Public Relations Review 47 (2021) 102061

Contents lists available at ScienceDirect

Public Relations Review

journal homepage: www.elsevier.com/locate/pubrev

Communicating corporate LGBTQ advocacy: A computational comparison of the global CSR discourse☆

Alvin Zhou

Annenberg School for Communication, University of Pennsylvania, 3620 Walnut St, Philadelphia, PA 19143, USA

ARTICLE INFO

Keywords:
LGBTQ
Corporate social responsibility
CSR Communication
Computational methods
Comparative study
Corporate activism
Institutional theory
Stakeholder theory

ABSTRACT

Corporations are increasingly engaging with political and social issues through corporate social responsibility (CSR) initiatives, in new areas such as lesbian, gay, bisexual, transgender, queer (LGBTQ) advocacy. Informed by institutional theory and stakeholder theory, this article systematically, comparatively, and computationally examines the intersection of LGBTQ advocacy and CSR communication. In particular, it contributes to the literature by (1) examining the global LGBTQ CSR discourse constructed by Fortune Global 500 companies (136,820 words) with semantic network analysis and structural topic modeling; (2) surveying non-profit organizations' guidelines and comparing corporate values with them; and (3) exploring how stakeholder expectations and institutional factors influence CSR communication. Results indicate 6 corporate topics and 9 non-profit topics, which were explicated by referencing organizations' original writing. It is further shown that stakeholder expectations and institutional factors not only affect whether or not corporations report LGBTQ efforts, but also affect what topics they highlight in CSR reports. Corporations in democratic countries with substantial stakeholder expectations emphasize areas that need high investment and exceed legal obligations.

The past few decades have turned corporations from targets of LGBTQ activism to sources of that activism (Ball, 2019). In 2016, for example, multiple organizations, including PayPal, NBA, Target, and Apple, took a firm stand against the North Carolina House Bill 2, which sought to compel transgender individuals to use public bathrooms corresponding to their birth sex (Jenkins, 2016; Surowiecki, 2016). These corporate efforts encountered intense opposition from conservative activists, lawmakers, and customers. An online petition initiated by the American Family Association to boycott Target[1] was signed more than 1.5 million times, along with a huge wave of #BoycottTarget hashtag backlash on Twitter. Subsequently, Target reported a 9.7-percent decline in earnings in the following quarter. In 2018, corporations such as Microsoft and Ernst & Young formed a strong alliance against India's Penal Code Section 377, and have since continued to host LGBTQ-specific events in the country to raise awareness on workplace diversity (Kapur, 2020; NYU School of Law, 2019). More recently, the LGBTQ Equality Act, proposed to ban discrimination on the basis of sex, sexual orientation, and gender identity in the United States and publicly supported by only three companies in 2015, has now gathered more than 260 corporate sponsors (Human Rights Campaign, 2020).

Although these companies' actions are prone to CSR skepticism and although their motivations remain suspicious to some, the fact remains that corporations are increasingly engaging with LGBTQ issues. Yet communication scholars still know fairly little about how corporations are getting involved in the process, how they are constructing discourses around these topics, and why they might communicate their diversity-related efforts differently. This is partly because much empirical communication research on LGBTQ has been set in political and health-related domains, rarely exploring the issue in corporate and organizational settings (Anteby & Anderson, 2014; Chan, 2017; Gross, 2005). And even when they did, LGBTQ communities were narrowly examined from the lens of business marketing, as a means to capture the lucrative queer market (e.g., Campbell, 2005; Nölke, 2018; Read, van Driel, & Potter, 2018; Tsai, 2011). Some scholars, especially those in the field of public relations, are beginning to look past these economic benefits and internal stakeholders (i.e., sexual minority employees). In its stead, they

☆ **Author Note:** The manuscript, based on the author's master thesis completed at the University of Southern California and supervised by Aimei Yang, Robert Kozinets, and Larry Gross, was presented at the 102nd annual meeting of the National Communication Association as the Top Student Paper of the Public Relations Division. Additionally, I thank Rong Wang, Daniel Hopkins, Adam Khan, Shen Pan, editor, and two anonymous reviewers for their valuable comments and inputs. All remaining errors are my own. Replication materials have been deposited onto Open Science Framework at https://doi.org/10.17605/OSF.IO/5J9PT.

E-mail address: alvinyxz@upenn.edu.

[1] https://afa.net/target.

https://doi.org/10.1016/j.pubrev.2021.102061
Received 2 August 2020; Received in revised form 27 April 2021; Accepted 28 April 2021
Available online 10 May 2021

have started to examine the issue from new organizational perspectives, thus giving rise to an emerging field of "strategic communication for social change" (Ciszek, 2017; Ciszek & Rodriguez, 2020; Li, 2021; Mundy, 2013; Tindall & Waters, 2013).

In this paper, we made three contributions to this field by carrying out a computational comparison that systematically examines the intersection of LGBTQ advocacy and CSR communication. First, we compiled 2018 Fortune Global 500 companies' annual CSR reports and provided a descriptive account of the global CSR discourse on LGBTQ advocacy, using semantic network analysis and structural topic modeling. Second, we referenced non-profit organizations' guidelines on LGBTQ advocacy and compared them with the corporate discourse to identify gaps and differences. Third, using structural topic modeling's inferences on companies' communication emphases (i.e., topical proportions), we conducted a between-corporation comparison by exploring how variances in CSR reporting on LGBTQ advocacy could be predicted by geographical, institutional, and stakeholder-related variables, such as continents, political environments, industry types, and levels of LGBTQ social acceptance. By demonstrating how computational methods could be used to study topics that were typically examined by critical/cultural and quantitative scholars, we also showcase the potential of computational social science for public relations research.

The results support and extend the institutional theory and the stakeholder theory, in that corporations headquartered in democratic areas with high stakeholder expectations are not only more likely to report LGBTQ efforts in their CSR reports, but also more likely to devote a good deal of space to topics that exceed legal obligations (i.e., discrimination prevention). The effect of stakeholder expectations was robust when institutional factors were held constant.

1. Organizations and LGBTQ

Notwithstanding its prominence in popular culture, LGBTQ issues still constitute an emerging topic in communication and public relations research. Compared to other minority groups (e.g., based on gender, race, national origin, and religion), the LGBTQ communities have a relatively short history of issue advocacy, and the majority of LGBTQ individuals across the globe are not protected from employment discrimination by national legal systems (Hebl, Cheng, & Ng, 2020). The United States, for example, only guaranteed constitutional employment protections for LGBTQ people very recently on June 15, 2020 through a landmark Supreme Court case. In fact, as of 2019, 68 countries of all United Nations (UN) member states still criminalized same-sex sexual acts, the institution of marriage for same-sex couples was only provided by 26 member states, and the constitutional protection against discrimination based on sexual orientation existed for only 3 member states (Mendos, 2019). More broadly, LGBTQ individuals still experience both explicit and implicit forms of discrimination and harassment in many aspects of life, including the workplace (Tilcsik, 2011).

