Virus from the Global South:
A comparative analysis on Twitter commentary on China x Covid-19, and South Africa x Omicron

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Abstract

On the 12th of March 2020, the World Health Organisation (WHO) declared the widespread outbreak of Covid-19 a pandemic. This announcement came after months of monitoring a cluster of cases in Wuhan, China, in 2019 and led to a series of global lockdowns and travel restrictions to inhibit the spread of the virus. China and WHO were blamed by some for the spread of the virus for not raising concerns sooner. The combination of blame and Covid-19 misinformation led to increased xenophobia toward people of Asian descent. Nearly two years later, in November 2021, variant B.1.1.529 was discovered in South Africa. This variant was named Omicron and is considered a variant of concern by the WHO. In response, various countries from the Global North initiated travel bans for several southern African countries. Despite initial cases only being identified in South Africa and Botswana, southern African countries were being unfairly punished due to South Africa's transparency and the efforts of their scientists. These responses reinforce colonial perceptions of Africa and Asia as a 'county of illness' (Shim, 1998; Flint & Hewitt, 2015; Lee, 2017; Kagumire, 2021). Commentary on these events were widely discussed and shared on Twitter. Twitter allows for broader commentary on current events as user posts (Tweets) reflect their perspectives and contributions to any debates that may be ongoing.

Drawing on an analysis of the most shared (retweeted) posts from two datasets, this thesis conducts a comparative content analysis to identify dominant themes. Datasets were collected over 7-days, starting from the dates of WHO's announcements on the widespread outbreak of Covid-19 being declared a pandemic (2020), and the Omicron variant being declared a variant of concern (2021a). From these datasets, 3000 (1500 x 2) of the top retweeted tweets were analysed through qualitative content analysis. This thesis explores whether the online conversations reinforce stereotypes surrounding historical perceptions of China and Africa. Furthermore, the thesis explores whether the data sets revealed broader commentary on geopolitical tensions that were potentially heightened during the pandemic. Findings showed that although the datasets did not reveal many instances of explicit hate speech, there was discussion highlighting racial stigma and racial scapegoating of both China and South Africa. Both datasets also showcased broader commentary on geopolitical tensions, specifically centred around influence, power, and

inequality. These discussions drew on the ongoing battle for global power between the US and China and how the pandemic highlighted existing divides between the Global North and Global South. Stemming from colonial differentiations between “primitive” and “advanced”, the phrase “Global South” is a contested term. However, the term has shifted from its focus on development and culture to geopolitical power relations (Connell & Dados, 2012). Lastly, both datasets showcased how Twitter can be used by citizens as a tool to challenge and critique power elites.

Chapter 1: Introduction

On the 12th of March 2020, the World Health Organization (WHO) declared the widespread outbreak of a novel coronavirus (Covid-19) as a pandemic. This announcement came after months of monitoring a cluster of cases in Wuhan, China in 2019 and led to a series of global lockdowns and travel restrictions to inhibit the spread of the virus. China and WHO faced critique for not raising alarm about Covid-19 sooner, allowing the epidemic to develop into a full-scale pandemic. The combination of blame assignments and Covid-19 misinformation led to increased xenophobia towards people of Asian descent and prompted conversations surrounding racial stigma and discrimination (Dubey, 2020; Schild et al., 2020; Ziems et al., 2020). This xenophobia occurred on a global scale and has been directly and indirectly encouraged by several political parties using anti-Chinese rhetoric (Human Rights Watch, 2020), including former president Donald Trump calling it "The Chinese Virus".

Over a year later in November 2021, a variant of the COVID-19 virus was discovered in South Africa, variant B.1.1.529. This variant was named Omicron and was considered a variant of concern by WHO (2022a). In response, various countries from the Global North initiated travel bans for various southern African countries, including Botswana, Lesotho, Eswatini, Zimbabwe, Namibia, and South Africa (BBC News, 2021; Department of Health and Social Care, UK Health Security Agency, & Department for Transport, 2021). As initial cases were identified in South Africa and Botswana, many shared the perception that southern African countries were being unfairly punished as a result of South Africa's transparency and the efforts of their scientists (BBC News, 2021; Chutel, 2021; Reuters, 2021; Seydi, 2021; The Economist, 2021).WHO expressed their disapproval over this response, noting that putting travel bans in place specifically targeting Africa attacks global solidarity (WHO Africa, 2021).

China and South Africa are both located within continents that have faced the impacts of imperialism, and stigmas of Africa and Asia have formed, as a result (Shim, 1998; Said, 2003; Flint & Hewitt, 2015; Poncian, 2015; Lee, 2017; Viladrich, 2021). The Covid-19 pandemic, and later the emergence of the Omicron variant sparked conversations about these constructions and how they contribute to global perceptions of China and South Africa. The critique and

commentary surrounding these countries cannot be entirely attributed to stereotypical constructions. As the world experiences a shared crisis, lives are disrupted, and many feel fear and uncertainty (Bakker et al., 2018). Establishing who or what is responsible and who can be held accountable for a crisis can impact the way that people respond and view the actors who are involved (Bakker et al., 2018); thus it is natural for those impacted by the Covid-19 pandemic to attribute blame, investigate the origin to attempt to make sense of a situation. The Covid-19 variant preceding Omicron, Variant B.1.617.2 (later named Delta), was also noted as a variant of concern due to it being more infectious, causing more severe symptoms, and that it was able to bypass immunity gained by vaccination and earlier infection (World Health Organization, 2022b). Due to this, countries' concern and preparation for the worse-case-scenario can be understood. However, some decisions, such as Global North countries locking out southern Africa amidst their discovery of Omicron (BBC News, 2021; Chutel, 2021) can also be seen as a reinforcement of colonial perceptions of Africa as a "source of disease" (Flint & Hewitt, 2015; Kagumire, 2021). Demonizing and othering China can also tie into Western and Eurocentric constructions of China as a dirty, diseased, and evil (Shim, 1998; Lee, 2017).

The pandemic brought about a sudden and drastic shift in the relationship between governments, policymakers, and the scientific community, with the world eagerly hoping for a solution to what had become the worst pandemic of the century (Sharma et al., 2022). Extensive, widespread measures were implemented globally to stop the spread of Covid-19, with various pharmaceutical companies starting to develop a vaccine. However, existing geopolitical and economic divides were heightened during this time, showcasing that many countries did not have adequate resources, healthcare systems, and funding to combat Covid-19 appropriately. This divide of resources and power reflected global economic realities (BBC News, 2021; Chutel, 2021). Albeit a contested term stemming from the colonial differentiation between "primitive" and "advanced" intuitions and societies, the phrase "Global South" has shifted from focusing on development and cultural differences to geopolitical power relations (Connell & Dados, 2012).

McCann & Matenga (2020) highlight the impact of Covid-19 and the Global North-South divide through the actions of international governments seeking to protect their internal vested interests at the expense of global inequality, the most notable example being the hoarding of global

supplies of Covid-19 relief medication – and later vaccines – by rich countries. Murthy (2011) notes that there is an ongoing and systematic transfer of value from the Global South (including China) to the Global North, based on the exploitation of workers, which has expanded rapidly to include manufacturing. This drives neoliberal globalization (Murthy, 2011).

Global lockdowns, travel restrictions, quarantines, and social distancing changed the structure of society, shifting social media as a more prominent mode of communication in everyday pandemic life (Saud, Mashud & Ida, 2020; Thelwall & Thelwall, 2020). Twitter is a particularly useful platform for following events and sourcing current information (Weller et al., 2014). During the pandemic, it became an important tool for disseminating information (Weller, 2014; Rosenberg, Syed & Rezaie, 2020). Social media platforms became not only a place to obtain information and daily updates, but also social support (Rosenberg, Syed & Rezaie, 2020; Mpofu, 2021). For those who have access, social media can be used to obtain news and for networking, and receiving varied information and opinions (Bosch, 2020b).

It is important to note that demographic factors associated with inequalities such as access, skills and patterns of internet use can contribute to the digital divide (Dutton & Reisdorf, 2019). The digital divide can be understood as a division between people who have access and make use of digital media, and those who do not (Dijk, 2020). Elements that contribute to the digital divide include access to devices, connections, and applications. This divide does not present two clearly separated categories; they are linked to existing economic, social, and cultural divisions in society and can be considered a social divide rather than a digital one (Dijk, 2020). However, the digital divide moves beyond just issues of access. In exploring Twitter commentary, the perspectives of those impacted by the digital divide are excluded. China blocks access to Twitter for regular users, meaning that the perspectives of individuals living within China are only conveyed by government officials and state-affiliated media (Twitter, 2020). The digital divide is a contested term, causing significant concern about the contribution of digital technology to inequality (Dutton & Reisdorf, 2019). The importance placed on access to digital technologies has reinforced divides for middle-income and low-income countries within the Global South, creating a deeper divide. The usage and transfer of information technology of the Global North

has led to an ‘underdevelopment’ of the Global South through an outflow of financial and informational resources (Dutton & Reisdorf, 2019).

Analysing datasets extracted from Twitter, this thesis explores the primary narratives in tweets about Covid-19 and China in comparison to tweets about Omicron and South Africa, aiming to answer the following questions:

> Q1: What are the dominant themes that emerge in both datasets and how do they compare?
> Q2: Does the data reinforce stereotypical constructions of Asia and Africa?
> Q3: Do these datasets reveal broader commentary on geopolitical tensions that were heightened during the Covid-19 pandemic?

The thesis explores whether commentary in these datasets answered the above research questions and showcased how Twitter can be used by citizens as a tool to challenge and critique power elites. Twitter serves as a microphone for the masses, allowing for asynchronous “conversations” and citizen journalism, and connects users to larger themes, specific people, and groups (Murthy, 2011). This research showcases how Twitter can be used as an important tool for disseminating information during a crisis, but also the critique of existing socio-political structures.

Chapter 2: Literature Review

This chapter outlines relevant scholarly literature which frames this thesis. It is organised into three primary sections: Health and the Global South, Social Media and Covid-19, and Diplomacy and Covid-19. The first section provides contextualisation and discusses theories relating to the concepts of health, race, and stigma that are pertinent to understanding how negative stereotypes and perceptions are formed, as well as how they apply to health. The second section focuses on the role of social media in the Covid-19 pandemic, including humour, cyber racism, misinformation, and crisis communication. The final segment reviews the literature on diplomacy in the context of Covid-19.

2.1 Health and the Global South

This thesis explores commentary about China and South Africa, two countries that are categorised as part of the Global South. The concept of the "Global South" is complex and contested. The concepts of 'Global North' and 'Global South' serve as attempts at world ordering or world interpretation (Wagner, 2017). Globally, different regions have varying forms of inequality, some of which can be traced to historical antecedents and cultural systems. These inequalities have caused detrimental effects, such as poor access to basic needs, infrastructure, and healthcare (Amzat & Razum, 2021). 'Global inequality' implies unequal power and wealth amongst nations, resulting in differences between the Global North and the Global South. These concepts have roots in colonialism and have often been used concerning economic development, but shifted to be used as a political lexicon and later spread to various academic fields (Connell & Dados, 2012). The Global South has been preserved as a space of resistance against "Northern" dominance in multilateral settings, but also neoliberal capitalism and other forms of global resistance (Haug, Braveboy-Wagner & Maihold, 2021).

The Global South includes some regions of Asia, Africa, Latin America, the Middle East, and Oceania (Connell & Dados, 2012; Wagner, 2017). The term "South" is often used as shorthand for these regions, but the contours are blurred (Haug, Braveboy-Wagner & Maihold, 2021). Typically, these regions are also categorised by the Global North as 'developing' countries, the

Third World, immerging/transitional economies, and less industrialised countries. The majority of the Global South shares a common history of exploitation and a widespread history of colonialism, neo-liberalism and both economic and social change. This has resulted in large inequalities in standards of living, life expectancy and access to resources (Amzat & Razum, 2021; Mpofu, 2021). The concept of The Global South denotes regions outside of Europe and North America which are mostly (but not entirely) low-income and often politically and culturally marginalised (Connell & Dados, 2012). Within social science literature, the concept is not strictly attached to the Southern hemisphere, but as a general term for decolonised nations which were located roughly, but not exclusively South of the old colonial centres of power (Haug, Braveboy-Wagner & Maihold, 2021). This presents these areas as a form of resistance against 'northern' dominance in multilateral settings.

The phrase 'the Global South' has become a popular term for framing research, and is typically associated with 'the developing world (Haug, Braveboy-Wagner & Maihold, 2021). Usage of the term 'Global South' has steadily increased between 2004 and 2013, and the areas to which they refer have been exoticized and faced projections of pride and prejudice from the west (Connell & Dados, 2012; Wagner, 2017; Mpofu, 2021). The term has not only been used as a metaphor for underdevelopment, but also highlights mass inequalities (Connell & Dados, 2012). Due to factors such as under-resourced health and medical provision, conflict, climate change and socio-economic strain, many Global South countries had been highly exposed to the spread of Covid-19 (McCann & Matenga, 2020). The colonial association with the Global South is tied to underdevelopment and creates a stark distinction between "developed" and "primal" regions.

With these categorisations come certain associations, stigmas and stereotypes that impact the communities within these regions. The following subsections will discuss these stigmas and stereotypes of health.

Health, Stigma and Stereotypes

Diseases have challenged humankind's survival throughout human evolution, and as we have evolved, so have our mechanisms to avoid exposure to disease-related threats (Huang et al., 2011). As diseases can be transmitted unintentionally through contact or proximity to a carrier,

people are sensitive to behavioural and morphological traits that are associated with the presence of the illness. These human disease-avoidance mechanisms, such as avoiding symptomatic people, can provide a foundation for broader prejudice and can often 'misfire' against targets who are not legitimate sources of disease (Huang et al., 2011). Chronic self-perceptions of vulnerability to disease can predict attitudes toward targets with non-contagious health conditions such as physical disabilities, obesity, or social groups with subjectively unfamiliar practices (Huang et al., 2011). Goffman (1963) defines stigma as an attribute that is deeply discrediting, leading to the isolation of a group or individual. Stigma draws on the belief that the person holding it is less than human, and on this assumption, people exercise varieties of discrimination (Goffman, 1963). Stigma is an interactive system rooted in social structures and power hierarchies, framed with words that associate specific groups with negative characteristics that are socially and morally condemned (Viladrich, 2021; Friedman et al., 2022).

Stigma is a necessary part of the process of oppression (Friedman et al., 2022). Throughout history, it has been evident that when a disease spreads, xenophobia often follows (Clissold et al., 2020). Xenophobia has taken many forms throughout history and reflects an impulse to assign social meaning and responsibility to disease, but these efforts are often flawed as they try to make sense of an infectious disease that is not linked to our social reality (Hoppe, 2018). The association between foreignness and disease carriers has been a constant depiction in many parts of the world, with Covid-19 being no exception. Stigma has historically been associated with an infectious disease that presumably originated in and is assumed to be transmitted by particular populations and regions (Viladrich, 2021). Rapidly spreading infectious diseases are typically associated with people of colour and racial minorities, repeatedly being framed as "viral vectors" by White supremacist discourse and practices (Viladrich, 2021). Markel and Stern (2002) note that anti-immigration policies in the US have contributed to this due to the usage of explicit medical language to frame these policies. Bharat (2003) notes that in South Africa, fundamental inequalities, social prejudice, and social exclusion surrounding illnesses such as Tuberculosis, Cholera and Plague can explain why people of colour (as well as women, children, and sexual minorities) are more impacted by AIDS and accompanying stigma.

As demonstrated in the examples above, outbreaks of infectious diseases tend to unveil existing prejudice. This may be driven by fear and an attempt to 'other' the threat, which is reinforced by the desire to assign blame and responsibility for the disease to make sense of the adversity and uncertainty (Clissold et al., 2020). This often manifests as xenophobic tendencies, such as the blaming of 'out-groups' and increased 'in-group' protectiveness (Clissold et al., 2020). Dionne & Seay (2020) note that othering happens when in-groups treat other groups as if there is something wrong with them by identifying perceived "flaws" in the out-group's practice, appearance, and norms.

Fear can be a cause of stigma at both an individual and group level and this is showcased by the coronavirus pandemic. Friedman et al. (2022) note that in the United States (US), fears of getting infected led to verbal or physical attacks on people of Asian descent who people came to associate as the spreaders of Covid-19. Historically, public health has tended to associate new infectious diseases with foreign nationals and foreign countries (Hoppe, 2018); some examples include the N1H1 Global Influenzas Infection of 1918, which was responsible for an estimated 50 million deaths. Despite not originating in Spain, this virus was commonly known as the Spanish Flu (Hoppe, 2018). The Ebola epidemic that took place from 2014-2016 infected a limited number of West African groups, and it became publicly associated with all African regions. This phenomenon fuelled widespread anti-African racism in the US and Europe (Prati & Pietrantoni, 2016; Clissold et al., 2020).

Gee & Skovdal, (2018) show that international healthcare workers who responded to the West African Ebola outbreak from 2014-2016 faced unforeseen stigmatization upon returning home due to fear of the infectious disease. Over the last decade, two infectious diseases caused by coronavirus are suspected to have originated in China; Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS). The association of these outbreaks with East Asian populations has led to them being the unwarranted object of racial discrimination and hate crimes (Viladrich, 2021). The age of social media has made it especially important for officials to create and disseminate accurate and non-stigmatising epidemic names to the public as soon as they are identified (Hoppe, 2018).

