governments always use sophisticated techniques to discretely manipulate information (Lorentzen 2014; Roberts 2018), and present a new theory of how governments' interest in publicizing their censorship of queer content may actually increase exposure to LGBTQ identity on some mediums.

Despite these contributions, my analysis suggests several areas for future research. As additional data on Africans' attitudes towards LGBTQs become available, scholars should examine how changes in media access affect LGBTQ support over time. Alternative empirical approaches, especially experimental designs, that do not rely on cross-sectional survey data would also provide a more precise investigation of the mechanism driving my results. In particular, more analysis is needed to determine how exposure to different types of content affects beliefs, and whether these effects are long-lasting or easily negated by counter-exposure. While existing research shows that in-person exposure to LGBTQs creates long-term, positive effects on individual beliefs (Broockman and Kallah 2016), it is unclear whether these effects remain durable when exposure is not in person and in contexts where public opinion is not rapidly shifting towards the positive direction.

Ultimately, I do not claim that increased queer representation in the media is the only way to affect individual support for LGBTQs across Africa. However, the results suggest that there is some merit to the notion that the media plays a role in shaping pro-gay attitudes. On the one hand, this means that gay-rights activists who focus on using the media to demystify what it means to be queer could make meaningful strides to win over public opinion. On the other hand, and to curtail fears that government leaders may use these results to justify increased censorship, the results suggest that censorship may have limits. Although governments can often censor LGBTQ content from the radio and television, it is difficult to prevent citizens from accessing this content on the internet – a medium that is increasingly available across the continent.

Supplementary material. Replication data materials are available in Harvard Dataverse at: <https://doi.org/10.7910/DVN/UWMHET> and online appendices at: <https://doi.org/10.1017/S000712341900019X>.

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