Before going further, it bears emphasis that the acronym "LGBTQ" encompasses issues of multiple separate but connected dimensions, in that LGB concerns sexual orientations, T tackles gender identities, whereas Q grapples with the broader issue of sexual and gender diversity in contrast to the dominant heteronormative institutions and social relationships, all of which have implications for organizations' and public relations practitioners' processes of identity negotiation (Ciszek, 2018). Some scholars have considered the elimination of the acronym, especially the phrase "LGBTQ community," on the grounds that the five letters and the all-encompassing term tend to standardize diversity, conceal differences, and reinforce exclusion (Formby, 2017) — the exact opposite of what queer theorists and communication scholars queering the discipline advocate (Butler, 2006; Ciszek, 2018; McDonald, 2015). However, since corporate discourses and non-profit organizations address these issues in conjunction, as demonstrated below, we take an empirical approach similar to Chan (2017) and García-Jiménez, Sánchez-Soriano, and Prego-Nieto (2021), use this generic expression to collect and examine organizations' communication archives, and recognize this limitation due to practicality.

Despite the aforementioned low pace of public policy change at the global level, it cannot be denied that LGBTQ activists have had major wins in the past century (Githens, 2009). And organizations, be it for-profit or non-profit, have played major roles in LGBTQ activism's communication, education, and intervention processes. More specifically, civil society organizations have been at the epicenter of global LGBTQ advocacy, while for-profit organizations, with their wide reach to various stakeholders (e.g., suppliers, employees, and customers), have also contributed to the change of social norms by amending codes of ethics and supporting social changes through philanthropic activities, sometimes outpacing local governments (Adam, 1987; Mendos, 2019). While most scholarly attention has been paid to understanding how activist groups communicate LGBTQ advocacy through organizational activities (e.g., Ciszek, 2017), fewer scholarly efforts were dedicated to examining corporations' meaning construction around the issue in comparison, despite its increasing visibility in the public discourse.

These organizational discourses, oftentimes constructed through CSR initiatives and communicated through CSR reports, bear significance to the study of CSR communication and strategic communication at large. In a review of communication scholarship on LGBTQ issues, Chan (2017) cited Tindall and Waters's (2013) argument that "LGBTQ issues have largely been neglected by scholars in the strategic communication field, including advertising, public relations, and marketing" (p. 2658) and called for more scholars to investigate the practice of LGBTQ-related communication in these subfields.

Accordingly, Sha and Ford (2007) argued that public relations scholarship on diversity issues should cover three areas: (1) public relations practitioners who identify as minorities; (2) sexual and gender minorities as audiences of communication messages; and (3) the role of organizational communication in diversity issue management. However, a large portion of studies on diversity issues was conducted in the first two areas which investigated LGBTQ individuals' lived experiences either as employees or as customers. For example, Tindall and Waters (2012) tried to understand gay public relations practitioners' special concerns in the workplace with in-depth interviews and focus groups, which falls into the first area. Hon and Brunner (2000) and Toledano and Riches (2014), among others (e.g., Rodriguez, 2016), saw LGBTQ individuals as potential audiences of communication campaigns, and contended that in response to the globalization and diversification of audiences, organizations' public communication should also be practiced by diverse employees to effectively match with audience attributes, which covers the second area. The third area, which sees LGBTQ as a social issue for organizations, especially corporations, to manage and engage, was left much unattended (c.f., Amazeen, 2011; Capizzo, 2020).

Thus, extant communication scholarship at the intersection of LGBTQ and organizations, examining either LGBTQ employee experiences or LGBTQ audiences/consumers, constitutes a narrow focus on how organizations interact with such broad issues as LGBTQ rights and fails to illustrate the significant passage of corporate responsibility through which the function of public relations has positively contributed to the visibility of LGBTQ identities (Ciszek, 2020; Edwards, 2015; Edwards & L'Etang, 2013). This study, therefore, first tries to fill the knowledge gap by examining the communication of CSR practice as corporations' issue management efforts and providing an overview of the global CSR discourses constructed by leading corporations.

RQ1: What is major global corporations' CSR discourse around LGBTQ issues?

It should be noted that, with many large corporations getting increasingly vocal on diversity issues, there have been heated discussions — and sometimes harsh criticisms — on corporate involvement in LGBTQ activism. The general public has questioned these corporations' intentions, and scholars have argued that, by adopting LGBTQ-friendly policies and engaging with LGBTQ activism, some corporations merely

want to capture the lucrative queer consumer market for the sake of firm performance (e.g., Campbell, 2005). This kind of practice has been referred to as pinkwashing (Schulman, 2011). For example, Keystone Pipeline System, an oil pipeline project in Canada and the United States, tried to draw public support by comparing Canada's record on LGBTQ rights with other nations, while not devoting any real corporate resources to LGBTQ advocacy (Michaelson, 2014). In other words, by pinkwashing, businesses do not invest in the issue itself or challenge inequalities in society, but instead profit from it, which translates to them taking LGBTQ advocacy as *opportunities* instead of *responsibilities*. Although it is difficult to pinpoint the differences between CSR practice and CSR communication for each company in this empirical study, the phenomenon of pinkwashing, along with the quest to find an altruistic *prior* to identify topics in the corporate corpus, makes it necessary for the current study to seek non-profit organizations' guidelines as the benchmark, against which we can empirically critique the corporate discourse.

RQ2: How does the global LGBTQ CSR discourse compare with non-profit LGBTQ organizations' guidelines?

2. Corporate social responsibility

Traditionally, corporations are only responsible for delivering services to clients and maximizing financial returns to investors. But since the mid-20th century, consumers and governments have increasingly extended their expectations and definition of corporate responsibilities, and businesses in response have started taking employees, suppliers, local communities, and other stakeholders into account during their decision-making processes (Carroll, 1991, 1999; Johnson, 1971).

Corporate social responsibility is typically understood as corporations' economic, legal, ethical, and philanthropic responsibilities at a given point of time that are expected by the society (Carroll, 1979, 1991, 1999). However, no consensus on the definition has been reached, partially due to its extensive coverage and varied approaches of understanding (van Marrewijk, 2003). For example, there has been a debate about whether economic and legal responsibilities should be counted as corporations' social responsibilities. Opposite to Carroll's proposition, Davis (1973) believed "social responsibility begins where the law ends" (p. 313) and goes beyond "direct economic or technical interests" (Davis, 1960, p. 70), thus denying economic and legal responsibilities from the scope of CSR.

The issue of whether economic and legal responsibilities count as social responsibilities is of considerable relevance for our cross-national examination of diversity-related CSR practice. The scope of legal responsibilities is constantly expanding and absorbing ethical responsibilities, as newly proposed bills and regulations get introduced to protect (albeit sometimes jeopardize) marginalized groups' interests in certain countries. Thus, corporations' LGBTQ efforts predating any progressive laws should be characterized under the ethical/philanthropic category. But after such laws were introduced, some continued efforts would be characterized as legal obligations. These political interventions might also prompt corporations to change their CSR resource allocation and consequent communication practice. Since every country's political and legal systems are different, the dynamic boundary between legal and ethical responsibilities partially contributed to an interesting fact about the global CSR communication practice examined here, in that companies might have constructed vastly different discourses on LGBTQ issues.

These cross-national differences in LGBTQ advocacy are well documented in academic literature and reflected in multinational businesses' communication patterns. For example, Adamczyk and Liao (2019) examined the global trend of public opinion on LGBTQ issues, and identified several factors that contributed to the cross-national variances, including economic development, democratic orientation, and political history. Chintrakarn, Treepongkaruna, Jiraporn, and Lee (2020) showed that the LGBTQ population of a company's headquarter can also affect the adoption of LGBTQ-friendly corporate policies. Scholtens and Dam (2007) have shown that cultural values proxied by Hofstede's cultural indicators can predict corporate ethical policies across multiple countries. And the 2013 case of IKEA pulling an article featuring lesbian couples from its lifestyle magazine and shutting down its entire publication business in Russia due to legal considerations two years later (The Associated Press, 2015), serves as a great example of how regional factors can influence and sometimes determine corporate communication.