Public health efforts to address stigma often neglect to consider macro-social and political aspects, focusing more on internalised and interpersonal stigma (Friedman et al., 2022). Stigmatisation is contingent on access to social, economic, and political power that allows for the identification of differences, the construction of stereotypes, and the disapproval and rejection of exclusion and discrimination (Friedman et al., 2022). To obtain a better understanding of what informs stigma, it is beneficial to look at historical perceptions and stereotypes. The following segment will specifically examine literature examining representations and stereotypes associated with Asia and Africa.

Historical Perceptions and Stereotypes

In the late 1800's many European nations, Britain being the first, had owned territories and exerted political control over vast parts of Africa and Asia, numerous Pacific Islands, and elsewhere (Hobson, 1902). Although mainland China was never colonised, regions such as Hong Kong and Wei-hai-Wei were acquired through colonialism. The scramble for Africa and Asia had recast the policy of the European Union, evoking alliances that crossed the lines of historical association and sympathy (Hobson, 1902). Said's concept of Orientalism portrays the height of 19th century Imperialism as the moment which established a global discursive hegemony in which European attitudes and concepts gained universal validity (Said, 2003; Dubois, 2005). This allows the construction of European perceptions of cultures and groups to linger in historical discussions, potentially adding to the construction of stigmas and stereotypes. When discussing theories such as Orientalism and Imperialism that contribute to understandings of political, cultural, and social accounts, several scholars distinguish between East and West as opposed to Global North and Global South (Said, 2003); this thesis will also make use of this approach.

Coined by Walter Lippman, the term 'stereotype' can be explained as "pictures in our heads that simplify how we think about human groups" (Fiske & Operario, 2001: 22). Lippman (1922) argues that we rely on simplistic images when forming, as well as expressing, opinions about others. However, this leaves room for social misunderstanding, tension, conflict, and stereotypes clouding reality and distorting experiences with biased preconceptions (Fiske & Operario, 2001). Cooley and Payne (2019) found that existing stereotypes are more likely to be applied to groups

than individuals regardless of the valence of these stereotypes. Stereotypes are formed based on group memberships. Social Psychology literature showcases that when individuals are categorised into the same racial category, they elicit different types of prejudice based on how representative they are of their category (2019). Cooley & Payne (2019) highlight this by drawing on Black Americans as an example; Black Americans who have more Afrocentric features are considered to be more representative of Black People as a group. As a result, they are more likely to elicit prejudice both implicitly and explicitly. Their work further notes that note that race is a social category that is processed particularly quickly; seeing a group that shares a racial identity should make it a salient method to categorise the group. However, as a result, such a group may be perceived as more representative of the overall racial group, thus more likely to activate global representations of the racial category to which these members belong (2019). These concepts relevant to this thesis as prejudice and discriminatory narratives that emerged as a result of Covid-19 and Omicron could be considered to be motivated by predetermined stigmas and stereotypes about certain communities, in this case, China and South Africa.

China

In an article critically examining recent literature on stigma and addressing the association between Covid-19 and certain racial and ethnic groups, Viladrich (2021) notes that infectious diseases have historically been associated with developing countries and their citizens, which leads them to be perceived as prime vectors of contagion. The suspected origin of Covid-19 stemmed from the wet markets in Wuhan, China. Known for the sale of game animals, these markets are deemed ideal breeding grounds for infectious diseases (He et al., 2020). This reinforces the association between the virus and China, leading to stigma and aligning Chinese people as vectors of contagion (Viladrich, 2021).

Lee (2017) notes that 'ethnographic' knowledge about China and Chinese people dating back to the late 19th and early 20th centuries could be tied to a set of stereotypes that were popularised by work by an American missionary, Smith (1890). Smith's depiction of Chinese individuals in his work *Chinese Characteristics* was predominantly negative, with many racist Western literary and journalistic representations building off of this (Lee, 2017). Lee notes that *Chinese*

Characteristics presented the racist stereotype of Chinese people being 'unclean' and 'sinful' which linked to Smith's notions that Chinese people were "pagan in religion" and therefore were unfamiliar with the virtues of Christianity, namely honesty, integrity good faith and cleanliness (Lee, 2017: 4).

Concerning the US's perceptions of China, discourses of orientalism and communism go far back in history. This includes Cold War stereotypes and the concept of "Yellow Peril" as discussed in work by Shim (1998). In the mid-1800s there was an increase in Asian immigration to the US in response to a shortage of labour in California, where many Chinese immigrants contributed towards labour-intensive and agricultural work. During the economic depression of this era, Chinese people came to be identified with large businesses and considered enemies of small farmers and workers (Shim, 1998). Tabloid-style newspapers conceptualised this term to warn that Chinese and Japanese people were attempting to take over white America and destroy white civilisation. This led to an increase in anti-Asian agitation and major political parties passing discriminatory laws in the 1970s and 1980s restricting Chinese immigration to secure white votes (Shim, 1998). In addition to this, the Yellow Peril notion was translated into media, where White creators used this to portray evil, villainous characters as Chinese. Despite Shim's work portraying a US perspective, it can be argued that based on cultural imperialism and globalisation, these perceptions can be spread to other parts of the world which consume US media, causing these sentiments to potentially be spread. Hollywood films garner large global audiences, and flows of power and culture can emanate from cultural producers in countries like the US and the UK (Demont-Heinrich, 2011).

Orientalism can be understood as a style of thought based on the epistemological decision made between 'the orient' and 'the occident' (Said, 2003). For Europe, the concept of The Orient is known as one of their richest, greatest, and oldest colonies, the source of its languages, civilisations, and cultural contestants, and one of the most reoccurring images of "the other" (Said, 2003). America's understanding of the Orient is associated with the far east, mainly China and Japan. Said (2003) argues that Orientalism is not only a distribution of geopolitical awareness and elaboration of geographic distinction but also a discourse that is produced and exists in an exchange with various types of power. Orientalism showcases the interrelations

between social history and textuality, as well as the cultural role of The Orient in the West and how this connects Orientalism with ideology, politics, power, and relevance (Said, 2003).

Africa

Referring back to the notion of stigma, the historical subordination of Black people can lead to 'racial scapegoating' through stigmatisation (Friedman et al., 2022). Racial scapegoating is a divide-and-rule strategy that stems from colonial times, where non-white racial groups were used as slaves, with the ideologies and impacts still existing in modern times (Friedman et al., 2022). Scapegoating is most effective when pre-existing structures of subordination and ideologies of stigmatisation and inferiority are in place (Friedman et al., 2022).

Ponican (2015) outlines negative perceptions of Africa that the West has historically held over centuries. Outsider perceptions of African people are often clouded by long-standing racial stereotypes (Flint & Hewitt, 2015). Europeans who colonised Africa in the 19th century were obsessed with classifying and categorising the world (Dionne & Seay, 2020). For years, colonisers denigrated African people as subhuman and denied them recognition for intellectual, cultural, and historical accomplishments (Poncian, 2015). Colonial perceptions of Africa linked the continent with disease through a European lens governing morality, sex, and 'cleanliness'(Flint & Hewitt, 2015). Racial theories were proposed to explain the perceived barbarism, backwardness, and inability to develop associated with the African continent and its people (Poncian, 2015). The Victorians concluded that Africans were less intelligent than Europeans and needed to be 'civilised', justifying African subjugation under colonial rule (Dionne & Seay, 2020). At the time, most Westerners believed that people of colour were "savages" and needed the benefits of modernity, Christianity, and intelligence (Dionne & Seay, 2020). Upon the emergence of the HIV/AIDS epidemic, there was a re-emphasis on Africa's portrayal in the global imagination as the "sick continent," the "diseased continent," and the "dark continent" (Flint & Hewitt, 2015: 294).

Despite this thesis's focus on social media perceptions, it is worth noting that Africa's global media image is significant. These perceptions may be mirrored on social media as users are also consumers of mainstream media and may reproduce negative perceptions based on these

representations. Mainstream media representations are significant as negative content, imagery and othering representations of Africa can inform intercultural relations (Bunce, Franks & Paterson, 2016). Language particularly plays a large role in the perpetuation of stereotypes, norms and values and can play a role in supporting and perpetuating oppression (Bunce, Franks & Paterson, 2016). Audience research suggests that these representations have an impact on how international audiences perceive Africa (Bunce, Franks & Paterson, 2016).

Research has shown that past representations of Africa were woven with stereotypes and presented narrow perspectives of Africans that were highly dependent on Cold War frames, and portrayals of a savage "other" (Bunce, Franks & Paterson, 2016). Brooke's (1995) research looking at the ideological constructions of Africa in the British press in 1990 illustrated that Africa was presented as homogenous with characteristics such as violence, helplessness, lack of democracy and human rights abuses (1995). Brooke's (1995) analysis notes that the British press has a particular preoccupation with Africa, noting that work by Downing (1990) suggests that due to political players and a population that is not entirely of African origin, South Africa's representation is not typical of the rest of Africa.

There have been many important changes in the media representations of Africa, with mainstream international media coverage of Africa showcasing a more positive tone and varied subject matter (Bunce, Franks & Paterson, 2016). The age of social media has also allowed Africans to take control of these narratives, opposing them where possible. An example is outlined by Nyabola (2019), which showcases how social media can be used to help Africans rewrite their narratives. This study focuses on the tracking of reactions and build-up to the 2013 election in Kenya. Leading up to the election, a CNN journalist wrote an alarmist report anticipating "potential ethnic violence" in one of Kenya's provinces and was met with an abundance of backlash from citizens under the hashtag #SomeoneTellCNN. At this point, Kenyan presence on the internet had expanded, and it was difficult for citizens to overlook this type of sensationalism from CNN, presenting the idea that violent outbreaks were the norm rather than the exception and failing to acknowledge the lengths that people went to prevent violence happening during and after the election (Shearlaw, 2015; Nyabola, 2019). This hashtag

is a great example of the creation of an African-driven counter-narrative, magnified by social media (Nyabola, 2019).

This section has provided a review of the literature regarding health and the Global South, as well as how stigma and stereotypes for Africa and China are rooted in colonial ideology, reinforced through mainstream media produced by the Global North. The next section focuses on Social Media and Covid-19, showcasing existing scholarly literature Twitter and how it was used during the Covid-19 pandemic.

2.2 Social media and Covid-19

The concept of 'social media' is quite broad and has come to be understood as internet-based websites and applications that allow users to share and create content, allowing them to connect and interact with each other (Bosch, 2020b). Social media networks provide a platform where people can express their views and opinions (Dubey, 2020). Social media is riddled with distrust because of the problems associated with news production and dissemination within these platforms (Mpofu, 2021). The term 'prosumer' showcases how users are both producers and consumers of media, highlighting user agency concerning content creation via participatory engagement (Bosch, 2020b). However, this does lead to less regulation of information on social media platforms.

During the early stages of the pandemic social media also functioned as a way to socialise in a historic period where social distancing was a collective expectation (Stjernswärd, Ivert & Glasdam, 2021). When severe lockdown regulations were implemented, many people relied more on digital connectivity to socialise and work (Mpofu, 2021). Social media is incorporated into many everyday activities, including entertainment, news, and networking, and facilitates the circulation of varied information and opinions (Stjernswärd, Ivert & Glasdam, 2021). (Bosch, 2020a) notes that the phenomenon of 'coveillance' was frequently observed amongst South African audiences on Twitter and Facebook during the early stages of the pandemic (Bosch, 2020a). The term 'coveillance' can be used to explain peer-to-peer gazing on social media, or users being subject to surveillance by other users on social media platforms (Mann, Nolan & Wellman, 2002). Bosch outlines examples of how this occurred during South Africa's Covid-19

lockdown where users on Facebook and Twitter documented incidents of people breaking lockdown restrictions, often posting videos/pictures, and tagging the South African police department (Bosch, 2020a).

The following section will provide an overview of how social media was used during the Covid-19 pandemic, covering literature on crisis communication, misinformation, disinformation, humour, and hate speech, referencing literature showcasing examples of these phenomena and how they were displayed.

Crisis Communication and Twitter

Social media has also become adopted as a form of official communication for many commercial and public sector organisations, thus providing platforms like Twitter with a certain form of legitimacy and creating a new pathway for sharing knowledge amid a crisis (Weller et al., 2014; Kaur, Verma & Otoo, 2021). During the early stages of a crisis, also known as the 'sense-making' stage, leaders gradually share information to make the public aware of possible threats, ease panic and allow the public to prepare for their mental health (Kaur, Verma & Otoo, 2021). During a crisis, social media is used to share breaking news, coordinate responses to the crisis, monitor new developments, and express sympathy (Weller et al., 2014). Twitter is an important platform for breaking news for a minority of people in Global North countries and can be an important vehicle for disseminating new public health information (Thelwall & Thelwall, 2020). During a crisis, members of the public can be expected to tweet about their situation and emotional reactions (Weller et al., 2014; Thelwall & Thelwall, 2020). A study aiming to compare search strategies, perceptions, and effects of Covid-19 information in residents in Denmark and Sweden found that in Denmark, respondents were more likely to get information on Covid-19 from social media, friends, and family in comparison to Swedish respondents, who were more likely to get their information from newspapers (Stjernswärd, Ivert & Glasdam, 2021). Both Swedish and Danish respondents considered TV to be the most reliable source of information on Covid-19 (Stjernswärd, Ivert & Glasdam, 2021).

Humour and Social Media

Mpofu (2021) highlights how humour and ridicule can assist people in making sense of their circumstances as one of the more accessible ways for coping, changing, and understanding our predicaments in society. Laughing has been proven to have a positive effect in stressful or traumatic situations (Amici, 2020). Humour is fairly under-investigated despite appearing to be one of the most important means of resisting the power elite and dominant power relations (Obadare, 2009). With regard to pandemics, humour has proven to be a sophisticated avenue for assessing thoughts about crises and interpretations of society in general (Mpofu, 2021). Humour can be important to exercise agency, performing political participation and challenging official meaning (Obadare, 2009). Wasserman (2020) notes that during the early stages of the national lockdown, South Africans took to social media to share jokes and humorous content about Covid-19. Obadare (2009) notes that in Nigeria, humour is an important weapon utilised by civil society and can enrich our understanding of the culture of protest in many oppressed African societies. It is integral to a reality which urges post-colonial communities to endlessly improvise resistance.

During the pandemic, news coverage showed a lack of leadership, and the dangers of the pandemic instilled panic and fear in many citizens. In addition to this, worldwide lockdown regulations made people feel isolated, taking a toll on psychological wellness and a sense of community (Chiodo, Broughton & Michalski, 2020). Social media aids in alleviating this problem, and members of younger generations often share humour and laughter electronically (Chiodo, Broughton & Michalski, 2020) and Twitter is just one of many social media platforms used to share humour during the pandemic (Mpofu, 2021). Humour is vital in the way that ordinary people endure social abrasiveness as well as negotiate, contest, and shape the public domain of critical deliberation (Obadare, 2009). In South Africa, during the early stages of the Covid-19 pandemic, humour was used to critique society, calm fear, spread fake news, perform invincibility (Mpofu, 2021), and also helped build community (Wasserman, 2020).

An explorative study looking at humour in the age of Covid-19 found that, in line with existing literature, humorous content about Covid-19 transmitted positive emotions, and was used to help others and distance themselves emotionally from pain and stress (Amici, 2020). During the Covid-19 lockdown in Bergamo, Italy, there was an increase in humorous messages relating to

the rapid increase in Covid-19 cases (Amici, 2020). Thelwall & Thelwall (2020) investigated highly retweeted tweets during March 2020 about Covid-19 to gain insights into public reactions to the pandemic and the role of Twitter in information spreading and consensus building. Their findings showcase a prominent amount of "joke tweets" that crosscut with other themes in their analysis (2020). Humour is found to boost the audience of a tweet, making it more likely to be shared (2020).

Misinformation and Social Media

The combination of both widespread global interest with an intensive emergency can produce lots of uncertainty around the trustworthiness of information, leading to concerns about rumours and misinformation in the early stages of a crisis (Weller et al., 2014). Misinformation refers to misleading information created or disseminated without manipulative or malicious intent (Wardle & Derakhshan, 2017; UNESCO, 2018; Ababakirov et al., 2022). Disinformation refers to deliberate or orchestrated attempts to confuse or manipulate people by delivering dishonest information (Wardle & Derakhshan, 2017; UNESCO, 2018; Ababakirov et al., 2022). In 2020 the World Health Organisation (WHO) warned of an 'infodemic' surrounding health information during the early stages of the COVID-19 pandemic. WHO defines an infodemic as an excess of information that includes false or misleading information in digital and physical environments during disease outbreaks (2022). The expansion of the internet and social media use can cause information to spread more rapidly, contributing to an infodemic. This can cause confusion, risk-taking behaviours, mistrust in health authorities and undermines public health response (The Department of Global Communications, 2020; World Health Organization, 2022c).