Scholars who comparatively studied business ethics have been using the institutional theory to explain these between-corporation differences in terms of CSR practice and communication (e.g., Doh & Guay, 2006; O'Connor & Shumate, 2010). The institutional theory argues that institutional factors, such as political structures and industrial norms, drive isomorphic changes and make organizations more similar to each other if they share certain characteristics (i.e., industries, country, democracy level, etc.), including their communication practice of corporate social responsibility (Campbell, 2007; DiMaggio & Powell, 1983; Lammers & Barbour, 2006; O'Connor & Gronewold, 2013; Scott, 1995; Shumate & O'Connor, 2010; Yang & Liu, 2018).

Drawing upon these studies along with others that showed effects of institutional factors on firm management and CSR communication (e.g., Lattemann, Fetscherin, Alon, Li, & Schneider, 2009; O'Connor & Shumate, 2010; Scholtens & Dam, 2007), this study also took a comparative approach to the examination of global CSR practice. More specifically, we not only present common themes of the global CSR discourse on LGBTQ issues, but also pay special attention to the differences among corporations, and explore whether variances in CSR reporting on LGBTQ advocacy can be attributed to institutional factors across countries.

The level of protection for LGBTQ individuals still drastically varies across countries, from Mexico where same-sex marriage was legalized in 2009 and anti-discrimination law was passed in 2011, to Saudi Arabia where no LGBTQ advocacy groups were operating and sexual minorities continued to be persecuted (Adamczyk & Liao, 2019; Mendos, 2019). These institutional differences have significant influences on how corporations communicate their commitment to social responsibilities (O'Connor & Gronewold, 2013). Since LGBTQ advocacy is usually considered part of the human rights issue that correlates with democratic values and civil liberty (Davenport & Armstrong, 2004; Donnelly, 1999), we would suspect that corporations located in countries with higher levels of democracy, civil liberty, and legal protections against LGBTQ discrimination would be more likely to relay their efforts on LGBTQ advocacy in their CSR reports, while those located in countries with lower such levels would be less likely to communicate their commitment. Levels of democracy, civil liberty, and LGBTQ legal protections are well studied and numerically indexed in the political science and international relations literature, which this study adopts and will be explained in more detail in later sections. Moreover, as suggested by research agencies and non-profit organizations (e.g., Mendos, 2019; Poushter & Kent, 2020), the global divide of institutional LGBTQ protection remains large, in that countries in North America and Europe have consistently shown a higher commitment to and acceptance of LGBTQ issues compared to those in Asia. It reflects the geography of CSR and might also affect its communication as hypothesized below (Ding, Ferreira, & Wongchoti, 2019). Given the fact that leading corporations — in terms of revenues — are concentrated in these three continents, we propose hypotheses that do not consider other continents for statistical power considerations. However, our results will include all continents represented in the dataset.

H1a: Corporations in North America and Europe are more likely to communicate LGBTQ advocacy in CSR reporting than those in Asia.

H1b: Corporations headquartered in countries with higher levels of democracy (H1b1), civil liberty (H1b2), and legal protections (H1b3) are more likely to communicate LGBTQ advocacy in CSR reporting, compared to those with lower levels of democracy, civil liberty, and legal protections.

In addition to political factors of a corporation's country of origin, other factors might also have affected the practice of CSR communication concerning LGBTQ advocacy, one of them being the industry sector. For example, researchers have found that companies in the traditional industry (including the sectors of basic materials, energy, industrials, real estate, and utilities, and companies such as Exxon Mobil, DowDuPont, and East Japan Railway) have more oligopolistic structures and are less likely to fulfill institutional compliance and civil obligations such as corporate responsibilities (Jain, Aguilera, & Jamali, 2017). Giving less consideration to their social reputations, these companies have been found to communicate CSR practice less thoroughly and devote fewer resources to social causes in general (Wanderley, Lucian, Farache, & de Sousa Filho, 2008). Also, some political science literature has suggested that the traditional industry ideologically leans conservative according to their corporate political expenditures (e.g., Bonica, 2014) and might less likely engage with a liberal issue such as LGBTQ advocacy, compared to services (including the sectors of consumer discretionary, consumer staples, financials, and health care, and companies such as Walt Disney, Chase, and Allstate) and high tech (including the sectors of technology and telecommunications, and companies such as Apple, IBM, and Facebook). Our three-way industry classification references the Industry Classification Benchmark (ICB), the Standard Industrial Classification (SIC), and the scheme developed by Zéghal and Maaloul (2010). With more details presented in Table 1 of the online Appendix, we hypothesize:

H1c: Corporations in the traditional industry are less likely to communicate LGBTQ advocacy in CSR reporting than those in the services and high tech industries.

Another theoretical framework that has proven to be valuable in comparative examinations of CSR communication is the stakeholder theory (Donaldson & Preston, 1995; Freeman, 1984). CSR practice, especially those conducted on ethical and philanthropic grounds, is in many cases communicated to influence stakeholder perceptions (Costa & Menichini, 2013; Sweeney & Coughlan, 2008). By considering who the audiences of their CSR communication are, corporations are likely to curate their discourses around social issues to align with the preferences of their immediate public — the general population (Morsing & Schultz, 2006). In other words, corporations that operate in places where social acceptance of LGBTQ individuals is low, in fear of public opposition, might be reluctant to communicate their LGBTQ commitments in formal publications. In contrast, corporations headquartered in places with higher levels of acceptance might conform with the respective social norms and report their LGBTQ efforts to elicit positive responses, fulfill stakeholder expectations, and gain sociopolitical legitimacy (Capizzo, 2020; Wang & Qian, 2011). Therefore, we also investigate how the level of LGBTQ acceptance, which proxies the level of social expectations for companies to make LGBTQ-related CSR efforts, might influence corporations' CSR discourse, and hypothesize:

H1d: Corporations headquartered in countries with higher levels of LGBTQ acceptance are more likely to communicate LGBTQ advocacy in CSR reporting than those with lower levels.

3. Non-profit guidelines for corporate LGBTQ advocacy

Before diving into how corporations construct their CSR discourses around LGBTQ issues, we first examine the advice non-profit organizations issue to corporations for LGBTQ advocacy. As mentioned earlier, enlisting guidelines written by non-profit organizations and recognizing what topics "LGBTQ responsible" corporations should cover altruistically in their CSR reporting can help us set a *prior* to interpret topics that emerge from the corporate discourse. Leading non-profit organizations that focus on LGBTQ diversity and inclusion were consulted for their corporate guidelines, including Catalyst, Lambda Legal, GLAAD, Human Rights Campaign (HRC), International Lesbian, Gay, Bisexual, Trans and Intersex Association (ILGA), National Center for Transgender Equality (NCTE), National LGBT Health Education Center, Pride At Work, The Stonewall, The Trevor Project, The United Nation Human Rights Council, and Workplace Pride, most of them based in North America and Europe. The final guideline is summarized in Table 1 by incorporating reports from eight organizations.[2]

Non-profit organizations mainly constructed a corporate guideline for LGBTQ advocacy in nine areas. These nine areas were organized in Table 1 according to the level of investment indicated by the pyramid model of corporate social responsibility and the Corporate Equality Index report, ranging from basic legal responsibilities, such as the prohibition of discrimination against sexual minorities, to voluntary actions on philanthropy, such as monetary contributions to LGBTQ non-profit organizations (Carroll, 1991; Human Rights Campaign, 2020).

The hierarchy of corporate LGBTQ commitments recommended by non-profit organizations suggests another set of communication patterns that might exist in corporations' CSR reporting. For example, companies located in areas with low acceptance of LGBTQ individuals might just cover basic obligations (e.g., anti-discrimination policies) and dismiss expectations that require more investment (e.g., monetary contributions). In contrast, companies that endure higher democratic and stakeholder pressures might emphasize how they devote extra resources to areas that exceed expectations in their CSR communication. Therefore, similar to the first set of hypotheses developed earlier, we speculate:

H2a: Corporations in North America and Europe will give less emphasis to low-investment LGBTQ efforts in CSR reporting than those in Asia.

H2b: Corporations headquartered in countries with higher levels of

Table 1
NGO guidelines on corporate LGBTQ advocacy.

Level of investment	Keywords	NGO guidelines	In LGBTQ CSR discourse
Low	Discrimination	Prohibit discrimination and harassment based on sexual orientation and gender identity	✓
	Training	Integrate LGBTQ topics in internal training for workplace awareness	✓
	Culture	Foster an organizational culture that is inclusive of LGBTQ individuals	✓
	Metrics	Include LGBTQ diversity metrics in leadership performance measures	–
	Data	Monitor anonymous employee data on sexual orientation and gender identity	–
	Supplier	Enforce non-discrimination policies on suppliers during procurement processes	✓
	Networks	Maintain Employee Resource Groups for LGBTQ individuals	✓
	Benefit	Ensure equivalency in health benefits for same- and different-sex couples	✓
High	Outreach	Demonstrate philanthropic support for LGBTQ organizations and events	–

[2] The final eight reports consulted are the *Building LGBT-inclusive Workplace* report from Catalyst, the *Studio Responsibility Index 2019* from GLAAD, the *Corporate Equality Index 2020* from HRC, the *State-Sponsored Homophobia 2019* from ILGA, the *Providing Inclusive Services and Care for LGBT People* report from National LGBT Health Education Center, the *Model Contract Language* report from Pride At Work, the *Workplace Equality Index 2020* from The Stonewall, and the *Workplace Pride Global Benchmark 2017* from Workplace Pride.

democracy (H2b1), civil liberty (H2b2), and legal protections (H2b3) will give less emphasis to low-investment LGBTQ efforts in CSR reporting, compared to those with lower levels of democracy, civil liberty, and legal protections.

H2c: Corporations in the traditional industry will give more emphasis to low-investment LGBTQ efforts in CSR reporting than those in the services and high tech industries.

H2d: Corporations headquartered in countries with higher levels of LGBTQ acceptance will give less emphasis to low-investment LGBTQ efforts in CSR reporting than those with lower levels.

4. Data and method

Conducting a large-scale cross-national study on CSR communication is challenging, and comparative studies in this domain are still relatively rare. The limited collection of comparative studies on CSR communication focused on a few countries, using interviews, surveys, or content analysis. For example, employing manual coding, Maignan and Ralston (2002) compared the communication practice of companies located in France, the Netherlands, the U.K., and the U.S. on their websites, and presented their different levels of dedication and commitment to CSR. These qualitative and quantitative methods are usually not scalable and fail to utilize the accumulating empirical data of CSR communication for comparative analyses. In this study, we argue that the huge potential of computational methods for communication research can be realized for comparative endeavors (e.g., Lucas et al., 2015; van der Meer, 2016). Tools developed by computational social scientists have provided communication scholars a new way to conduct rigorous analyses on big textual datasets, which could not have been envisaged as a possibility by previous studies (van Atteveldt & Peng, 2018). We explicate our data collection and computational methods in the following subsections. Aligning ourselves with principles of open science and data transparency, we have deposited the dataset, scripts, and relevant files (e.g., non-profit reports) on Open Science Framework (OSF) for replication purposes.

4.1. Data collection

We collected and examined the annual CSR reports of companies on the 2018 Fortune Global 500 list. Fortune Global 500 companies were selected for three reasons. First, companies on the list are from different countries and industries with various political and social backgrounds, which introduces the variances necessary for this comparative study. Second, Fortune Global 500 companies have larger revenues, more stakeholders, and higher visibility in their countries than companies with smaller volumes. Therefore, they arguably contribute more corporate resources to CSR causes and communicate their CSR efforts more actively. Third, with a larger number of stakeholders, a Fortune Global 500 company may have more LGBTQ stakeholders proportionally. The higher visibility of LGBTQ members could elicit more corporate attention to the communities. Using companies more active in CSR reporting and more engaged with the LGBTQ communities can facilitate our data collection and analysis.

Fortune Global 500 companies use various methods for annual CSR reporting. Most companies offer their CSR reports as downloadable PDFs, using names such as *CSR Report*, *Sustainability Report*, *Corporate Citizenship Report*, *ESG (Environmental, Social, and Governance) Report*, and other variations. Others adopt online website reporting, and some do not implement CSR reporting at all. To avoid biases and to fairly compare companies, we collect and analyze English CSR communication reports in the form of PDF publications. In cases where corporations explicitly stated that CSR reports were incorporated into general reporting, we used the CSR sections in annual and integrated reports or registration documents. We manually downloaded the most recent CSR report of each company published in the past 5 years. The exact coverage of "fiscal year" differs across companies, and therefore some collected reports were named as their 2018 report, with others named as 2017 or 2019. Data were collected in mid-2019. This data collection procedure was set in place to collect data as recent, official, and extensive as possible at the intersection of corporate LGBTQ advocacy and CSR communication.

These documents were then manually searched for thirteen search terms concerning LGBTQ issues: *LGBT*, *gay*, *lesbian*, *bisexual*, *transgender*, *queer*, *homosexual*, *sex*, *orientation*, *preference*, *gender*, *identity*, and *pride*. In the following analyses, we used the textual data of the context in which these terms were used. In most cases, the context was the paragraphs under the same subheading.

Among these Fortune Global 500 companies, 406 of them published CSR reports which we collected and manually searched for the thirteen keywords. Among these 406 companies, 236 mentioned at least one LGBTQ-related word in their CSR reports. Our corpus thus contains 236 documents and their 136,820 words and 8287 unigrams. More details about data collection, descriptive results, and corpus construction can be found in the online Appendix.

4.2. Data labeling

Covariates that might affect how companies ($N = 236$) constructed their LGBTQ CSR discourses were reviewed in previous sections. Below, we detail data sources and some descriptive results of each variable for the whole dataset.

Ranking, Country, and Continent. The Fortune Global 500 list provided the ranking number and headquarter location of each company. Thirty-three countries were represented on the list, 25 of which contained companies that mentioned LGBTQ issues. We matched the geographical information to five continents: North America ($N = 77$), Europe ($N = 91$), Asia ($N = 56$), Oceania ($N = 7$), and South America ($N = 5$).

Industry. We used companies' industry information provided by Fortune for further classification. Consulting the Standard Industrial Classification (SIC) and Industry Classification Benchmark (ICB), both widely used by scholars and financial sectors for categorization (e.g., NYSE, NASDAQ, Arun, Almahrog, & Ali Aribi, 2015; Yang, Liu, & Wang, 2020), we classified the 2018 Fortune Global 500 companies into three categories: traditional ($N = 62$), services ($N = 140$), and high tech ($N = 34$), similar to Zéghal and Maaloul (2010). The detailed classification scheme can be found in Table 1 of the online Appendix.