Social media has become a popular method for seeking information and consuming news as it is fast and easy, but due to low barriers to providing and disseminating information on social media, large amounts of disinformation are produced for a variety of purposes, ranging from financial to political gains (Shu et al., 2020). During a crisis, everyday social media users may turn to a platform like Twitter to inform themselves about a situation, which brings forth the problem of effectively monitoring the flow and veracity of crisis-related information (Weller et al., 2014). When individuals share unreliable information, they become potential infectious agents contributing to the infodemic (Stjernswärd, Ivert & Glasdam, 2021). During the peak of

the pandemic social media platforms were flooded with misinformation about COVID-19, including the virus's origin, remedies, cures, and government responses to the outbreak (Wasserman & Madrid-Morales, 2022). The anonymity of social media makes it easy for users to share and exchange information but also increases vulnerability to heinous activities (Shu et al., 2020).

Cyber Racism and Online Hate Speech

Social media has become an essential part of everyday life, with large societal, economic, and political implications (Solan & Quan-Haase, 2017). Social media platforms have been adopted around the globe at an unprecedented speed and data gathered from user-generated content has become the primary focus for many areas of study including politics, business, and healthcare (Solan & Quan-Haase, 2017). Typically, when one thinks of the term "Social Media" the definition of 'social network' is often contented; as online platforms with the aim and design to allow people to connect and form networks, enabling the sharing of information between them (Twetman, Paramonova & Hanley, 2020).

Twitter, as well as other social media sites, represent a growing setting in which and racism-related stress may manifest (Criss et al., 2021). With millions of tweets posted every day, unlimited access to unfiltered information could result in exposure to negative ideologies such as prejudice, white supremacy, and intolerance (Criss et al., 2021). Racism specifically is displayed on the internet in many ways. Studies have verified the presence of aggression and hatred towards different races, ethnicities, and religions (Dubey, 2020). Criss et. al. (2021) explored expressions and experiences of online racism and found that their participants described Twitter content as displaying both overt and subtle expressions of racism and served as an echo chamber where similar views were amplified. Some of the overt expressions of racism included the perpetuation of stereotypes, derogatory commentary on race/ethnicity, prejudiced responses to news and politics, and general racist commentary (Criss et al., 2021). They also noted that racist commentary is often tied to politics, noting that former US president Donald Trump is widely cited in comments about race and ethnicity (Criss et al., 2021).

Proceeding WHO's announcement that the outbreak of Covid-19 was declared a pandemic, former US President Donald Trump posted, "The United States will be powerfully supporting those industries, like Airlines and others, that are particularly affected by the Chinese Virus. We will be stronger than ever before!" (Dubey, 2020: 2). Trump's account had been suspended after the end of his presidential term, with a recent invitation from Twitter's new owner Elon Musk to return to the platform (Olson, 2022). This tweet sparked various controversies due to his usage of the term 'Chinese Virus.' This term led to the creation of hashtags such as #ChineseVirus and #WuhanVirus, which started trending amongst Trump supporters. Other government leaders and senior officials have also contributed to or encouraged xenophobic and anti-Chinese rhetoric (Criss et al., 2021). A study (Dubey, 2020) looking at sentiment and emotions in tweets found that a fair number of tweets using the term "Chinese Virus" expressed feelings of fear, disgust, hatred, and anger. Dubey (2020) also found that China and WHO have been blamed by some for the spread of Covid-19 and instances of racism and hateful acts have been reported as a result thereof. It can be clearly noted that the sentiments of those tweeting about the "Chinese Virus" have been predominantly negative and indicate signs of racism and discrimination (2020). This study also found a large number of tweets using slurs and profanities as well as phrases like "China Lied People Died", "Kung Flu", "China Must Pay" and "CCP is Terrorist" (Dubey, 2020).

A study analysing a Twitter dataset showcasing anti-Asian hate and counter-hate Tweets defines anti-Asian Covid-19 hate as ill-disposed speech that has one or more Covid-19-related keywords that are directed towards an individual or a group of Asian people, including Asian organisations and governments, and is abusive and derogatory (Ziems et al., 2020). This type of hate speech typically tends to assign blame for the spread or mismanagement of Covid-19. This study classified Anti-Asian Covid-19 hate in tweets by looking at linguistic features, hashtags, and tweet embeddings. Their findings showed that online hate speech was more frequent than counter-hate and that the efforts to counter hate speech were limited (Ziems *et al.*, 2020). A study by Lloret-Pineda et al. (2022) looking at types of racism and Twitter users' responses amid the COVID-19 outbreak found clear sentiments of racism against Chinese individuals in the first quarter of 2020, drawing data from the hashtags #nosoyunvirus, #imNotAVirus,

#ChinesesDon'tComeToJapan and #racism. These tweets mostly conveyed individual racism but also displayed cultural and institutional racism.

Schild et al, (2020) explored the emergence of xenophobic behaviour on web communities during the beginning of the Covid-19 pandemic on social media platforms 4Chan and Twitter. They found that there was a rise in discussions relating to China and Chinese people. Trump's aforementioned tweet sparked more conversation using the term 'Chinese Virus' (Schild et al., 2020). The rise in discussions relating to China and Chinese people was met with an increase in racist slurs and the emergence of new derogatory terms relating to Covid-19, such as "Kungflu" (Schild et al., 2020). On Twitter specifically, the study found that there was a movement in conversation toward blaming China and Chinese people for the Covid-19 outbreaks around the world (Schild et al., 2020).

As seen in the literature by Dubey (2020) and Criss et al. (2021) political figures such as Trump shared anti-Asian / anti-Chinese sentiments in response to the Covid-19 pandemic. Such commentary highlighted ongoing geopolitical tensions that were impacted due to the pandemic. The following segment draws on how diplomacy and geopolitical relationships were impacted by Covid-19 and Omicron.

2.3 Diplomacy and Covid-19

Foster (2021) explores the concept of 'Covid Diplomacy' in the age of social media, noting that the outbreak of Covid-19 took China by surprise, with Beijing specifically suffering for undermining their epidemiological warning system, punishing whistle-blowers who brought attention to the early discovery of COVID-19. The People's Republic of China not only faced the loss that the pandemic would bring internally but risked the loss of performance legitimacy it held in the eyes of a global audience gained throughout its rapid economic rise (Foster, 2021). The pandemic brought about a drastic shift in the relationship between the government, policymakers, and the scientific community (Sharma et al., 2022). Many countries – both in the Global North and Global South – locked their borders and took unilateral actions, causing friction between different governments and between international organisations and global bodies, like WHO (Sharma et al., 2022). A study aimed at exploring how political leaders

portray emotions in communication on Twitter noted that establishing trust is essential for smoothly disseminating information to the public (Kaur, Verma & Otoo, 2021). This study further discusses how researchers believe that the strategic use of emotions by political leaders for communication campaigns largely depends on how these leaders want to portray themselves among the audience to gain particular sentiments (Kaur, Verma & Otoo, 2021). Leaders are judged by their reactions to a situation, so their emotions in communication may be significant in impacting their political supporters (Kaur, Verma & Otoo, 2021).

The pandemic revealed a shortage of doctors, life-saving equipment, personal protective equipment (PPE), ventilators, hospital beds, oxygen machines and more (Singh, 2020). Covid diplomacy makes use of traditional diplomatic tools such as medical assistance, exchanges of subject matter experts and public diplomacy, and Foster (2021) argues, an adaption to a contingent crisis that reveals the underlying objectives and mechanisms of revolutionist states' global information operations (2021). The virus spread violently on a global scale and continued to rage in the Global South, whilst the countries in the Global North became increasingly protectionist, due to both the COVID-19 crisis and global power politics, leading lesser developed countries in the Global South to fend for themselves (Sharma et al., 2022).

TRIPS Waiver and Vaccine Apartheid

An example of the mass inequality between the Global North and the Global South was prevalent when Covid-19 vaccines became available. In the early stages of the pandemic, the Vaccines Global Access Facility (COVAX) promised vaccine supplies for all countries. However, they failed to meet their 2021 target of delivering two-billion doses due to insufficient funds and donations (Bajaj, Maki & Stanford, 2022). The WHO Director-General referred to this vaccine inequity as "vaccine apartheid", emphasising this moral failure through a comparison to the South African racial segregation system (Cohen, 2021; Bajaj, Maki & Stanford, 2022).

The second wave of the Covid-19 pandemic left devastating impacts on all facets of life, including the availability, affordability, and accessibility of medicine and vaccines (Singh, 2020). By August 2021, approximately 1 billion doses of coronavirus vaccines had been administered worldwide, but this was disproportionately distributed between the Global North

and Global South (Sharma et al., 2022). Only 2.3 doses per 100 people were administered the vaccine in a low-income country, compared to 105 doses per 100 people in high-income countries (Sharma et al., 2022). The world had been divided into two groups, those who had access to medicine and vaccines and those who did not, with rich countries pre-ordering and holding on to an excess of Covid-19 vaccines (Singh, 2020).

The Trade-Related Intellectual Property rights (TRIPS) created restrictions around sharing technology of vaccines, medicine, and life-saving equipment, worsening the pandemic. Due to this, South Africa and India proposed a joint proposal to garner support for waiving TRIPS to ensure equity, accessibility, and affordability of vaccines through mass production and fair distribution (Singh, 2020). A significant number of countries, civil societies, philanthropic societies, human rights activists, and many other regional and international organisations supported this waiver, but several Global North countries, particularly the EU, Canada, New Zealand, Australia, and the US staunchly opposed (Singh, 2020).

Chinese Diplomacy

China has had an increased economic presence in Africa, aiming to consolidate its diplomatic presence on the continent while helping China's state firms to internationalise and grow (Wasserman & Madrid-Morales, 2022). Part of this strategy has been expanding its media footprint, expanding, and aiding in its goal of soft power. Soft power can be defined as the ability to influence others to achieve outcomes one desires through consent rather than coercion (Gauttam, Singh & Kaur, 2020). Soft power can be seen as an instrument of foreign policy to conduct international relations and provides legitimacy to a county to employ its hegemonic power through consent and agreement (Gauttam, Singh & Kaur, 2020).

Public diplomacy can be defined as direct communication initiated by the government to influence a foreign government, by influencing the citizens of that government (Huang & Wang, 2019). This concept has been at the centre of China's national promotional strategy since the start of Xi Jinping's first presidential term, conveying the concept of the "Chinese Dream", a replica of the "American Dream" (Huang & Wang, 2019: 2985). The Chinese government has looked for an innovative way to share stories about China with the rest of the world, painting

China in a positive light and creating positive perceptions amongst foreign audiences (Huang & Wang, 2019). On the African continent, this can be seen through the expansion of China's media footprint, which promises more compassionate coverage of Africa and China, and aims to build better relationships in the region whilst bolstering China's discursive power globally (Wasserman & Madrid-Morales, 2022).

In addition to increasing its economic and media presence, China has also used their health diplomacy as an attempt to attain geopolitical ambitions in Africa. Health diplomacy can be defined as political activity that meets the twofold goal of improving health whilst maintaining and strengthening international relations (Gauttam, Singh & Kaur, 2020). Africa was China's first test to use health diplomacy to attain geopolitical ambitions. Since 1963 China has been providing medical aid in the form of hospital buildings, clinic constructions, and education and training programmes for African medical personnel and physicians in various countries across the African continent (Gauttam, Singh & Kaur, 2020). When Africans see that Chinese doctors have aided in saving lives, it can create a benevolent and favourable image of China (Gauttam, Singh & Kaur, 2020). However, public sentiment towards China has declined in several African countries in recent years (Wasserman & Madrid-Morales, 2022).

Historically, health diplomacy has focused on international collaboration to protect national, commercial, and human interests from the spread of disease (Gauttam, Singh & Kaur, 2020). China has become the world's largest donor of foreign aid and has attracted much support from low-income countries through this (Huang & Wang, 2019: 2985). Although China was initially blamed for the Covid-19 pandemic, its health diplomacy could also be considered an exploitation of this global health emergency, using it as a soft power tool (Gauttam, Singh & Kaur, 2020). During the beginning of the pandemic, China provided medical aid to various countries around the world. Whilst some countries, such as Iran, praised China's generosity, others, such as Turkey, criticised China due to faulty masks and equipment (Gauttam, Singh & Kaur, 2020). A study by Wasserman and Madrid-Morales (2022) also noted that misinformation about Covid-19 (Including conspiracy theories about the origins of Covid-19, xenophobia, and stigmatisation of East Asians) may have amplified an already-existent negative perception of China amongst South African and Kenyan participants.

Tensions between China and the United States

When discussing Chinese diplomacy, it is also important to mention China's ongoing conflict with the US in its quest for global economic leadership and the power that accompanies this. China has been rising rapidly as a global economic superpower, with an economy already larger than the United States (Bergsten, 2022). The Covid-19 pandemic and these countries respective responses to it emphasized the competition between these two economic superpowers. China responded more effectively, but its lack of transparency surrounding the origins of the disease and declining attempts with international efforts to combat it deteriorated its global status and leadership aspirations (Bergsten, 2022).

In 2018, the Trump administration initiated a trade conflict with China by planning to implement tariffs on Chinese imports, later threatening to impose higher tariffs. China responded by imposing similar tariffs on imports from the United States and filing additional charges against the US with the World Trade Organization (WTO) (Yu, 2020). Despite moderation between China and the US post-2018, trade measures have imposed serious challenges on their trade and cooperation relationship (Yu, 2020). Under Trump's administration, the US violated fundamental rules and norms of the economic order, adopting protectionist policies about trade, investment, and technology, criticizing formal institutions like the WTO and WHO, which have organised cooperative governance of the world economy (Bergsten, 2022). This caused damage to the global economic system, tarnished the US's standing around the world, and decreased China's respect for the US (Bergsten, 2022).

Conclusion

This chapter has provided an overview of the primary themes that frame this thesis. Section one provides an overview of health and the global South, giving a historical and contextual understanding of issues that the Global South experienced during the Covid-19 pandemic, as well as where stigma and stereotypes of China and South Africa may stem from. Section two provides an overview of social media and Covid-19, looking at how social media can be used in times of crisis for communication, how humour is used as a coping mechanism and a mode of protest, issues of misinformation and disinformation on social media that were highlighted

during the Covid-19 pandemic and issues of online hate speech and cyber racism. Lastly, section three provides contextualisation of political tensions that were prominent during the Covid-19 pandemic, how Global North countries exercised their power when it came to issues of intellectual property, how China made use of health diplomacy and the ongoing power struggle between China and the US.

This chapter provides both contextualization and an overview of existing literature that will aid in the analysis and discussion of the data for this thesis. There a body of literature has emerged on Twitter and Covid-19, but little research has been conducted on how the platform has been used to share information during the crisis. Although there have been many studies conducted on China and Covid-19, there is very limited research that focuses on South Africa and Omicron.

The following chapter will look at the methodological procedures for this thesis, providing insight into how Twitter can be used for research as well as an overview of ethical considerations, data collection and sampling.

Chapter 3: Methodology

Social media research is a new and emerging field, especially in the context of Africa (Bosch, 2020b). Social media services have evolved to become one of the main sources for keeping track of emerging topics and real-life (Xia et al., 2017). Rogers (2019) categorises various social media services under the broad categorisation of 'platform studies'; an inquiry into research of the uses of a certain class of online software such as Facebook, Instagram, YouTube, and Twitter, amongst others. These platforms host and deliver user-generated data that moves beyond just code and hold meanings and connotations that users convey through their posts (Rogers, 2019). This data is time-stamped and includes user operations such as how many likes a post gets, shares, or comments (Xia et al., 2017). These platforms have become information-rich spaces where users can share their thoughts, build fan bases, and settle into the interests of advertisers (Rogers, 2019). Furthermore, these platforms are not considered mass media companies, only conduits rather than publishers; thus, their content would not necessarily be regulated (Rogers, 2019).

Twitter is a popular online platform for studying and analysing social and political movements (Bozarth & Budak, 2022). Posts on Twitter (Tweets) allow for broader commentary on events, as they reflect users' perspectives and contributions to any ongoing debates (Bruns & Burgess, 2012). Twitter is a microblogging platform founded in 2006 with headquarters based in the USA (Twetman, Paramonova & Hanley, 2020). As stated on Twitter's 'about' page, the intended purpose of the platform has changed in the nearly two decades since its inception. Rogers (2019) notes that in 2006 Twitter was for "staying in touch and keeping up with friends no matter where you are or what you're doing" (170) . In 2017 the purpose was for users to see "what's happening in the world and what people are doing right now" (Rogers, 2019:170). Currently, Twitter states that its purpose is to "serve the public conversation" (Twitter, 2022), further outlining that its principles are; "promoting health," "earning people's trust", "making it straightforward", "uniting profit and purpose", and "being fast, free and fun" (Twitter, 2022)[1].

[1] In October of 2022 Twitter was acquired by billionaire Elon Musk who brought about prominent changes to the platform and organisation (Benton et al., 2022). Musk's accusation of the platform was seen as an opportunity to reintegrate dominant discussions onto the platform without fear of restrictions. Through this aqusition key employees such as former CEO Parag Agrawal, Head of Legal, Policy and Trust, Vijaya Gadde, and 75% of staff

3.1 Twitter as a tool for research

In 2022, Twitter remained one of South Africa's most frequently used platforms, suggesting that a large base of users wanted to read and write short-form content, interact with other users or engage in debate (Ornico & World Wide Worx, 2022). Twitter is an excellent platform for sourcing current information (Weller et al., 2014), with 2.85 million users in South Africa in early 2022 (Kemp, 2022) and approximately 2 million unique authors between June 2021 and May 2022 (Ornico & World Wide Worx, 2022).