Democracy. Each country's democracy level was marked by the latest *Polity* score from the Polity Project (Marshall & Gurr, 2020), which has been widely used and validated in political science, economics, and sociology literature (e.g., Brückner & Ciccone, 2011; Cole, 2005). The score ranges from -10 (hereditary monarchy) to +10 (consolidated democracy) on a 21-point scale in our dataset ($M = 5.22$, $SD = 6.78$).

Civil Liberty. The International Institute for Democracy and Electoral Assistance provided the annual Global State of Democracy Indices, which assessed the subarea of civil liberty (e.g., freedom of expression and personal integrity) across 158 countries in 2018 (Skaaning, 2019). The score ranges continuously from 0 (no civil liberty) to 1 (full civil liberty), and has one missing data on Luxembourg in our dataset ($M = .72$, $SD = .24$).

Legal Protection. The International Lesbian, Gay, Bisexual, Trans, and Intersex Association (ILGA) publishes annual reports on state-sponsored homophobia, which assess the degree to which each country legally protects minorities against sexual orientation discrimination (Mendos, 2019). The score ranges from -4 (death penalty for consensual same-sex acts) to $+4$ (constitutional protection against discrimination) on a 9-point scale ($M = 1.43$, $SD = 1.28$)

Social Acceptance. Each country's LGBTQ social acceptance data come from the Social Acceptance of LGBT People in 174 Countries report published by the William Institute, which compiled 5 million survey responses to questions on the general public's beliefs on LGBTQ individuals (Flores, 2019). The score ranges from 0 (low social

acceptance) to 10 (high social acceptance) on an 11-point scale, and has one missing data on the United Arab Emirates in our dataset ($M = 6.12$, $SD = 1.59$).

4.3. Data analysis

The combination of semantic network analysis and structural topic modeling was used to present and compare the global CSR discourse on LGBTQ advocacy. Semantic network analysis, by revealing relations among concepts, helps demonstrate the meaning creation in corporations' discourse on a certain issue (Doerfel & Barnett, 1999; Yang & Veil, 2017). The method is particularly valuable for research that examines organizations' narratives and discourses, such as values advocacy, CSR communication, and crisis responses (Schultz, Kleinnijenhuis, Oegema, Utz, & van Atteveldt, 2012; Zhou, 2019). In this study, we use semantic network analysis to uncover the linguistic associations among words that are used by corporations when they discuss LGBTQ advocacy as a commitment to social responsibilities, which will give us a general picture of the big textual dataset.

Structural topic modeling (STM), an unsupervised machine learning method, was used to investigate topical patterns in our corpus. Topic modeling such as STM is not dictionary-based; instead, it analyzes patterns of term co-occurrences and clusters these co-occurring terms together as topics for human interpretation (Grimmer & Stewart, 2013). Therefore, topic modeling can also be understood as a dimension reduction method, in the sense that the method simplifies and categorizes the universe of document unigrams — a system with complex linguistic meaning — into a limited number of topics (dimensions). During the process, unigrams that do not clearly belong to any topic might form a filler topic that is generic in its meaning as interpreted by human readers (Crain, Zhou, Yang, & Zha, 2012). Topic modeling methods assume each document is a mix of several topics, with each document having different emphases and hence different topical proportions. We use the variances in topical proportions in the model to test our second set of hypotheses.

One major innovation of structural topic modeling, compared to more traditional methods such as the Latent Dirichlet Allocation model, is that it allows researchers to incorporate document metadata into the computing process (Roberts, Stewart, & Tingley, 2019). By linking topical results (such as the proportion of each topic in documents) with covariates, the method is particularly useful for comparative studies that explore the relationship between covariates and communication emphases. For example, by adding conditions (treatment or control) as covariates to documents, scholars are now able to estimate the treatment effect of an intervention on how people construct their meaning around certain issues (e.g., Roberts et al., 2014). Similarly, Lucas et al. (2015) labeled documents with their origins as covariates (either China or the Middle East) and demonstrated how the two countries' citizens differed in what substantive topics they focused on when posting online about an international event. Applied to our case, structural topic modeling can help us test hypotheses on topical emphases by labeling Fortune Global 500 companies with their institutional and stakeholder-related covariates.

Upon data cleaning, including document-feature matrix construction, frequency threshold-based feature selection, and stopword removal, we estimated the topic model with the number of topics ranging from 3 to 10, per the NGO guidelines discussed earlier. The model diagnosis along with human reading suggested the 7-topic result which includes one filler topic and six substantive topics on CSR LGBTQ Advocacy. The 6 topics will be explicated in the result section, with more methodological transparency provided in the Online Appendix.

5. Results

5.1. RQ1 and RQ2: CSR versus non-profit discourse on corporate LGBTQ advocacy

Our RQ1 asks for a descriptive account of major global corporations' CSR discourse around LGBTQ issues. To this end, we conducted semantic network analysis and structural topic modeling, with results respectively shown in Fig. 1 and Table 2.

In our semantic network (Fig. 1), the tie width corresponds to the number of corporations that used the two words in their documents, and the label size corresponds to the word's weight. The visualization, only showing the top 50 words after backbone extraction (Serrano et al., 2009), shows that Fortune Global 500 corporations' CSR discourse on LGBTQ advocacy mainly focuses on creating diverse and inclusive workplaces for their employees, signaled by the centrality of words that are used mostly for internal contexts (i.e., employee, employment, workplace, and team). Consequently, their narratives usually mention other diversity-related attributes describing employees such as gender and disability. Several non-profit guidelines uncovered earlier were also visible at the core of our network. For example, words around "human rights" suggest a semantic cluster that focuses on the prevention of discrimination and the necessity of training in the workplace. Efforts on external LGBTQ stakeholders were also present albeit not central in the network, an example being the cluster around "supplier programs" which focuses on diversifying procurement pools to support more minority-owned providers.

To answer RQ2, we use structural topic modeling to cluster the collected text into topics and compare those corporate topics with non-profit guidelines. The model result, shown in Table 2, suggests six distinct corporate topics that could all be found in the NGO guidelines on LGBTQ advocacy (Table 1). However, three NGO recommendations were absent in the corporate discourse, i.e., the measurement of diversity performance for leadership positions, the implementation of data collection on queer individuals, and the philanthropic and monetary support for external LGBTQ advocacy organizations. In Table 2 we also listed words most likely to be associated with the topic (High Probability) and most likely to be distinguishable from other topics (High Exclusivity) to help explicate these six corporate topics. Structural topic modeling's raw data output, along with word clouds and model diagnostics, is provided in the Online Appendix.

Below, from the low level of investment to the high level of investment, we briefly explicate each topic using the relevant words in Table 2 to provide more context on how each topic was discussed by examined corporations. Organizations on average emphasized the most on their legal obligations (Label: Discrimination; Proportion: 20.1%) as they reiterated corporate policies on discrimination and harassment. For example, Quanta Computer wrote that they "fulfill its anti-discrimination commitments and prohibit the discrimination of people based on ethnicity, skin color, age, gender, sexual orientation, race, disabilities, pregnancy, religious and political beliefs, membership in social groups, or marital status." This finding suggests that companies' communication patterns might also conform with the pyramid model (Carroll, 1991), in that it emphasizes corporations' fulfillment of lower-level responsibilities (i.e., legal obligations). Next, using examples of their human rights seminars, these corporations tried to demonstrate how they raised awareness of LGBTQ issues within their companies (Label: Training; Proportion: 14.2%). For example, Mazda wrote in its CSR report that they started "organizing training programs and lectures to promote understanding of sexual minority (LGBT) issues" in early 2017. Organizational culture (Label: Culture; Proportion: 18.0%) is the next topic mentioned in corporations' writing, where they show a strong commitment to creating an inclusive and welcoming culture for everyone. Support for LGBTQ-owned suppliers also constitutes a major topic (Label: Supplier; Proportion: 10.4%). For example, IBM spared several sections in its CSR report on supplier diversity and

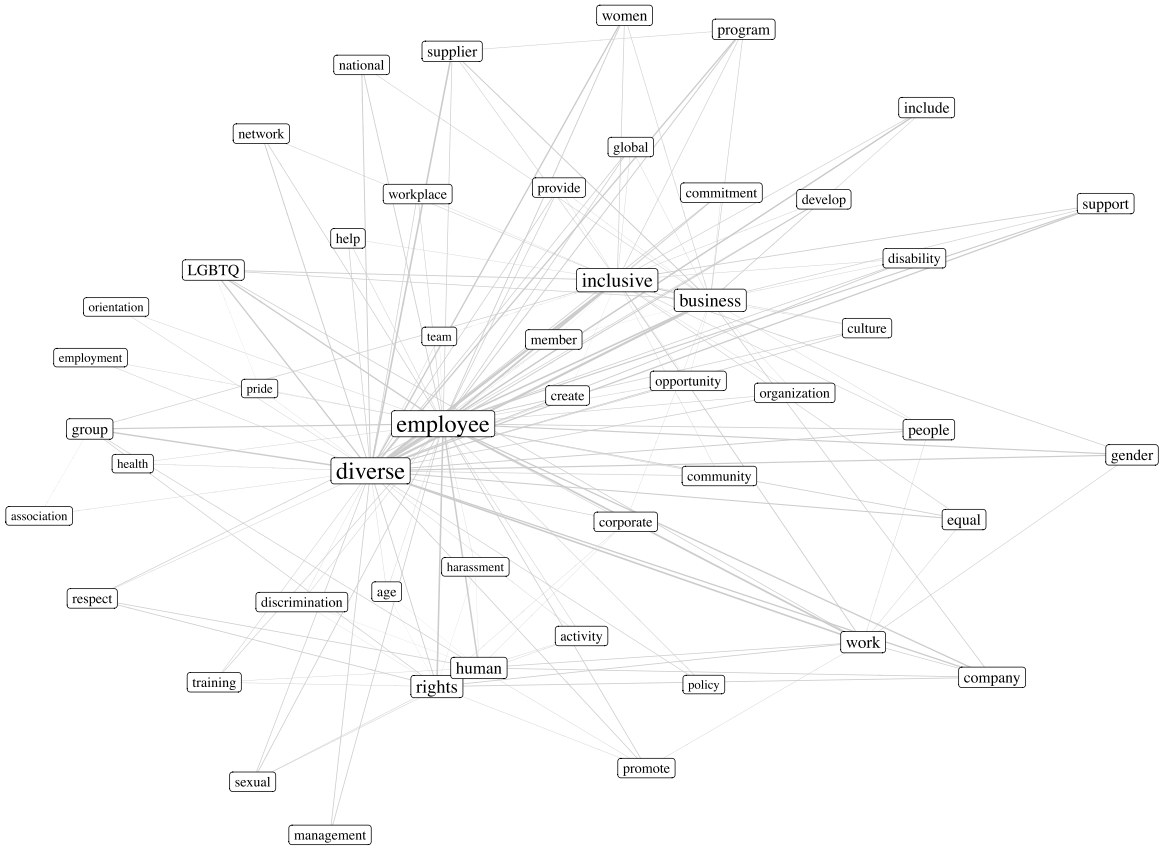

Fig. 1. CSR discourse on LGBTQ advocacy: semantic network. *Note*: The tie width corresponds to the number of documents ($N = 236$) that mentioned the two words. The label size corresponds to the word's weight (weighted degree centrality). The original semantic network before filtering contains 2511 nodes and 1,222,949 edges. Multiple rounds of backbone extraction (Serrano, Boguna, & Vespignani, 2009) and thresholding based on degree centralities were performed to visualize the top 50 words in the semantic network. All stemmed unigrams have been rehydrated back to their most frequent forms for visualization.

communicated its dedication to LGBTQ-owned businesses. The second most emphasized topic across all examined corporations is establishing colleague networks through Employee Resources Groups (ERGs) (Label: Networks; Proportion: 14.4%). For example, Dell documented how it established new chapters of its employee resource group for sexual minority members and allies "in locations where identifying as LGBT is not widely accepted." Last, some organizations detailed how they extended healthcare benefits to LGBTQ employees' partners and made new strides at transgender healthcare (Label: Benefit; Proportion: 10.7%). For example, Raytheon claimed in its CSR report to be among the first in the Aerospace Defense industry to offer same-sex domestic partner benefits, and Bank of America claimed to be the first major company in the United Kingdom to include gender reassignment surgery for employees in its health insurance package.

5.2. *Hypothesis testing: institutional and stakeholder factors in LGBTQ CSR communication*

Now we turn to hypothesis testing on how politics, stakeholders, and industry types affect whether corporations communicate LGBTQ efforts in CSR reports (H1) and what topics they emphasize in CSR communication (H2). The results are summarized in Table 3.

To examine the first set of hypotheses (H1) about the likelihood to communicate CSR efforts on LGBTQ issues, we regressed a dummy variable, indicating whether LGBTQ issues were mentioned in a said company's CSR report, on covariates discussed in the method section using logistic regression. Table 4 shows that proposed hypotheses are all supported, as corporations in North America ($b = 1.35,\ p < .001$) and Europe ($b = 1.14,\ p < .001$) or in the services ($b = .46,\ p < .05$) and high tech ($b = 1.29,\ p < .01$) industries are more likely to communicate CSR efforts on LGBTQ issues. Indicators on the political environment of the headquartered country are also significant, as companies in democratic ($b = .17,\ p < .001$) and civil liberal ($b = 5.25,\ p < .001$) countries with better legal protections against sexuality discrimination ($b = .47,\ p < .001$) are more likely to communicate their commitment to the communities. Stakeholder expectation, proxied as the general population's average social acceptance of LGBTQ individuals, is also a statistically significant predictor ($b = .55,\ p < .001$). Table 4 treats companies that do not publish CSR reports as missing data. Its result on statistical significance remains robust when the regression model treats companies that do not publish CSR reports as if they do not mention LGBTQ issues.

To examine the second set of hypotheses (H2) on how companies differ in terms of their communicative emphases, we focus on the low-investment topic of anti-discrimination policy for LGBTQ individuals, which in many cases only helps companies assume their legal responsibilities. By regressing this topical proportion on the same set of corporate variables, Table 5 shows that companies based in North America are significantly less likely to detail their anti-discrimination policies in CSR reports ($b = -.22,\ p < .001$) compared to those based in Asia. The effect of Europe is in the hypothesized direction but not statistically significant ($b = -.06,\ p = .19$). Two political indicators are both statistically significant and negative, as companies headquartered in countries that are more democratic ($b = -.02,\ p < .05$) and enjoy higher levels of civil liberty ($b = -.75,\ p < .001$) are less likely to spare unnecessary space for anti-discrimination policies that might have been a given. However, the level of legal protections for LGBTQ individuals positively predicts the topical proportion devoted to companies' communication on anti-discrimination policies, contrary to the hypothesis ($b = .05,\ p < .01$). Stakeholder expectation also makes

Table 2
CSR discourse on LGBTQ advocacy: structural topic modeling.