Qualitative research on Twitter provides an array of unique potentials. Within the digital sphere, Twitter offers a diverse environment for research on social and material practices, generating public data that can be analysed by a variety of methodological approaches (Stewart, 2016). Twitter's strength lies in its ability to gain interesting insights from short and highly content-bound posts (Weller et al., 2014). Social media platforms can be tricky to navigate when it comes to data collection. Over the past decade or so, several platforms have updated their terms of service to disallow data being scraped, stored, repurposed, and redistributed (Rogers, 2019). Facebook's terms of service previously allowed for a more open application interface, but in 2015 this was adapted, and data access was stopped. Similar to Instagram, its data interface for researchers has been limited as of 2016 (Rogers, 2019).

Formerly, Twitter had made its data freely accessible for academic research, providing real-time and historical public data to create precise, complete, and unbiased datasets (Twitter Developer Platform, 2022). Twitter's popularity as a platform for research and investigation lied partially in the ease of accessing data (Bozarth & Budak, 2022). Twitter has a well-documented set of

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were fired from Twitter (Warzel, 2022). This acquisition has brought about new concerns surrounding the trust and safety of Twitter. An additional feature that has been integrated through this accusation is Twitter Blue. Previously, Twitter would independently verify public accounts for safety and validity by assigning the account a blue checkmark icon. Twitter Blue allows users to purchase this icon through a monthly subscription fee (Twitter Help Center, 2022). These changes and adaptations can make it more difficult for users to verify valid sources of information on Twitter. A study based on early data (Benton et al., 2022) showed a correlation between Musk's accusation of Twitter and broader perceived acceptability to post hostile content on Twitter, allowing more opportunities for hate speech.

application interfaces (API) that facilitate data extraction automation (Al-Saqaf, 2016). However, Twitter recently announced that they will no longer support free access to the Twitter API, introducing a paid tier system (Twitter Dev, 2023)[2]. This limits researchers access and instils additional costs (Jingnan, 2023).

3.2 Research Questions

The aim of this thesis is to comparatively analyse tweets about Covid-19 and China with tweets about the Covid-19 variant, Omicron, and South Africa to explore dominant themes and discussions. Through this comparative analysis, the thesis aims to further explore how Twitter users made use of the platform to frame the outbreaks and create narratives around broader socio-political issues that were subsequently impacted.

Research Questions:

> Q1: What are the dominant themes that emerge in both datasets and how do they compare?
> Q2: Does the data reinforce stereotypical constructions of Asia and Africa?
> Q3: Do these datasets reveal broader commentary on geopolitical tensions that were heightened during the Covid-19 pandemic?

3.3 Tools and Data Collection

Tweets were collected by scraping, a form of automated collection. Scraping allows new opportunities for digital social research, which include new methods of collecting, analysing and visualising social data (Marres & Weltevrede, 2013). Software codes to scrape online spaces are known as 'scrapers' and are often custom-built (Marres & Weltevrede, 2013). This study draws on datasets created using MeCodify software, an open-source tool for social media research that allows the extraction and analysis of Twitter data. MeCodify[3] is a bespoke tool that was created

[2] These changes were announced via Twitter's developer account (@TwitterDev) on the 2 February 2023, after data collection for this research had occurred.
[3] https://mecodify.org

to enable the extraction, codification, analysis, and presentation of social media data (Al-Saqaf, 2016). MeCodify uses Twitter's official API, which allows access to Twitter's historical data and the metadata of each obtained tweet (Al-Saqaf, 2016). Twitter's Compliance Firehose API (Twitter Developer Platform, 2023) is dedicated to respecting users' expectations and intent when it comes to sharing tweets on their platform, therefore deleted tweets, tweets from private (locked) accounts, and tweets from suspended accounts are not available to access via MeCodify.

Issue mapping

There were several hashtags and search terms that could be used to access tweets for both datasets. The first step was to engage in issue mapping to find terms that were most relevant to the research questions and minimise 'noise'. On Twitter, the concept of 'noise' refers to tweets that are purely spam and off-topic (Pond, 2016). Social scientists have relied on keyword searches and hashtags to extract data on social movements on social media sites, especially Twitter (Bozarth & Budak, 2022). In the case of hashtags, often popular hashtags are used by individuals and corporations to garner attention or draw attention to issues unrelated to the hashtag. This is classified as hashtag hijacking (VanDam & Tan, 2016). One concern is that by using data collected under hashtags, there may be a lot of noise due to hashtag hijacking, presenting irrelevant data. When exploring relevant hashtags and extracting preliminary datasets, using hashtags such as #Covid-19 or #Omicron contained several cases of hashtag hijacking. TweetDeck, a media hashtag application dashboard, was used to identify key hashtags and relevant keywords. These hashtags and keywords were used as search queries in MeCodify, and datasets were organised and compared.

The keyword search queries "South Africa, Omicron" and "China, Covid-19" provided the most useful datasets that aligned with the research questions and contained minimal noise. These keywords were used to extract two datasets. Keyword searches are a natural approach to analysing social media (Xia et al., 2017). Although it is a relatively straightforward approach, it is difficult to determine a time frame to query (Xia et al., 2017). This study notes two events to determine the starting points for relevant data collection, but important tweets may still be missed due to the failure to include it in a particular time window (Xia et al., 2017). Filters can exclude users and content by further limiting boundaries for data collection. The initial intention

of this study was to focus on a South African audience on Twitter, but filtering by geolocation provided an extremely limited dataset. Therefore, the two datasets used for this thesis are not limited by geolocation and do not represent perceptions held by a particular geographical group.

Kim et al. (2018) note that traditional media research has 3 typical sampling methods; systemic sampling, constructed sampling and consecutive day sampling. This dissertation makes use of consecutive day sampling, a convenience method of data collection over 7 or more consecutive days. This method is both convenient and considered a reliable way of analysing content, often used for social media research (Kim et al., 2018).

Dataset A

For Dataset A keyword search was conducted using the terms “China” and “COVID-19”. This query extracted English tweets over a 7-day period from the 11th of March 2020 – 17th of March 2020. This timeframe covers the day that WHO declared Covid-19 a pandemic and the week thereafter (World Health Organization, 2020). The full dataset contained 56 852 tweets.

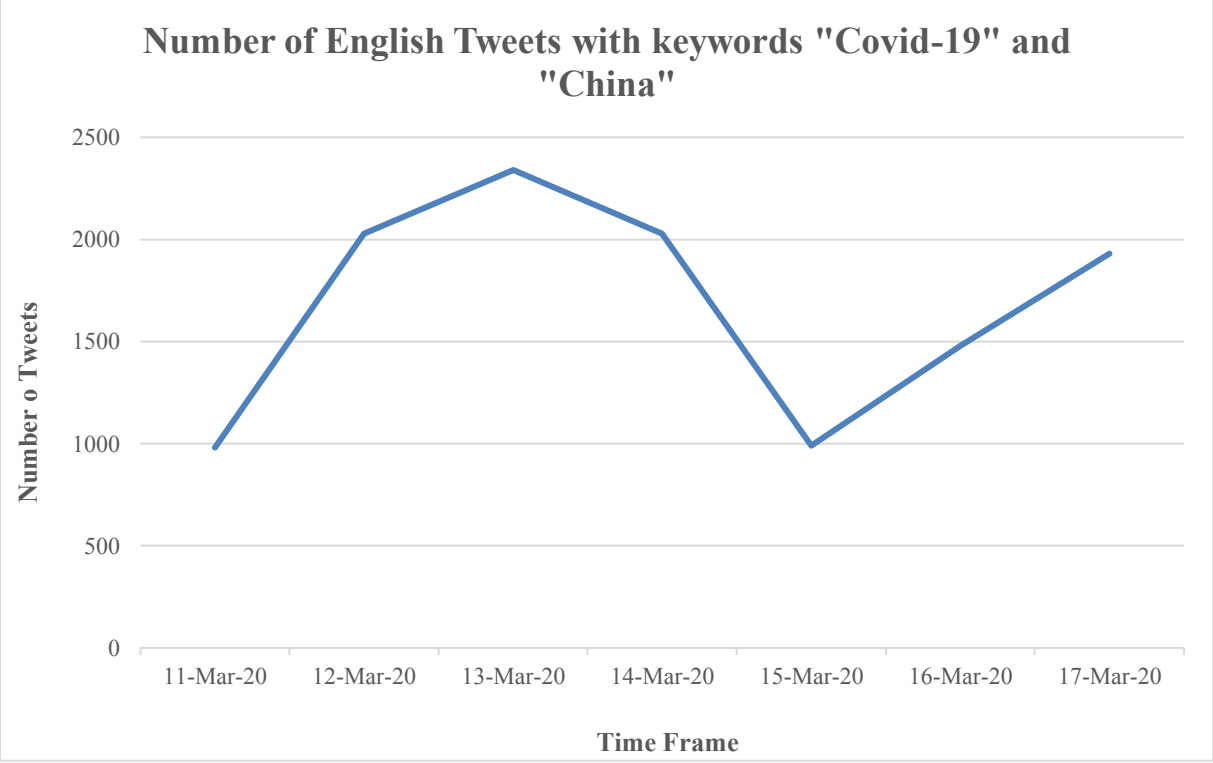

Figure 1 Graph showcasing the distribution of Dataset A over the 7-day time frame.

Dataset B

Dataset B made use of the keyword search terms “South Africa” and “Omicron”. For this query, English tweets were extracted over a 7-day period from the 26th of November 2021 to the 2nd of December 2021. This timeframe covers the day that WHO declared Omicron a variant of concern and the week thereafter (World Health Organization, 2021b). The full dataset contained 18 679 tweets.

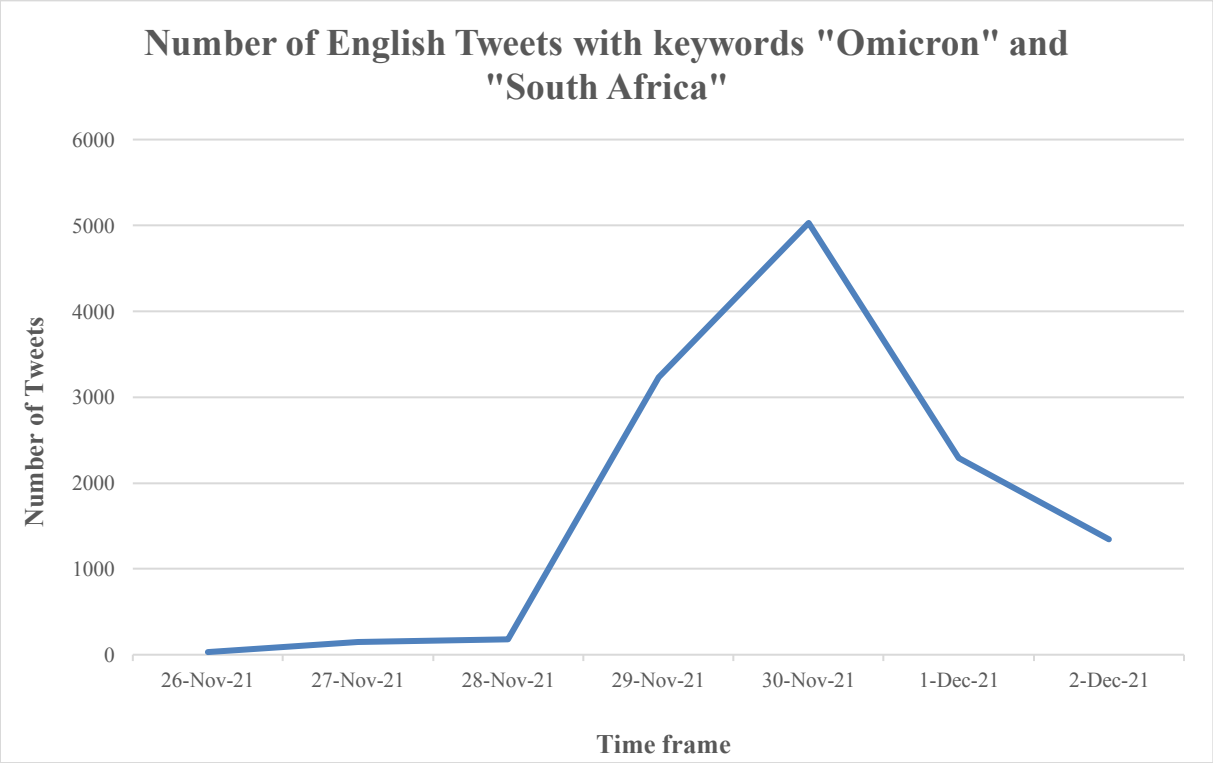

Figure 2 Graph showcasing the distribution of Dataset B over the 7-day time frame.

3.4 Sample

Of these large datasets, a sample of 1500 of the most shared tweets from each dataset was chosen for analysis. This makes the total number of tweets in the sample 3000 of the most retweeted tweets over a 7-day period.

Retweeting is an affordance of Twitter that allows users to repost other users' tweets. Retweeting is the most important driver of visibility during a crisis and allows multiple users to share

important messages and information to reach a wider audience (Weller et al., 2014). Social media can be used to disseminate breaking news and monitor new developments, and retweets are an indicator of what information users deem important to share (Weller et al., 2014). Syn & Oh (2015) explored motivations for sharing information on Facebook and Twitter, and found that Twitter users were most influenced by learning as a motivator to share information. Another study (André, Bernstein & Luther, 2012) evaluating microblogging content value showed that when looking at the content of tweets, information sharing was one of the factors that was more valued by users.

This study uses a smaller data approach as samples were drawn for qualitative content analysis. Qualitative methods are considered more efficient for capturing intentions, subjectivities, and experiences (Latzko-Toth, Bonneau & Millette, 2016). When it comes to social media, researchers need to adopt strategies to keep the sizes of datasets manageable whilst also gaining enough information to draw meaningful findings (Latzko-Toth, Bonneau & Millette, 2016). Although limited in volume and velocity, small data has a history of development across science, small agencies, non-government organisations and businesses. Small data approaches also have more established methodologies, models of analysis and a record of providing meaningful answers to research questions (Kitchin, 2016). A benefit of small data studies is that they can be tailored to answer specific research questions and focus on specific cases to tell individual, nuanced, and contextual stories (Kitchin, 2016). Latzko-Toth, Bonneau & Millette (2016), note that the unique value of small data research lies in data thickness. Thick data requires a smaller dataset and relies on human learning to reveal the social context of the patterns and connections between data points (Wang, 2016). Thick data looks at data elements that are difficult to quantify, such as emotions, worldviews, and stories (Wang, 2016).

3.5 Analysis

Content analysis describes a broad family of analytic approaches ranging from intuitive, impressionistic, systemic, and interpretive to strict textual analysis and is one of the numerous research methods to analyse textual data (Hsieh & Shannon, 2005).

Qualitative content analysis extends beyond just counting words but allows for language to be examined for the purpose of clarifying large amounts of text into an efficient number of categories that represent similar meanings (Hsieh & Shannon, 2005). This study makes use of a conventional content analysis approach. This approach is appropriate for descriptive or explanatory studies where one aims to identify or contrast meanings for one or more units of text and for exploratory inquiries where questions are complex, uncharted, and changing (McTavish & Pirro, 1990). This thesis presents a comparative discussion between two datasets to explore themes and answer broad research questions, so this approach was most appropriate.

The conventional content analysis avoids using pre-conceived coding categories and takes an inductive approach, allowing codes to emerge from the data. This approach examines patterns in text and is advantageous as it gains direct information from the data without imposing preconnected categories or theoretical perspectives (Hsieh & Shannon, 2005). For this analysis, a codebook was developed inductively by observing both datasets and finding broad categories to code them in. The codes were: Blame, Diplomacy, General Commentary, Humour, Crisis Updates and Prejudice. Both datasets were analysed using the same codebook, but there was some variation in subcategories that emerged through the analysis.

3.6 Ethical Considerations

Ethics clearance was granted by the University of Cape Town's Centre for Film and Media Studies. The method of scraping public data with software that uses Twitter's API has presented a common problem associated with Big Data projects, informed consent. The Association of Internet Researchers (AoIR)[4] (Franzke et al., 2020) notes that when personally identifiable information or sensitive information is collected, steps are required to protect their identities, and informed consent should be obtained where possible, but in the case of Big Data this is entirely unfeasible. To account for this, steps were taken to ensure participant anonymity.

In line with recommendations both from AoIR (Franzke et al., 2020) and the UCT Faculty of Humanities Guide to Research Ethics (Faculty of Humanities, 2017), the following steps were

[4] https://aoir.org

taken; data was downloaded and anonymised, and quotes from tweets were paraphrased so as not to identify users via search engines. The only exception to this was verified public figures, official organisations, government accounts, and media publications. To ensure contextual integrity, personal social media accounts were not used to obtain data. This ensured that there are no personal relationships with participants, and the data accessed was strictly from users with public accounts. No profile pictures or images were downloaded when conducting the data extraction. Metadata was downloaded, stored, and accessed on a password-protected personal device.