Level of investment	Topics	Relevant words	Topical proportion
Low	Discrimination	High Probability: Employee, Discrimination, Gender, Sexual, Policy, Age, Disable, Orientation High Exclusivity: Discrimination, Religion, Ethics, Origin, Code, Complaint, Race, Labor	20.1%
	Training	High Probability: Human, Rights, Respect, Promote, Training, Activity, Sexual, Harass High Exclusivity: Human, Rights, Seminar, Awareness, Lecture, Harass, Consult, Violate	14.2%
	Culture	High Probability: Inclusive, Diverse, Workplace, Equal, Culture, Business High Exclusivity: Colleague, Everyone, Inclusive, Workplace, Progress, Change	18.0%
	Supplier	High Probability: Supplier, Diverse, Business, Program, Develop, Enterprise High Exclusivity: Supplier, Spend, Procurement, Council, Enterprise, Own, Chain	10.4%
	Networks	High Probability: Diverse, Employee, Network, Resource, Group, Association, Program High Exclusivity: Association, Fund, Latino, Hispanic, Black. Chapter, Ally, Asian	14.4%
High	Benefit	High Probability: Employee, Health, Equal, Benefit, Include, Support, Provide, Commit High Exclusivity: Health, Healthcare, Medical, Benefit, Patient, Children, Family, Care	10.7%

Note: All stemmed unigrams have been rehydrated back to their most frequent forms.

companies pay more attention to discussions on high-investment areas ($b = -.05,\ p < .01$). And the model suggests that the proportion devoted to legal responsibilities does not differ significantly across industries.

The procedure of linearly regressing topical proportions on covariates did not approximate the STM model's measurement uncertainty (Roberts et al., 2019), and thus might underestimate standard deviations of some covariates' effects in Table 5. To provide a robustness check, we included a more conservative measure of covariates' effects by using global approximation, reported in Figure 4 of the online Appendix. The directional effects of these covariates are mostly robust according to the alternative method, except the effects of democracy and state-level legal protection become marginally significant.

In summary of our findings on H1 (Table 4), we find that institutional factors can well predict whether Fortune Global 500 companies' CSR reports communicate LGBTQ advocacy. Corporations located in more democratic countries with higher civil liberty indexes and higher levels of legal protection tend to mention LGBTQ issues more frequently. The influence of institutional factors is particularly striking when we compare Mainland China and Taiwan, two regions that share much similar cultural and linguistic backgrounds but have drastically different political environments for sexual minorities. As Taiwan became the first in Asia to legalize same-sex marriage in 2019, Mainland China continues to be an unwelcoming place for LGBTQ individuals politically. In our dataset, only 6 out of the 59 companies in Mainland China mentioned LGBTQ-related terms in their CSR reports, while 7 out of the 9 companies in Taiwan communicated their commitment to LGBTQ

Table 3
Hypotheses and results.

Outcomes	Variables	Hypotheses	Results
H1. Communicate CSR Efforts on LGBTQ Issues	H1a. Continents	Corporations in North America and Europe are more likely to communicate LGBTQ advocacy in CSR reporting than those in Asia.	Supported
	H1b1. Politics	Corporations headquartered in countries with higher levels of democracy are more likely to communicate LGBTQ advocacy in CSR reporting.	Supported
	H1b2. Politics	Corporations headquartered in countries with higher levels of civil liberty are more likely to communicate LGBTQ advocacy in CSR reporting.	Supported
	H1b3. Politics	Corporations headquartered in countries with higher levels of legal protections are more likely to communicate LGBTQ advocacy in CSR reporting.	Supported
	H1c: Industries	Corporations in the traditional industry are less likely to communicate LGBTQ advocacy in CSR reporting than those in the services and high tech industries.	Supported
	H1d: Expectations	Corporations headquartered in countries with higher levels of LGBTQ acceptance are more likely to communicate LGBTQ advocacy in CSR reporting.	Supported
H2. Emphasize High- Investment Topics	H2a. Continents	Corporations in North America and Europe will give less emphases to low-investment LGBTQ efforts in CSR reporting than those in Asia.	Partially Supported
	H2b1. Politics	Corporations headquartered in countries with higher levels of democracy will give less emphasis to low-investment LGBTQ efforts in CSR reporting.	Supported
	H2b2. Politics	Corporations headquartered in countries with higher levels of civil liberty will give less emphasis to low-investment LGBTQ efforts in CSR reporting	Supported
	H2b3. Politics	Corporations headquartered in countries with higher levels of legal protections will give less emphasis to low-investment LGBTQ efforts in CSR reporting.	Not Supported
	H2c: Industries	Corporations in the traditional industry will give more emphasis to low-investment LGBTQ efforts in CSR reporting.	Not Supported
	H2d: Expectations	Corporations headquartered in countries with higher levels of LGBTQ acceptance will	Supported

(*continued on next page*)

Table 3 (*continued*)

Outcomes	Variables	Hypotheses	Results
		give less emphasis to low-investment LGBTQ efforts in CSR reporting.	

stakeholders. Geographically, we find companies located in North America and Europe more likely to address sexuality issues in their corporate reports. Using the population's social acceptance of LGBTQ individuals as our proxy, we find that companies tend to align with stakeholder expectation and communicate their LGBTQ efforts if the public support sexual equality. Interestingly, if we regress the dummy variable on stakeholder expectation while holding state-level legal protection constant, which enables us to disentangle the effect of social pressure from institutional factors, we still find companies with higher stakeholder expectation to more likely communicate LGBTQ efforts in their CSR reports ($b = .25,\ p < .05$). In other words, the effect of stakeholder expectation remains robust, if we narrow our analysis to smaller areas such as Northern Europe and South Asia where state-level legal protection is the same across countries.

In summary of our findings on H2 (Table 5), we find the results to generally fall in line with the hypotheses. Companies located in democratic countries with high civil liberty stressed their ethical and philanthropic responsibilities, while companies in autocratic countries with low civil liberty merely stated their legal obligations. Stakeholder expectation also significantly affects CSR communication in terms of topical proportion. Similar to what we did above, if we regress the topical proportion on stakeholder expectation while holding state-level legal protection constant, we likewise find companies with higher stakeholder expectation to emphasize less on anti-discrimination policies in their CSR reports ($b = -0.08,\ p < .001$). Thus, our findings on H2 align with the predictions from the pyramid model of corporate social responsibility (Carroll, 1991), but also extend it by showing that the hierarchy of corporate social responsibilities also manifests through CSR communication.

6. Discussion

The LGBTQ communities have swiftly risen to high visibility during the past few decades, thanks to advocates and allies' persistent political activism (Adam, 1987). Corporations, meanwhile, have also entered the public dialogue by taking social responsibility initiatives, and tried to influence their economic and institutional environments through values advocacy (Bostdorff & Vibbert, 1994; Xu & Zhou, 2020). The communication of corporate social responsibilities constitutes a critical part of organizational rhetoric during this advocacy, which underscores the critical role of public relations in contemporary societies (O'Connor & Ihlen, 2018; Schoeneborn & Trittin, 2013). Going forward, as the corporate environment gets increasingly politicalized, consumers, stockholders, and activists will demand corporations not only take firm stances, but also take actions and communicate on these pressing social issues (Wettstein & Baur, 2016). More research is thus needed to further illustrate how corporations are engaging with these issues and explain why they are engaging differently (van der Meer & Jonkman, 2021).

Against this backdrop, this paper comprehensively, comparatively, and computationally examined the global CSR discourse on LGBTQ issues, offered insights on how leading organizations are communicating their commitment to the continuously more visible LGBTQ stakeholders, and highlighted the role of institutional factors and stakeholder pressure in corporations' values advocacy. The study thus makes three contributions to the literature.

Table 4
Regressing whether CSR report mentions LGBTQ issues on corporate variables.

	Dependent variable: CSR report mentions LGBTQ issues					
	H1a	H1b1	H1b2	H1b3	H1c	H1d
Oceania	16.041					
	(550.089)					
Europe	1.135***					
	(0.247)					
North America	1.353***					
	(0.271)					
South America	2.084					
	(1.109)					
Polity Democracy Score		0.173***				
		(0.025)				
Civil Liberty Index			5.253***			
			(0.713)			
Legal Protection				0.468***		
				(0.087)		
Services Industry					0.461*	
					(0.221)	
High Tech Industry					1.286**	
					(0.401)	
Stakeholder Expectation						0.552***
						(0.074)
Observations	406	406	405	406	406	405
R^2	0.100	0.174	0.196	0.076	0.029	0.150
Adjusted R^2	0.091	0.172	0.194	0.074	0.024	0.148
Residual Std. Error	0.471 (df = 401)	0.450 (df = 404)	0.443 (df = 403)	0.475 (df = 404)	0.488 (df = 403)	0.456 (df = 403)
F Statistic	11.119*** (df = 4; 401)	84.951*** (df = 1; 404)	97.943*** (df = 1; 403)	33.182*** (df = 1; 404)	6.054*** (df = 2; 403)	71.088*** (df = 1; 403)

Note: Asia is the reference continent; Traditional industry is the reference industry.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

Table 5
Regressing topical proportion of anti-discrimination policy on corporate variables.

	Dependent variable: proportion devoted to the anti-discrimination topic					
	H2a	H2b1	H2b2	H2b3	H2c	H2d
Oceania	− 0.271*					
	(0.116)					
Europe	− 0.064					
	(0.049)					
North America	− 0.224***					
	(0.051)					
South America	0.271*					
	(0.135)					
Polity Democracy Score		− 0.015*				
		(0.007)				
Civil Liberty Index			− 0.752***			
			(0.183)			
Legal Protection				0.051**		
				(0.019)		
Services Industry					− 0.032	
					(0.047)	
High Tech Industry					− 0.050	
					(0.066)	
Stakeholder Expectation						− 0.050**
						(0.017)
Observations	236	236	236	236	236	236
R^2	0.125	0.021	0.067	0.029	0.003	0.037
Adjusted R^2	0.110	0.017	0.063	0.025	− 0.006	0.033
Residual Std. Error	0.290 (df = 231)	0.304 (df = 234)	0.297 (df = 234)	0.303 (df = 234)	0.308 (df = 233)	0.302 (df = 234)
F Statistic	8.227*** (df = 4; 231)	5.140* (df = 1; 234)	16.921*** (df = 1; 234)	6.934** (df = 1; 234)	0.355 (df = 2; 233)	8.956** (df = 1; 234)

Note: Asia is the reference continent; Traditional industry is the reference industry.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

First, we provided one of the first analyses on the intersection of LGBTQ advocacy and corporate communication. Moving beyond seeing LGBTQ as "diverse audiences that public relations campaigns have to capture" (e.g., Toledano & Riches, 2014), "diverse employees that work for public relations agencies" (e.g., Tindall & Waters, 2012), and "activism groups that use public relations to build social impact" (Ciszek, 2017), this paper sees LGBTQ as a social issue for organizations to engage and broadens the ways in which diversity issues interact with public relations research. Second, grounded in institutional theory and stakeholder theory developed by business management literature (Campbell, 2007; Doh & Guay, 2006), this comparative study tested their applicability to the communication of corporate social responsibilities and expanded them by showing that structural and local factors can also serve as predictors of corporations' communication silence as well as communication emphases. Lastly, we applied newly developed computational methods to assist our data analysis on large corporate corpora, a niche area which was highlighted by prior research (van der Meer, 2016) but has not yet received considerable development in recent publications. By demonstrating how these methods could help scale up empirical analyses — especially in comparative studies where most existing research took qualitative and critical approaches — we invite more scholars to consider the values of computational social science for public relations research.

7. Limitations and future research

Admittedly, the study is limited by its sample of Fortune Global 500 companies, a revenue-based ranking list that over-represents the Global North. However, as the practice of corporate social responsibilities remains a luxury for financially healthy companies and a symbol of Western imperialism in many developing countries (Khan & Lund-Thomsen, 2011), accessing a more representative sample of global companies is challenging. Moreover, the issue of gender and sexual diversity, in and of itself, is oftentimes considered Western interference (Epprecht, 2013). For example, Currier and Cruz (2020) described how Barack Obama's declaration of support for LGBTQ rights instilled concerns and fueled local anti-gay mobilization in Liberia, which shed light on how sexuality, race, colonialism, and public diplomacy could interplay in local politics. The study thus presents opportunities for future fieldwork to further our understanding of how sexual minorities (and any other marginalized publics) exert influences on social responsibility practice and communication in Global South corporations. Taking a qualitative or ethnographic approach, by observing the dynamic process of meaning construction within a specific organization and inquiring about the forces behind the final product of CSR discourse as reported by the current study, can also help answer the broader question of how organizational rhetoric is negotiated within its hierarchical structure.

Collecting textual data to provide a descriptive account of the global CSR discourse on LGBTQ issues was one of the study's goals. However, the dataset with its cross-sectional nature cannot precisely reveal the causal link between external factors and corporate rhetoric. Future research can employ longitudinal data to better explore this issue. For example, Lucas et al. (2015) showed the potential of using structural topic modeling to detect temporal changes in textual data. By collecting years of corporate reports, modeling topical proportions as the dependent variable, and marking significant events as discontinuity points, studies can tap into how political episodes, such as the passage of LGBTQ-friendly legislation, could have influenced CSR communication. Another way to move the literature forward is by identifying cases where a multinational corporation adjusts its issue-based CSR practice and communication on a region-by-region basis. For example, the Virgin group has terminated trade with Uganda since the introduction of its anti-homosexuality bill, but kept its business running in other African countries (Labott & Farshbaf, 2013). Single-company multiple-country

cases similar to this might provide better opportunities for future studies to claim causal identification.

Creating strict data collection criteria and only using official publications also limited us from constructing a bigger dataset or investigating more interactive communication formats, such as social media posts and website communication. By considering what kinds of stakeholders would be drawn to each format and examining differences between the content posted in these formats, in terms of language differences and topical proportions, future research can provide more insights on how stakeholder demographics and characteristics might influence organizations' communication on their CSR practice.

Declarations of interest

None declared.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at https://doi.org/10.1016/j.pubrev.2021.102061.

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