3.7 Limitations

There are several limitations to consider with the chosen methodological approach. Through analysing the most retweeted posts, perspectives and commentary by less active users may be overlooked (Weller et al., 2014); as well as commentary not tagged with hashtags The size of an account following does play a role in how quickly a tweet can be shared and amplified; thus, smaller accounts may also be excluded from datasets. Taking into consideration the digital divide, social groups who lack access will also be excluded from these datasets, including people who reside in China where Twitter cannot be accessed (Dijk, 2020; Twitter, 2020). Twitter is a growing platform, and some of the countries with the highest number of users include India, Indonesia, and Japan. However, the dominating country with 76.9 million users is the United States (Dixon, 2022), and the dataset might thus showcase narratives predominantly from a US-centred perspective. Lastly, only English tweets were included in the data extraction and analysis, which excludes commentary from non-English-speaking users.

Chapter 4: Findings and Discussion

This chapter reports the results of the qualitative content analysis conducted on both datasets. The top 1500 most retweeted tweets in each dataset were analysed using an inductive approach. Six primary coding categories made up the code book: Blame, Crisis Updates, Diplomacy, General Commentary, Humour, and Prejudice. The nature of inductive coding allowed sub-categories to emerge within each of these codes that were relevant to each dataset. The graphs below show the distribution of tweets across coding categories for each dataset.

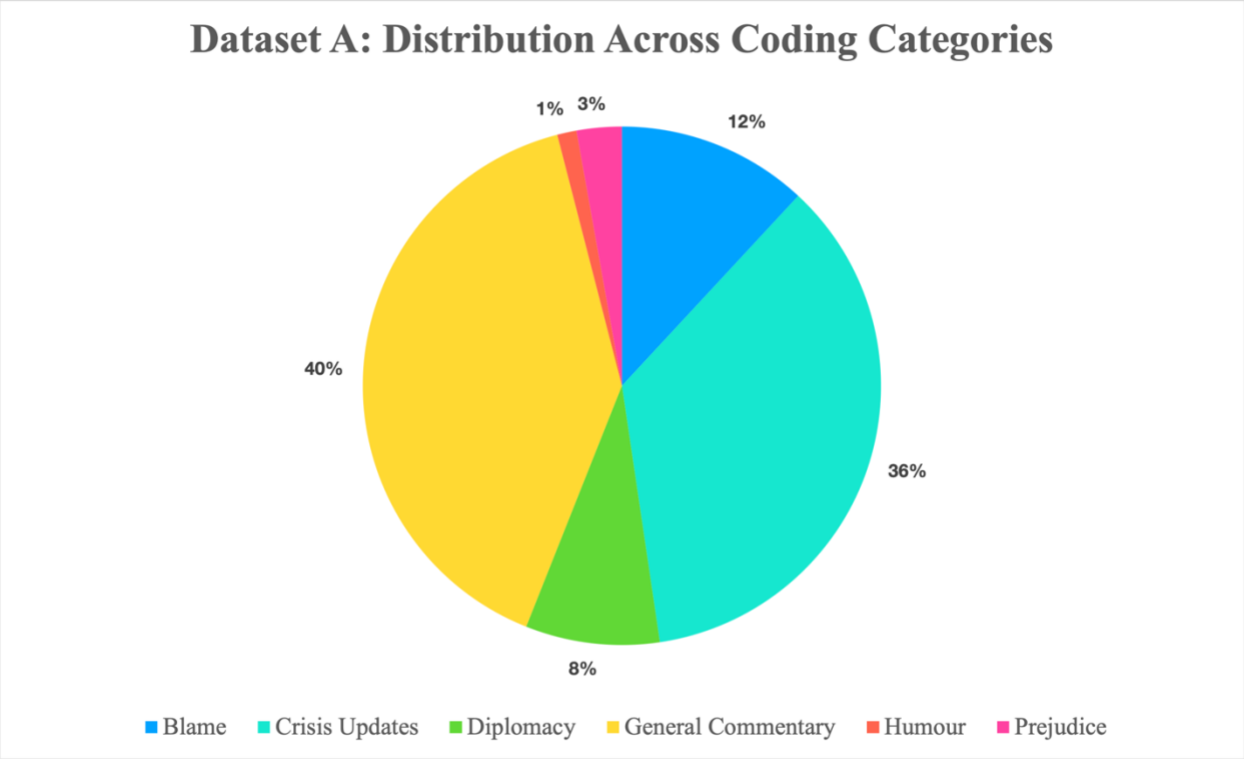

Figure 3 The distribution of Dataset A across coding categories.

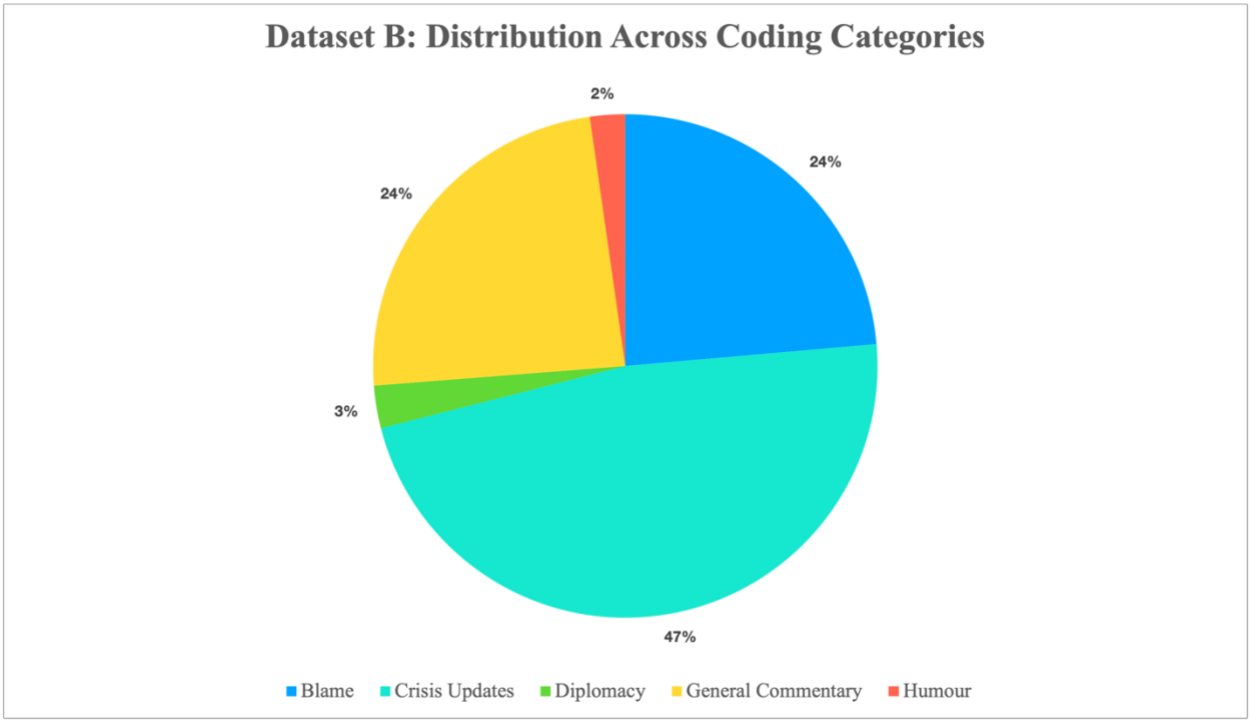

Figure 4 The distribution of Dataset B across coding categories.

These two datasets reflect two different time periods of the Covid-19 pandemic, resulting in the emergence of varying subcategories that may only apply to a particular dataset. Dataset A contains tweets about Covid-19 and China and draws on tweets from March 2020. Dataset B contains tweets about Omicron and South Africa and draws on tweets from late November to December 2021.

Through this comparative analysis, the dominant themes be discussed and compared, which reveals insights to how users perceived the management of and responses to the ongoing Covid-19 crisis. These coding categories are organised into three chapters with overlapping themes; Chapter 4.1 will discuss the theme of Crisis Updates, Chapter 4.2 will discuss General Commentary and Humour, and Chapter 4.3 will discuss tweets that were coded accordingly to the category, Blame, Diplomacy, and Prejudice.

Chapter 4.1: Crisis Updates

This code categorises tweets which provided updates on the crisis as it unfolded. This included breaking news, information on Covid-19 and the Omicron variant, preventing the spread of the variant, health impacts, statistics on positive cases, and where the virus had been identified. This was the largest code for Dataset B, with 47% of tweets falling into this category. This code was the second largest for Dataset A, with 36% of tweets falling into this category. The prominence of this code supports Weller et al. (2014), who notes that during a crisis, social media can be used to disseminate breaking news, make the public aware of threats, ease their mental health, and monitor new developments. The large size of this category highlights the fact that social media has become a prominent platform for information sharing (Shu et al. 2020)

Both categories showcased the World Health Organization's announcements on the widespread Covid-19 outbreak being declared a pandemic and the Omicron variant being declared a variant of concern. Users shared links to the announcements, concerns about the rapid increase in Covid-19 cases, and concerns about the severity of the virus and its variants. Users also shared updates on where the virus was located and sources on where to find out more about it. Breaking news for various countries were frequently shared in Dataset A. This included announcements about national states of emergency being implemented, lockdown regulations, schools closing, evacuations of nationals from foreign countries and other Covid-19-related updates.

Users in Dataset B cited South African sources and their updates about Omicron. As seen in the tweets below, people cited include Anne von Gottberg from the National Institute for Communicable Diseases, South Africa's health minister, Joe Phaahla, Chairwoman of the South African Medical Association, Angelique Coetzee, Professor Abdool Karriem and President Cyril Ramaphosa. The South Africa Medical Association was also quoted stating that 90% of Omicron hospitalisations are amongst unvaccinated individuals. Users also shared that South Africa shared a "sigh of relief" as the Omicron variant appeared to be mild, and death rates not rapidly rising, as seen in the examples below. The prominence of sharing sources from "experts" in the field supports literature by who note that the sharing of information from affiliated organisations can ease panic during a crisis. It may also be a response to WHO's concern and

warning around the infodemic in early 2020 (The Department of Global Communications, 2020; World Health Organization, 2022c), perhaps causing users to be more cautious of the sources they share in 2021.

""The new Omicron variant of the coronavirus results in mild disease, without prominent syndromes," Angelique Coetzee, the chairwoman of the South African Medical Association..." (26 November 2021)

"On Omicron in South Africa: "We have no red flags that have been raised so far." @ProfAbdoolKarim" (30 November 2021)

"'We are seeing an increase in the rate of reinfection with Omicron (that was unseen in previous waves') - NICD's Anne von Gottberg speaking on reinfections in South Africa"

Within this code, 3 sub-categories emerged: Case Updates, Health and Science Updates, and Stopping the Spread.

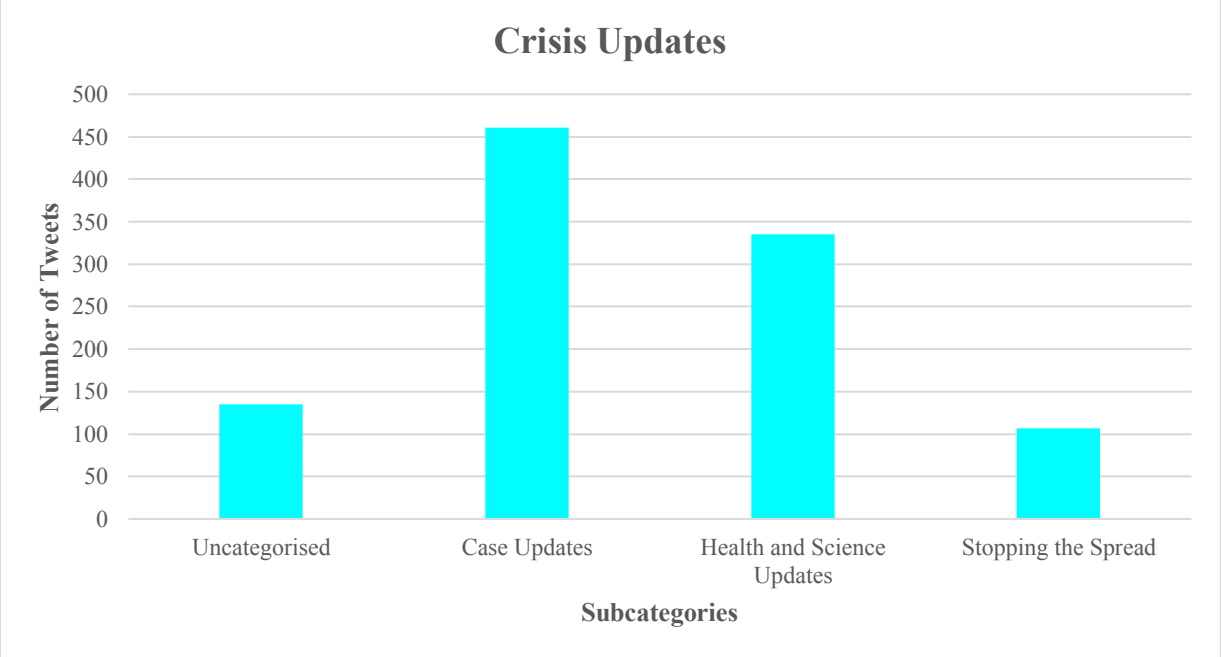

Figure 5 The number of tweets per subcategory for Crisis Updates.

Case Updates

Majority of tweets covered Covid-19 and Omicron case updates. This included statistics of positive cases, new cases identified in various, mortality and recovery rates. This subcategory accounted for approximately 15% of the overall dataset with 175 tweets in Dataset A and 286 tweets in Dataset B.

Both datasets focused on case updates both inside of China and South Africa, as well across the globe. This information was often accompanied by expressions of concern due to the rapid spread of the virus and variant. Tweets shared the same updates and messages surrounding the first Covid-19 and Omicron cases identified in different countries, the circumstances of those infected (If they are vaccinated, if they were travelling, what symptoms they are experiencing, the status of their close contacts, etc.).

Commentary in Dataset A noted that cases rose in other parts of the world, while China reported a decline in cases and an increase in Covid-19-related hospital discharges and recoveries. As noted in the tweets below, although this was seen as a positive outcome, the increasing cases around the world indicated that despite China's epidemic coming to an end, the rest of the world was only facing the beginning.

> *"China's cases of COVID-19 are finally declining. Why? A @WHO expert explains: 'it's all about speed. The faster you can find the cases, isolate the cases, and track their close contacts, the more successful you're going to be.'"* (Dataset A, 11 March 2020)

> *"Many African countries saw their first Covid-19 cases as recently as this Friday. 'This is our morning. China is seeing the sunset. Europe and other countries, maybe the middle of the day.' — Dr John Nkengasong, director of Africa CDC."* (Dataset A, 16 March 2020)

Twitter user's shared information abouts the rapidly increasing new Covid-19 cases and deaths in Italy, and the shift of the pandemic epicentre from China to Europe. The Philippines was also noted as having the highest Covid-19 mortality rate at some point in this time frame. These case updates emphasised the severity and rapid spread of Covid-19's impact on the world, such as the example below.

> *"World Health Organization officials say that Europe has become the epicentre of the COVID-19 pandemic. "More cases are now being reported every day than were reported in China at the height of their epidemic," said WHO head Tedros."* (Dataset A, 13 March 2020)

Commentary in Dataset B made use of suggestive language, alluding to unconfirmed Omicron cases by using words such as "probable", "suspected" and "preliminary". As shown in the two examples below, these terms are often accompanied by a mention that these potential cases had recently travelled from South Africa.

> *"...Two passengers who arrived in Singapore from South Africa have tested "preliminarily positive" for new Omicron #COVID19 variant"*
> (Dataset B, 2 December 2021)

> *"Very likely" Omicron variant case reported by Germany...traveller case has certain mutations identified on the PCR test (likely S-gene dropout proxy PCR) that indicates likely #B11529. Traveller had arrived from South Africa..."* (Dataset B, 27 November 2021)

Furthermore, users in Dataset B frequently mentioned the US and the Netherlands. These tweets noted that the first case identified in the US was in San Francisco, California (Chappell & Franklin, 2021; Hunnicutt, 2022). The individual was a traveller that had recently returned from South Africa two days before the discovery of the new variant and had been self-isolating since testing positive for Omicron. The most commonly shared information about the Netherlands was

that they had identified 61 cases Covid-19 on two flights coming from South Africa and that 16 of these cases were the Omicron variant.

Health and Science Updates

This subcategory includes information and updates relating to health and science. This includes new studies, scientific updates on the virus, and vaccine updates. As new science updates about Covid-19 and Omicron were released, they were also rapidly shared. This subcategory accounted for approximately 13% of the overall dataset, accounting for 225 tweets in Dataset A and 110 tweets in Dataset B.

Both datasets included early research studies and predictions on the outcome and impacts of Covid-19 and the Omicron variant based on early data from infections and death rates. These predictions informed countries and their healthcare systems to assist with preparation. An early study (Lai et al., 2020) showed that had China implemented its Covid-19 prevention strategies earlier, there would have been significantly fewer cases. Dataset B featured commentary on the time frame, noting that it took 8 weeks for Omicron to grow to a local epidemic, as well as commentary noting that current samples and preliminary findings come from early clusters and should be interpreted with care, such as the tweets below:

"Study finds that if #China's interventions could have been brought in a week earlier, 66% fewer people would have been infected by #coronavirus. If the same measures brought in three weeks earlier could have reduced cases by 95%" (Dataset A, 12 March 2020)

"As a broad analogy, if it took approximately 8 weeks for Omicron to grow from an initial spark into a local epidemic in South Africa, I would expect very roughly 8 weeks from today for secondary epidemics to begin to manifest" (Dataset A, 12 March 2020)

Both datasets shared information and characteristics about the virus and its variants. In Dataset A, this included different strains that had been identified and their severity, environmental conditions that may impact transmission, and identifying which population groups are more at risk. Users also noted that cases spread so rapidly, allowing new data to be collected, that studies quickly become outdated as discoveries are made. Similar information was shared in Dataset B, with users noting that evidence suggested that this variant had a higher risk of infection. And suggestions that previous infection provides less protection against Omicron. Tweets in Dataset B showcased some contradictory information citing different sources and studies, which could have potentially caused anxiety and confusion.

Tweets in both datasets shared information on health-related issues. Information frequently shared in Dataset A included how the virus impacted children and toddlers, the possibilities of re-infection after recovering from Covid-19, identifying common symptoms, addressing the impact that Covid-19 can have on co-morbidities and that asymptomatic patients cause the rapid and stealthy spread of the virus. Tweets referred to doctors being aware of Cytokine storm syndrome, an immune response that was killing Covid-19 patients. Users shared a link to an article by Vox (Cron & Chatham, 2020) which references an early study (Ruan et al., 2020) on clinical predictors of mortality due to COVID-19, based on data from Wuhan, China.

Tweets in Dataset B shared that there was a rapid rise of Covid-19 reinfections in South Africa and that the Omicron variant was displacing the previous Covid-19 variant of concern, the Delta variant. Several tweets shared visualisations of data on Omicron vs Delta, comparing the two waves. Despite this, users also shared that South Africa has shown a minimal rise in Covid-19-related deaths amidst the Omicron variant emergence. South African Health Minister Joe Phaahla was quoted stating that the majority of Omicron cases have been “mild”. As seen in the tweets below, South African health officials were quoted when sharing information:

"#Exclusive The new variant symptoms are mild but it is not necessary that it will stay the same going forward: Dr Angelique Coetzee, South Africa Medical Association #NewsToday" (Dataset B, 29 November 2021)

"South Africa's health minister Joe Phaahla said the majority of cases of Omicron seen by doctors in his country have been "mild"." (Dataset B, 2 December 2021)

Commentary in both datasets discussed pharmaceutical developments, as various forms of medication were trialled to treat Covid-19 patients. Tweets in Dataset A included updates from various pharmaceutical companies' attempts to begin trials on a Covid-19 vaccine, including a letter of intent from BioNTech and Pfizer. China and Cuba were mentioned as currently working on the production of anti-viral drugs to treat Covid-19, whilst other tweets shared that already-existing Swiss and Cuban pharmaceuticals were shown to be highly effective in treating the virus. Dataset B showed similar updates, with commentary on South Africa being in talks with Pfizer and Merck to gain access to Covid-19 treatment pills.

Stopping the Spread

The final subcategory in Crisis Updates is Stopping the Spread. This code includes advice on how to prevent the spread of the virus, how various countries implemented measures to 'stop the spread', and updates on the effectiveness of lockdowns. This subcategory made up approximately 3.5% of the overall dataset with 98 tweets in Dataset A and only 9 tweets in Dataset B.

Users in this category shared various countries' efforts to stop the spread of Coronavirus, including South Korea, China, India, and Taiwan. Some of the advice shared in these tweets included social distancing, disinfecting, tracing infections, mass quarantining, and lockdowns, wearing masks, and self-isolating if displaying flu symptoms. This sub-category of tweets also featured updates on the number of tests conducted per country. At this stage of the pandemic, testing was particularly important as it not only detected positive Covid-19 cases in a given country but also reflected the accuracy of Covid-19 case numbers. Users tweeted updates on countries donating tests and critiquing the US for not conducting enough testing.

"Coronavirus tests per 1 million people: South Korea: 3,692 Guangdong, China: 2,820 Italy: 826 Taiwan: 615 Israel: 401 Netherlands: 350 UK: 347 Japan: 66 . . . United States: 23. The US is 161x behind South Korea." (Dataset A, 13 March 2020)

Prominent commentary amongst tweets in Dataset B included calling for individuals to get vaccinated or get their booster vaccine to protect themselves from Omicron. Tweets reiterated information on preventing Covid-19 that was shared throughout the pandemic such as wearing a face mask, avoiding crowded indoor spaces, social distancing, and frequently sanitising hands. A small number of tweets noted countries implementing measures to 'stop the spread' or effectiveness of lockdown. The tweets below showcase some examples; Greece making vaccines mandatory for individuals over the age of 60, issuing monthly fines to those who remain unvaccinated, and the US encouraging that all adults should get a booster shot.

"COVID updates, around the world: • U.S. says all adults "should" get a booster shot • South Africa's early Omicron research suggests "mild" symptoms • Greece makes shots mandatory for ages 60+ and will issue monthly fines to those who remain unvaccinated" (Dataset B, 30 November 2021)

This chapter provides insight into what information users shard pertaining to the Covid-19 and Omicron outbreaks. Tweets fell into three categories: Case Updates, Health and Science Updates, and Stopping the Spread. Case Updates showed to be the largest category, sharing information about emerging Covid-19 and Omicron cases. The next chapter looks at responses and reactions, discussing the codes for General Commentary and Humour.

Chapter 4.2 Reactions and Responses: General Commentary and Humour

When in a crisis, people attempt to make sense of a situation; their understanding stems from acting and observing feedback (Seeger & Sellnow, 2013). How information is relayed and how accountability is attributed can impact their relationship with the parties involved. A party can be considered less competent or trustworthy after a crisis has passed depending on how what action they took during the crisis (Bakker et al., 2018). Mpofu (2021) notes that humour and ridicule can also be used as tools for people to make sense of situations, as well as cope with and challenge predicaments in society.

The General Commentary and Humour codes categorised Twitter responses and reactions to the Covid-19 and Omicron outbreaks and featured jokes and critiques surrounding responses of government officials across both datasets.

General Commentary

General commentary made up the largest category for Dataset A and one of the second-largest categories for Dataset B. This code included responses and reactions to the outbreak. Tweets in this category confirmed previous work by Weller et al. (2014) and Thelwall & Thelwall (2020), who note that during a crisis, members of the public will likely tweet about their situations and emotional reactions, monitor new developments and express sympathy. Both datasets featured 5 themes that emerged within the General Commentary category: Impacts, Critiques, Concern, Praise, Disinformation and Conspiracy, and Experiences.

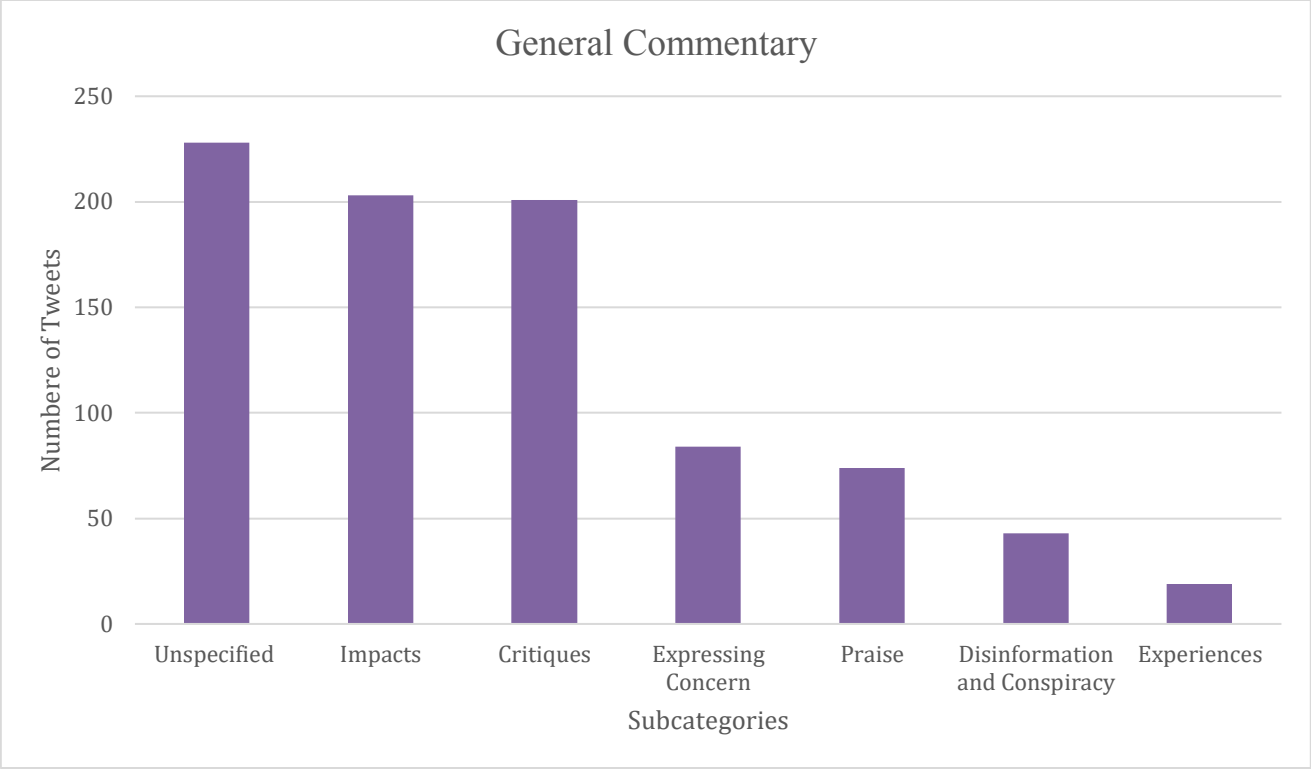

Figure 6 The number of tweets per subcategory for General Commentary Code.

Overview

General Commentary comprised 47% of Dataset A and covered a wide array of topics. One of the more prominent topics was China's return to normalcy and its influence as the leading global manufacturer. As cases in China appeared to decrease, returns to normalcy included President Xi Jinping visiting Wuhan for the first time since the start of the epidemic, reopening businesses and closing temporary Covid-19 hospitals.

> *"The COVID-19 pandemic should be a wake-up call for a world that has accepted China's lengthening shadow over global supply chains for far too long"* (Dataset A, 16 March 2020)

The tweet above noted that China has great influence and power over global supply chains. Similar tweets were often accompanied by messages that the US is too dependent on China and its products, expressing worry and concern over their reliance on pharmaceuticals given the pandemic and ongoing tensions, supporting literature on the ongoing battle for economic power between China and the US (Bergsten, 2022). As seen in the example below, this category also featured commentary on Africa's need to industrialise and obtain economic emancipation from China. These comments support literature observing China's soft power and its growing control over Africa (Huang & Wang, 2019; Gauttam, Singh & Kaur, 2020; Wasserman & Madrid-Morales, 2022).

> *"We import much of what we use from China and other COVID-19-infested countries. A good reminder of the urgency for AFRICA to industrialise."* (Dataset A, 16 March 2020)

Building on China's influence, this category also featured confrontational messages towards China. These included expressions of distrust due to China's lack of transparency in the early stages of the pandemic with tweets sharing that the country intimidated and silenced doctors. Furthermore, tweets pointed out examples of situations that have proven China to be dishonest in the past. Users drew on comparisons of Covid-19 to the Spanish Flu pandemic, noting that both viruses started in China[5]. Users drew on the concept of China starting a "war" and Covid-19 being used as a bioweapon, using pharmaceuticals and medical aid as leverage. These tweets also refer to China fighting an information war by expelling US journalists and attempting to rewrite history, as seen in the tweet below.

> *"The Chinese government have chosen to fight "the coronavirus information war like an actual war" by expelling US journalists from China and Hong Kong. They are rewriting history to make this pandemic someone else's fault."* (Dataset A, 17 March 2020)

This category made up a smaller percentage of Dataset B, accounting for only 24% of tweets. Tweets shared that there had been minimal-to-no hospitalisations for Omicron cases in South

[5] An in-depth review by Barry (2004) notes that it is likely that the site of origin of the 1918 Influenza Pandemic (The Spanish Flu) was in the US.

Africa, expressed concern about the increased infections in children, expressed relief as early data showed that Omicron was milder in symptoms in comparison to other variants, and also noted that it was too early to determine how dangerous the virus is. Users noted that there were opposing responses shared as information about the variant was still being shared, as seen in the tweet below.

> *"Twitter today is basically 'Bad news! ICU doctor in South Africa says they're seeing an Omicron surge of sick young patients' and 'Good news! A doctor in South Africa says that everybody she's seeing only has mild symptoms'"* (Dataset B, 27 November 2021)

There were some general comments about vaccination which also offered opposing stances. Users noted that President Cyril Ramaphosa had stopped importing Covid-19 vaccines due to a lack of demand and two days later the World Health Organization announced the discovery of Omicron by South African scientists. There were tweets quoting Ramaphosa's calls for South Africans to get vaccinated to protect themselves from the new variant and to "restore social freedoms", implying that the more people get vaccinated, the more Covid-19 restrictions can be dropped. Some users challenged this, as seen below, stating that lockdowns do not prevent transmission and that vaccine mandates were hurting hospitals, as seen in the tweet below. These users referred to the same Wall Street Journal opinion piece, drawing on Ramaphosa's decision not to implement more lockdown restrictions during the Omicron outbreak (The Editorial Board, 2021).

> *"The Omicron Non-Emergency: 'Lockdowns don't stop the virus, and vaccine mandates are hurting hospitals. The Omicron variant is no excuse for more of either one.'"* (Dataset B, 30 November 2021)

Impacts

This subcategory included Twitter commentary on how the virus and its variants impact factors outside of public health, such as sport, recreation, travel, and the economy. This subcategory

makes up approximately 6.7% of the overall dataset with 163 tweets in Dataset A and 40 tweets in Dataset B.

In Dataset A, tweets showcased changes that countries implemented that impacted day-to-day activities. This included several countries closing schools, businesses closing, factories in China being retooled to make personal protective equipment such as masks due to increased global demand and setting up temporary hospitals for incoming Covid-19 patients. As the rest of the world implemented restrictions to curb the spread, the decrease in China's cases allowed for their economies to slowly re-open. Dataset A also noted that lockdown restrictions also brought about some positive environmental impacts such as decreased air pollution in China, a decline in Nitrogen Dioxide emissions in Italy, and China banning the consumption of wildlife and canals in Venice filling with fish, as seen below. Some of these environmental impacts, specifically those relating to the return of dolphins and swans to the canals of Venice have been critiqued as misinformation (Daly, 2020). However, the pandemic also brought about an increase in medical waste in China.

> *"Thanks to Covid-19, the canals in Venice are full of fish. Satellite images show air pollution in China reduced. These are two perfect examples of how humans are the virus to this planet."* (Dataset A, 17 March 2020)

Economic Impacts

Both datasets discussed the economic impacts brought about by Covid-19 and the Omicron variant. Users in Dataset A noted that countries with high numbers of Covid-19 cases faced negative ad impact on their economies, noting that this could have a ripple effect on other countries. The pandemic also caused low tourism numbers and low import numbers from China. New businesses attempted to adapt to Covid-19 restrictions by implementing services like contactless delivery, and overall, the pandemic led to mass job losses.

Similarly, Dataset B also touched on similar economic impacts. Tourism was a prominent topic, as it makes up 3% of South Africa's gross domestic product, causing the travel restrictions that

had been implemented to severely impact its economy (The Economist, 2021). Tweets also noted stock markets worldwide dropping, oil prices dropping, and one tweet noting that rich countries should compensate South Africa for this economic hit. In Dataset B tweets showcased more commentary on the issue of travel. This not only included announcements of new restrictions that various countries had implemented, but also cases of travellers being stranded as a result.

Recreational Impacts

Both datasets touched on how Covid-19 and the Omicron variant impacted recreational activities such as sports. Dataset A featured commentary noting that sporting seasons would be postponed. Users in Dataset B commented on how the Omicron impacted various sporting events and teams, with the most frequently mentioned being the Cardiff Rugby team being unable to depart from Cape Town after detecting two positive Covid-19 cases amongst their team, with one case being suspected of being Omicron (Phillips, 2021).

Critiques

This subcategory included critiques of various government institutions, organisations and the media for their reactions and response to the outbreaks. Accumulatively, 201 tweets fell into this subcategory across both datasets.

Media Responses

Both datasets featured commentary of users critiquing the media for their response and contribution towards causing mass panic and anxiety over Covid-19 and the Omicron variant. In Dataset A, Twitter users noted that some media publications produced pro-West, contradictory information about Covid-19. Western media was considered to produce predominantly negative coverage when reporting on China's response to the epidemic, whilst information and articles stemming from health organisations praised China's approach. However, there were also users critiquing the media for praising China's response.

"This media hysteria over China Virus is irresponsible. Disease deaths per day worldwide: COVID-19—56 Seasonal Flu—1,027 Pneumonia—2,216 Tuberculosis—3,014 Media mentions of Tuberculosis: 2.9 million Media mentions of China Virus: 1.1 BILLION They need to calm down." (Dataset A, 12 March 2020)

Similarly, Dataset B also featured commentary critiquing the media's portrayal of the Omicron outbreak. Tweets noted that the public should not be scared by the image of the variant outbreak in South Africa, reinforcing the fact that at the time South Africa was not experiencing a surge in hospitalisations. As seen in the example below, users commented that organisations were spinning information and releasing headlines that spread panic about Omicron throughout the world, with most media sources highlighting the fact that Omicron is more contagious, but not mentioning that it is less severe.

"What I've learned from medical sources, in South Africa and elsewhere, is the Omicron variant is more contagious but less severe than the Delta variant. Yet, most media sources highlight the 'more contagious' while ignoring or concealing the 'less severe' part. Ideology over reality!" (Dataset B, 29 November 2021)

Global Responses

Both datasets featured critiques of global responses and an approach to combatting Covid-19 and the Omicron variant. Similar narratives were expressed in both datasets, displaying critique of Global North countries such as the EU, UK and US for their lack of assistance and poor preventative measures. As seen in the tweet below, Dataset A featured some government-specific commentary included critiquing the EU for not assisting Italy in their severe first wave, critiquing the UK and Australia for not implementing preventative measures sooner, the US not ordering medical supplies in preparation for the strain on their healthcare system and critiquing the Indonesian government for their poor Covid-19 response. There was a particular focus on former US president Donald Trump's response to the pandemic. As seen in the second example below, users noted that his response was poor. Further commentary critiqued the US government

for refusing to collaborate with other countries, purchase medical supplies in preparation and attempt to buy the intellectual property for the Covid-19 vaccine for exclusive use.

> *"The neoliberal EU (which demanded that member states cut medical spending and privatize health services 63 times in 7 years) totally abandoned Italy, as thousands die from Covid-19 So Italy turned to China, Cuba, and Venezuela, who are actually helping it"* (Dataset A, 17 March 2020)

> *"Germany ordered 10 000 ventilators. China & Italy placed orders too. US Hospitals need them to pump oxygen into the failing lungs of COVID-19 patients. US Ventilator Maker, Ventec, says they can ramp up production of Five-Fold. Trump has ordered Zero!"* (Dataset A, 17 March 2020)

Similarly, in Dataset B, tweets expressed disapproval over the reactions of the US and the UK, expressing concern that South Africa and Botswana are being penalised for their transparency and that global leaders are further restricting people's freedoms. Commentary labelled this behaviour as a form of mass hysteria, knee-jerk reactions, scaremongering, and an overreaction. The commentary also noted that global ministers were expressing distrust of Covid-19 testing from southern African countries and how this is ironic as Botswana and South Africa managed to identify omicron before anyone else. The tweets below quote Professor Tulio de Olivieria, Bioinformatician and director of KwaZulu-Natal Research Innovation and Sequencing Platform (KRISP), commenting on his frustration with the global response to Omicron (Chotiner, 2021).

> *"Interview with de Olivieria, 'We are honestly tired of this—after not having access to vaccines and still doing some of the best science on covid. (...) the world wants to find fault with Africa and doesn't recognize the absolute lack of support.'"* (Dataset B, 1 December 2021)

Commentary in Dataset B drew on quotes from various public figures. Multiple South African figures expressed disapproval over decisions made by foreign countries to implement travel bans in response to Omicron, shown in the tweets below.

"President Cyril Ramaphosa has doubled down on his rejection of travel bans to South Africa amid the discovery of the Omicron variant of Covid-19, saying it was a slap in the face of African excellence." (Dataset B, 2 December 2021)

"Just-posted: '...few aspects of the international response to #COVID19 are as idiotic, stupid, and ultimately self-destructive as the failure, born from wealthy-nation selfishness, to make Africa's HIV+ population a top #vaccination target..'" (Dataset B, 2 December 2021)

Monitoring and Management

Both datasets featured commentary critiquing the monitoring and management of Covid-19 and the Omicron variant. Dataset A featured critiques of China's governance specifically, calling for accountability as officials knew about the crisis in November 2019, but failed to inform the world. This discussion is further expanded on in the following chapter on Blame, Diplomacy, and Prejudice.

Dataset B showcased critiques of the global approach to tracking COVID-19 cases and travel. Several countries had implemented PCR tests or proof of vaccination to travel internationally, causing several users to express concern and confusion that Omicron could travel at such a rapid rate without positive Covid-19 cases being identified during travel. There were questions as to how these positive cases were let into various countries and allowed to travel undetected. Following suit, there were tweets critiquing Covid-19 protocols as being counterproductive, such as passengers with negative results being confined to travel alongside infected people.

"If omicron was first found in South Africa in 58 people, how is it now halfway across the world already? How did they allow these people to travel without testing? If not, then how did it get to their countries? I thought these people had to be vaxxed or tested before travelling?"
(Dataset B, 2 December 2020)

Dataset B showcased some anti-vaccine commentary, primarily critiquing calls to get vaccinated in light of the new variant. One tweet mentioned that fully vaccinated people are travelling and spreading the new Omicron variant. There was also commentary critiquing the incubation period for Omicron, questioning whether it was effective.

"South Africa says that 'almost half' of the Omicron infections are in people who are unvaccinated. What's another way of saying that?"
(Dataset B, 29 November 2021)

Expressing Concern

This subcategory includes tweets sharing fear, panic and concern over Covid-19 and the Omicron variant. Accumulatively 84 tweets were coded in this subcategory across both datasets.

Healthcare

One of the primary topics of concern in this subcategory was health. Both datasets showcased commentary expressing concern on not only how the virus and variant would impact populations, but the strain it would have on healthcare systems. Dataset A mostly discussed concerns about the US, comparing their hospital bed numbers to those in China, South Korea and Italy. This included worry over the healthcare workers on the front line. There were also tweets expressing concern over middle and low-income countries with weaker healthcare systems, particularly shocked and devastated by the impact the virus had on Italy, which is considered to be a country with a relatively strong healthcare system.

"The US has 2.8 hospital beds per 1,000 people. By contrast, China has 4.3. South Korea has 12.3. Italy has 3.2. As the coronavirus advances in the US, one of the biggest issues doctors could face is simply finding space to treat patients" (Dataset A, 17 March 2020)

Tweets in Dataset B expressed similar concerns over the new-found Omicron variant. Tweets showcased fear over how fast the variant was spreading and the rise in infections, claims that the omicron variant is more deadly than previous variants, and claims that health officials were alarmed by this new variant. Tweets shared a link to a Sky News article claiming that the emerging picture from South Africa suggests that Omicron may be a "real cause for concern" (Clarke, 2021).

"The emerging picture from South Africa suggests that the Omicron variant could be real cause for concern: Do not be distracted by headlines that the Omicron variant might be less deadly than Delta. More worrying pictures are starting... VIA @SkyNews" (Dataset B, 1 December 2021)

Global spread, impact, and management

Both datasets showcased concern over how the virus and variant would spread and impact countries. As seen in the example below, comments in Dataset A anticipated that the devastating outbreak of Covid-19 in Italy would occur in other EU and UK countries. There was also concern over how long it would take to inevitably contain the virus, and the economic impacts that widespread lockdowns would have. Tweets in Dataset B looked at government concerns about the new Omicron variant, expressing that governments were "scrambling" to contain potential outbreaks and how there may be dangers in implementing more lockdowns.

"The European Centre for Disease Prevention and Control: "In a few weeks or even days, it is likely that similar situations to those seen in China and Italy may be seen in other EU/EEA countries or the UK"." (Dataset A, 12 March 2020)

Tweets in Dataset B also included concerns around transparency. Given the reaction towards the discovery of Omicron, many users shared quotes from articles and public figures sharing their concerns that other countries will be afraid to come forward with their discoveries, as seen in the example below. Further commentary noted that dangerous new variants can spread further if countries hide evidence to avoid the economic consequences, as seen in the example below.

> *"Alex Sigal, lead scientist who helped discover Omicron variant in South Africa, says he is 'saddened' by global response to country's 'transparency.'"* (Dataset B, 30 November 2020)

Prevention

Both datasets displayed commentary on preventing the spread of Covid-19. As early studies emerged on Covid-19, Dataset A featured users sharing information to make others more aware of the health conditions that can increase the severity of Covid-19, causing anxiety amongst populations who have those conditions. There was also frequent concern that the preventative actions being taken to prevent the spread of Covid-19 were not serious enough, once again drawing on the experiences of the US, claiming that former President Trump did not take adequate measures. Dataset B featured commentary calling for more people to get vaccinated if they have not yet done so, and the need for more boosters to protect themselves from Omicron. Juxtaposing this, there were also tweets noting that the spread of Omicron internationally cannot be placed on those who are unvaccinated as most countries' travel restrictions require vaccinations to fly, and many of the early Omicron cases being identified are from vaccinated individuals.

Praise

This subcategory included expressions of praise to specific countries, governments, organisations, and people. This made up approximately 2% of the overall dataset with 31 tweets in Dataset A and 43 tweets in Dataset B.

As seen in the tweet below, Dataset A contained expressions of praise towards healthcare workers on the front lines and travelling to provide aid in countries that were severely impacted, Cuba for their medication that played a role in saving many lives in China, American citizens for adhering to Covid-19 lockdown restrictions to prevent the spread of the virus. Some tweets also

praised China for managing to stabilise the epidemic, donating medical supplies to Italy and organising programmes with Iran and Afghanistan to translate and distribute their anti-epidemic information.

> *"Instead of thanking China, I'd like to thank our health workers who have been on the frontlines against COVID-19. You have been working tirelessly in the name of public health and safety. You are the real heroes, and I am thankful for your service to our people."* (Dataset A, 12 March 2020)

In Dataset B, there was an overwhelming amount of praise for South Africa for their discovery of the Omicron and their transparency. As seen below, users shared that South Africa and Botswana's scientists should be thanked. Tweets also commented on not only the work of their scientists, but the speed at which this discovery was made and communicated with the rest of the world. Several tweets featured expressions of thanks and gratitude to South Africa and Botswana for their discovery.

> *"A big thanks to the people of South Africa for their transparency and making the Covid-19 data publicly available. Without your hard work and dedication, the world would be significantly further behind in the fight against the Omicron variant."*

This subcategory also noted that South Africa does not deserve to be resented, punished, or penalised through travel restrictions for their discovery, pointing out the contradictions of countries praising South Africa for their discovery and transparency whilst simultaneously implementing travel restrictions and bans.

> *"The World Health Organization (WHO) on Monday said experts from South Africa and Botswana must be thanked and not punished for detecting the Omicron variant, which is tagged as very high global risk."* (Dataset B, 29 November 2021)

Disinformation and Conspiracy

This section categorises commentary on conspiracy theories and disinformation relating to the discovery of Covid-19 and the Omicron variant. This made up 1.4% of the overall dataset with 28 tweets in Dataset A and 15 tweets in Dataset B.

Conspiracy theories are beliefs that attribute agency over important world events to a secret plotting of a powerful, malicious group (Klein, Clutton & Dunn, 2019). These theories have the potential to cause harm to individuals and communities (Klein, Clutton & Dunn, 2019). Both datasets displayed commentary about conspiracy theories. Dataset A featured conspiracy theories that were predominantly centred around China, stating that China has no credibility and should not be trusted. As seen in the example below, users shared tweets expressing suspicion that WHO and China are working together, theories that China created Covid-19 for population control, theories that Chinese-based technology company Huawei's 5G services are used for malicious intent, and that the coronavirus was created in a lab by both China and South Korea. Dataset A also included tweets debunking homemade coronavirus remedies and prevention methods and debunking the theory that Covid-19 was created as a biological weapon. Tweets also commented on China's claim that the US created the coronavirus. These included calls for evidence and calling the claim a conspiracy theory. A conspiracy theory was pushed by a Chinese ministry official, Zhao Lijian that COVID-19 was brought over to China through the US army, blaming the US for the pandemic and ongoing outbreaks (Scott & Marlow, 2020).

> *'The Communist Party official cites their own state-run media "reporting" to spread China's false claim that COVID-19 originated in USA research lab. The Chinese regime has zero credibility. Remember that when they promise you Huawei's 5G gear will not be used for malign purposes. 'More evidence suggests that the virus was not originated at the seafood market in Wuhan at all, not to mention the so-called "made in China".'"* (Dataset A, 16 March 2020)

Dataset B showcased users expressing claims that Omicron is a cover-up for Covid-19 vaccine reactions, as seen in the tweet below. Similar to Dataset A, theories were shared that Pfizer and WHO are in collaboration to punish South Africa for stopping shipments of their vaccines. Another tweet used the term 'Pfizer bribery" when referring to European politicians' response to Omicron, implying that their reaction is tied to South Africa's decision to stop importing more vaccines. Similar to Dataset A, tweets in Dataset B also include accusations that the WHO is lying about the Omicron variant, with two tweets claiming that the discovery was first made in July.

> *"Omicron is the cover-up for the jab adverse reactions. They are going to use South Africa as the scapegoat since their jab rate is low. Very clever."*
> (Dataset B, 28 November 2021)

Experience

This subcategory was the smallest under the General Commentary code, with only 19 tweets accumulated in Dataset A alone. This included commentary on experiences of people who have recovered from Covid-19, healthcare professionals on the front lines and learning how to treat the virus and struggles with accessing Covid-19 testing given limited supplies in certain countries.

Humour

This code encompassed tweets containing jokes, memes, and humorous commentary relating to the outbreaks. Despite being the smallest category, making up 1% of Dataset A and 2% of Dataset B, the two most shared tweets in Dataset A fell into this group. This highlights existing research by Thelwall & Thelwall (2020) and Chiodo, Broughton & Michalski (2020) who note that social media is used to share laughter and humour, and that humour is likely to boost the audience of a tweet, making it more likely to be shared. It may also support research by Mpofu, (2021) and Wasserman (2020) who note that humour can assist people in making sense of their

circumstances and developing a community. The tweet below was the most shared with 57 872 retweets.

> *"Cuba: We have an antiviral drug with a demonstrably high success rate in treating patients with COVID-19*
>
> *China: Our studies show that this Cuban drug has extremely high success rates*
>
> *US: If only WE could find a treatment, someone in the PRIVATE SECTOR needs to find a PATENTABLE treatment" (Dataset A, 16 March 2020)*

This tweet contributes to discussions on the US's battle for global economic power (Bergsten, 2022), continued in the following chapter. The tweet mocks the US's governments response to the Covid-19 pandemic by disregarding health diplomacy efforts from China and Cuba. Despite being tweeted in March of 2020, it also reflects on issues surrounding the TRIPS waiver and vaccine inequality that is discussed in Dataset B. This supports literature by Obadare (2009) who notes that humour on social media can be used to exercise agency and political participation.

> *"BREAKING NEWS: China has reported an outbreak of a deadly coronavirus #Covid19 in the city of Wuhan"* (Dataset A, 14 March 2020)

The tweet above had the second-highest number of shares in Dataset A with 50 006 retweets. This tweet was from an account parodying Microsoft's Internet Explorer browser, The tweet itself is not necessarily where the joke stems from, but rather the text, the date it was posted and the account. This tweet is a play on the popular Microsoft Internet Explorer meme format which is based on the shared experience of Internet Explorer being a slow browser. This meme format often showcases news being shared quite long after the event has passed, commenting on how Internet Explorer provides a long delay before providing search engine results. The tweet was posted on the 14th of March 2020, whilst the news of the coronavirus outbreak in Wuhan was reported on the 10th of January 2020 (World Health Organization, 2020). This supports discussions in the following chapter on assignments of blame, critiquing China's transparency, and management.

Tweets in Dataset A featured humorous commentary comparing countries' responses to curbing the spread of Covid-19 and critiquing certain governments for not implementing appropriate responses. Many of these tweets followed a similar format, comparing countries' responses, for example, the tweet below. This supports previous work by Obadare (2009), who notes that humour can be an important tool to exercise agency, perform political participation, and challenge official meaning.

"CHINA: Quarantines 58 million people.

SOUTH KOREA: Tests 200k people for COVID-19.

SINGAPORE: Orders the Army to distribute masks to the public.
ITALY/FRANCE/GERMANY: Ban all public gatherings.

WALES: You can't cancel the rugby mun! Dai's already sorted a minibus!"
(Dataset A, 12 March 2020)

"Italy: Lockdown

China: lockdown

Denmark: Lockdown

Norway: Lockdown

Ireland: Close all schools and ban European planes

Indonesia: coronavirus can heal by itself

What is wrong with my country????" (Dataset A, 13 March 2020)

In Dataset B users commented on the name assigned to the new Covid-19 variant. Some tweets suggested that it should have been given a more South-African-inspired name, suggesting names such as "Vuvuzela". The tweet below drew on naming the variant using Southern African

profanities such as “Voetsek”, or after the evil spirit from Xhosa culture, “Tokoloshe”. Tweets in this category made humorous comments about Covid-19-related conspiracy theories such as Omicron emerging due to South Africa stopping vaccine deliveries, calling this theory “Moronic” and “Omicrap”. A few tweets were also accompanied by memes.

> *“If the world is going to blame the Omicron variant on South Africa, they could at least do us the honour of giving it a local name. Like Masepus or Voetsek or Tokoloshe.” (Dataset B, 30 November 2021)*

Tweets in Dataset B also featured humorous commentary on the global response towards Omicron, poking fun at reactions from certain countries and organisations. For example, the tweet below made commentary on India’s reaction to Omicron, noting that they are not worried about the variant as they have survived the “O’mitron virus” for 7 years.[6]

> *“…Omicron variant discovered in South Africa is 30x more dangerous than the Delta variant.*
>
> *Indian answer: No worries. We have survived O’MITRON virus for 7 years.*
>
> *Omicron is not even a shadow of this deadly Virus”* (Dataset B, 29 November 2021)

Users criticised the widespread panic noting that South Africa had no hospitalisations for Omicron at the time, with their death rate being nearly one-third of the United Kingdom’s Covid-19 death rate and that symptoms are extremely mild. Five tweets shared the same video of a man from South Africa commenting on the state of Omicron in South Africa compared to the United Kingdom. The video notes that there are more daily cases in the UK, but there is the perception

[6] This comment refers to Indian prime Minister Narendra Modi, who frequently uses the phrase “mitron”, which Modi frequently uses in his speeches to address the nation (India Today, 2022; The Indian Express, 2022).

that Omicron is extremely severe, and the blame has been placed on Africa by the British. The man in this video continues his commentary about Omicron, stating, “Of course, it’s the worst of all variants, it’s dressed in a loincloth, carries a spear and waits for you at the airport to chop your head off and crawls up your ass” (Dataset B, 2 December 2021). He notes how the UK’s reaction impacts South Africa’s tourist industry and the livelihood of many Southern African industries. Although humorous and shared with laughing emoticons and described as “hilarious”, this contributes towards broader commentary about racial scapegoating and stereotypical perceptions of Africa as discussed by Poncian, (2015), Dionne & Seay (2020) and Friedman et al (2022).

Through discussing the General Commentary and Humour codes, this chapter provides insight into how users responded and reaction to the Covid-19 and Omicron outbreaks. Critique is a large theme in this section and serves as an example for how Twitter users can make use of the platform to criticise elites, such as powerful governments. When discussing the code for Humour, we still see users sharing jokes and commentary that are rooted in critique of not only powerful entities, but stigmas and stereotypes about Africa. The following chapter will build on this by discussing the codes for Blame, Diplomacy and Prejudice.

Chapter 4.3 Seeking Transparency: Blame, Diplomacy and Prejudice

Transparency and accountability were overlapping themes in both datasets. Building on discussions in the previous chapter, these themes continue when discussing the Blame, Diplomacy and Prejudice codes.

Attribution theory is the notion that people will judge the cause of an event, especially events with negative outcomes, and are unexpected (Coombs, 2004). Across both datasets, several countries and government officials came under scrutiny over their response to the pandemic. This chapter features opposing commentary under Blame, with users calling for China to be held accountable for the pandemic and face consequences. Dataset B features the opposite response, with praise for South Africa's transparency and critique for the punishment the country received through travel bans. Both datasets drew on how assignments of blame towards China and South Africa can stem from racial prejudice and racial scapegoating. This chapter will discuss each code, its subcategories, and the dominant themes that emerged across datasets.

Blame

This category comprised 12% of Dataset A and 24% of Dataset B. This code included commentary assigning blame for the Covid-19 and Omicron outbreaks, discussions on where the virus originated from and calls for accountability and consequences. Two themes emerged within this code: origins and travel restrictions.

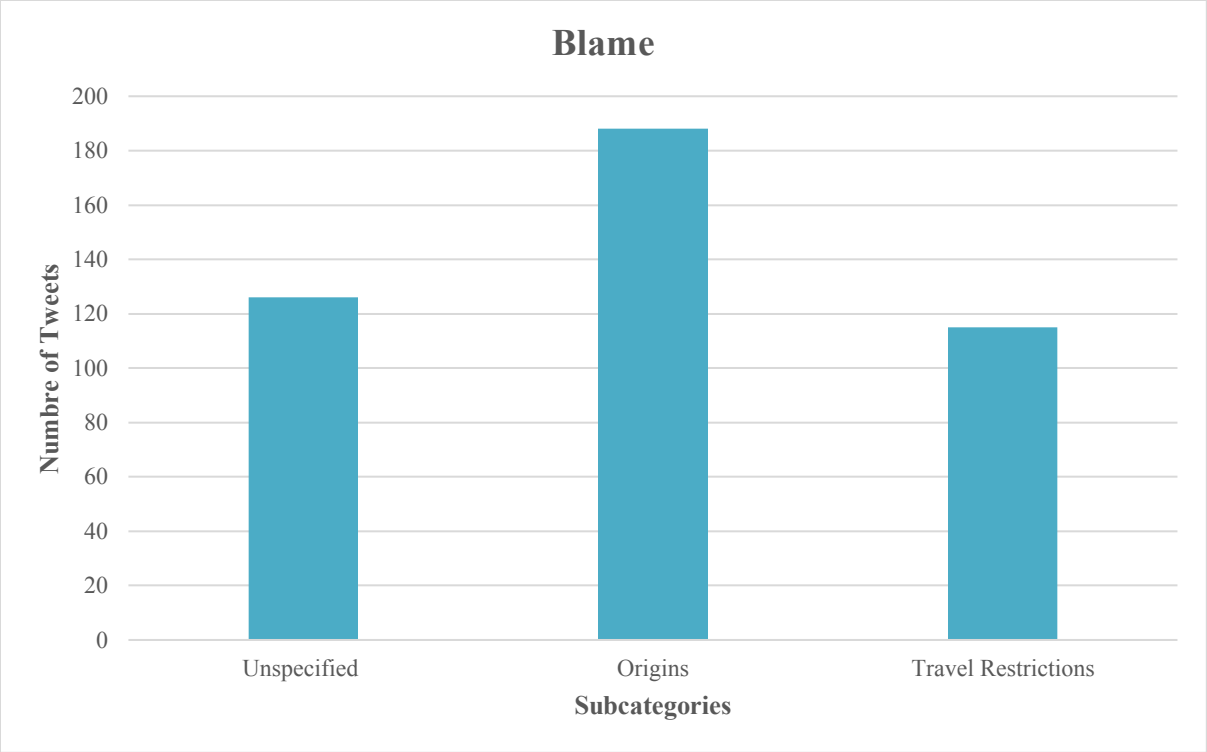

Figure 7 Graph showing the distribution of Tweets for Blame code.

Overview

Datasets A and B featured contradictory commentary when it came to assignments of blame. Whilst users in Dataset A placed blame on China and the US, claiming that there should be consequences for the pandemic, users in Dataset B defended South Africa and noted that they should not face blame or punishment for the discovery of Omicron. Users also critiqued the double standards surrounding assigning blame to South Africa for the discovery of Omicron. These tweets promoted a political angle noting that "democrats" and "liberals" can say that Omicron originated in South Africa and initiate travel bans, but it was considered racist and xenophobic to associate Covid-19 with Wuhan and China and ban travellers.

Users in Dataset A assigned blame to two countries: China and the United States. Beginning with China, several tweets blamed China for the mismanagement and lack of transparency around Covid-19 which ultimately led to the pandemic. As seen in the tweet below, these assignments of blame were often paired with accusations of China lying, silencing whistle-blowers and being deceptive. Several of these tweets also featured the hashtags #Wuhanvirus or

#WuhanCoronavirus. Hoppe (2018) who notes the advisory of viruses being given non-stigmatising names to avoid negative sentiments being attached to communities.

> *"Repeat after me, "China is responsible for #WuhanVirus outbreak". #SpreadTheWord let us not forget who the real culprit behind the #CoronaOutbreak is. #IBlameChina #coronavirus #GoCorona #Covid_19 #Wuhan"* (Dataset A, 13 March 2020)

Tweets in this category, such as the example below, also commented on the Chinese wet markets in Wuhan, accusing China of not being concerned about animal welfare and closing down wet markets permanently, as this is the suspected origin of Covid-19. Wet markets are the most popular form of food markets in Southern China, and are typically an open commercial complex with independent vending stalls where vendors sell "wet" items such as poultry, vegetables, meat, seafood and fruit (Zhong, Crang & Zeng, 2020). Wet markets are important food providers in not only China, but the Philippines, Vietnam, Indonesia, Singapore, Taiwan, and Hong Kong (Zhong, Crang & Zeng, 2020).

With regards to the US, tweets in this category showed that blame was assigned to former president Donald Trump's administration. Demonstrated in the tweets below, users noted that the US government should focus less on assigning blame and discrediting China's Covid-19 efforts and noting that this could be considered a scapegoat to avoid taking responsibility for being unprepared for the pandemic. The two tweets below expressed this sentiment from Chinese government officials and Chinese state-affiliated media. This contributes to discussions by Kaur, Verma & Otoo (2021) who note that political leaders are judged by their reactions to a situation, therefore their emotions in communication are significant in impacting their supporters.

"What a president! By labelling the Covid-19 "Chinese virus," Trump tries to hide his administration's lack of prevention and control measures against the coronavirus. He passes the buck to China, trying to prove that he is NOT responsible for the current situation the US is facing." (Dataset A, 17 March 2020)

"Right now, Trump's devotees and media partners are engaged in a coordinated online campaign to label COVID-19 the 'China Virus'/'foreign virus', this is designed to shield Trump from political fallout for his lies and inept handling of the crisis." (Dataset A, 12 March 2020)

As mentioned in the previous chapter on General Commentary and Humour, the conspiracy theory that Covid-19 was brought to China by the US army was challenged. Users noted that this may be China's attempt to divert blame to the US for the pandemic. Tweets labelled this theory as propaganda, an attempt to gaslight the world, and an attempt to rewrite history, as seen below.

"I'm pleased to report this #China Foreign Ministry clown has blocked me for daring to challenge his outrageous lies that the US is responsible for #coronavirus #Covid_19. The fact is, the Chinese Communist Party lied to its citizens & the world about this virus. They are responsible" (Dataset A, 13 March 2020)

This category featured calls for consequences, commenting that China should receive punishment for its mismanagement and lack of transparency regarding Covid-19. Tweets suggested economic sanctions and calls for the World Trade Organisation to act. American politician Senator Tom Cotton was quoted in two tweets, one featured below, noting that China would not "get away" with the Covid-19 pandemic.

"Senator Cotton states, with a tone that can best be described as angry, that China is "not going to get away with infecting the world with this Chinese coronavirus." (Dataset A, 13 March 2020)

Tweets in Dataset B showcased disapproval and critique that South Africa was being assigned blame by the media and travel restrictions in response to their discovery. Several tweets referred to international news articles stating that South Africa was being punished for its discovery, expressing that the categorisation of the 'South African variant' assigned the stigma that the country was responsible for the emergence of Omicron. Users noted that South Africa was not only being blamed, but demonised, vilified and punished for their discovery and transparency. The tweet below mentioned that South Africa was rightfully being punished, critiquing their treatment protocols.

> *""Ramaphosa appeared to channel growing frustration in South Africa that the nation is being 'punished' with travel bans" Of course they are being punished- their covid protocols include early treatment and ivermectin. How dare they deny the science?!"* (Dataset B, 29 November 2021)

A large number of tweets highlighted the fact that Omicron was present in Europe before its detection in South Africa, referencing Reuters and CBS news (2021; 2021). Tweets frequently commented on the different responses that European countries faced compared to South Africa, the example below draws on the Netherlands.

> *"Omicron was found in the Netherlands on the 19th of November. Confirmed. South Africa got punished for being transparent. It's not a SA variant but rather a European Variant."* (Dataset B, 30 November 2021)

Commentary in Dataset B also drew on racial dynamics that may contribute to the assignment of blame. The tweet below was the start of a short thread categorising this event as 'Imperialism revisited'. The thread suggests that had this variant been found in Germany, they would not be the target travel bans towards them and their neighbouring countries as a first resort. A few tweets also drew on the element of race, such as the second example below, noting that European countries were not facing the same travel restrictions despite identifying cases of Omicron within their countries, claiming that this is a case of racial bias. The second tweet below critiqued media outlets for blaming South Africa, correlating it to blaming Black people. These comments

support existing literature on the concepts of stigma and racial scapegoating (Friedman et al., 2022).

> *"IMPERIALISM REVISITED – South Africa is being punished for identifying the Omicron variant and alerting the world swiftly. There is no evidence it emerged there; 1 of the identified cases of the omicron variant in Belgium had no contact or travel with any nations in…(1/3)"* (Dataset B, 29 November 2021)

> *"Punishing South Africa for discovering and reporting the Omicron Variant is not only irrational (as community spread in EU began before its discovery), but also a symptom of racial bias."* (Dataset B, 2 December 2021)

Origins

Tweets coded in this category discussed the origins of Covid-19 and Omicron, with commentary tracing back cases to specific regions. This subcategory accounted for 6.3% of the overall dataset with 99 tweets in Dataset A and 89 tweets in Dataset B.

As seen in the first tweet below, in Dataset A, users assigned China as the origin of Covid-19, with approximately 60 tweets sharing that the first case in China could be traced back to 17th November 2019. Users further emphasised that the virus originated in China, with some tweets further stating that it should not be considered racist to state this. Users in this subcategory once again referred to wet markets as the origin of Covid-19, assigning animal reservoirs as the reason for the virus's emergence. The second tweet below noted that Both SARS and COVID-19 can be traced back to wet markets, whilst another called for UN sanctions for all countries that allow wet markets.

> *"Let's be clear, COVID-19 first emerged and appeared in CHINA. Medical journals have published studies on its origin and transmittal in CHINA. Even the Chinese government admits to these facts. The truth matters."* (Dataset A, 12 March 2020)

> *"Let's address the root cause: "Both SARS and COVID-19 can be traced to China's open-air markets where animals (such as wolf cubs, snakes, turtles, rats, and civets) are bought live and then slaughtered on the spot." Such markets will spawn more deadly viruses."* (Dataset A, 12 March 2020)

Four tweets in this subcategory shared views that diverted away from the dominant narrative. Like the example below, these tweets share the belief that the virus did not originate in China but was brought there by a traveller from another country or in a lab.

> *"This is the laboratory that some suspect MAY be connected to the origin of Covid-19. Emphasis, MAY. Researchers claim that the virus in China and in Iran are branch viruses with the trunk virus originating from the USA. This is pure speculation at present."* (Dataset A, 16 March 2020)

Users in Dataset B noted that early cases of Omicron were found in the Netherlands before South Africa reported their discovery to the World Health Organization, such as the example below. This supports the narrative that South Africa was not the origin of the Omicron variant. The World Health Organization was quoted on this, stating that the first documented samples of Omicron from various countries do not specify South Africa as the origin. Users aimed to clarify this distinction, noting that the virus did not necessarily originate in South Africa, it was simply discovered by South African scientists. The tweet below commented that Europe may have spread the Omicron variant to South Africa. With more European countries discovering earlier cases of Omicron, there were also tweets questioning Europe's transparency, and whether this discovery was hidden.

"Wouldn't it be ironic if it turned out that omicron emerged in Europe and was then exported to South Africa, which just happened to have a pandemic system that detected it faster. Just saying." (Dataset B, 30 November 2021)

Travel Restrictions

This sub-category looked at tweets discussing travel bans and restrictions in response to the pandemic. It accounted for 3.8% of the overall dataset with 12 tweets in Dataset A and 103 tweets in Dataset B.

Dataset A noted that several countries with identified Covid-19 cases were considered 'high risk' by certain governments. As a result, these governments either implemented travel bans or warned of caution when travelling. Tweets in this subcategory featured the discussion of travel restrictions and mandatory 14-day isolations for travellers returning from these countries. This subcategory also featured some conflicting approaches by different states in the US on their approaches towards implementing travel restrictions and isolation procedures. The tweet below from a US Government official shared an update on former President Donald Trump's decision to implement travel bans.

"Pres. @realDonaldTrump continues to take necessary steps to protect Americans and prevent the spread of Covid-19. @DHSgov has been instructed to prohibit travel from China, Iran, and the Schengen region of Europe. U.S. citizens may return via 13 specific airports." (Dataset A, 14 March 2020).

In Dataset B, users shared information from news outlets regarding various countries' decisions to instate travel restrictions and bans in light of Omicron's discovery. The example below features examples from users commenting on how this reaction may stem from racial stigmatisation or lack of concern for Africa's well-being, shown in the examples below. Several users questioned the instating of travel bans and restrictions towards southern African countries, while EU countries such as the Netherlands, which had identified Omicron cases, were not being

handled in the same way, calling this discriminatory and racist. This category also included claims that travel bans are ineffective, and that banning air travel will not contribute to the containment of the variant.

> *"Choosing to ban travel from Southern African countries is not 'following the science.' It's just racist. #Omicron"* (Dataset B, 30 November 2021)

Users in Dataset B also noted that this reaction was a punishment for the transparency that South Africa had offered the world, and that it is likely that Omicron had been circulating the globe before their discovery. As a result of these travel bans, South Africa's livelihoods would be destroyed. At the time of Omicron's discovery, South Africa was entering the peak of their tourism season and was just starting to recover economically from severe lockdowns during earlier stages of the pandemic (Kapela, 2022). Users condemned the travel restrictions placed on southern African countries and quoted public figures and official health organisations in their statements regarding this, shown in the tweet below.

> *"South Africa's President Cyril Ramaphosa said that the world needed to resist unjustified and unscientific travel restrictions over the newly detected coronavirus variant Omicron. Ramaphosa said these were mostly hurting developing nations"* (Dataset B, 29 November 2021)

Diplomacy

This category made up 8% of Dataset A and 3% of Dataset B, including commentary on international relations between various governments in response to the Covid-19 pandemic. Subcategories under diplomacy included Health Diplomacy, Tensions and Vaccine Inequality.

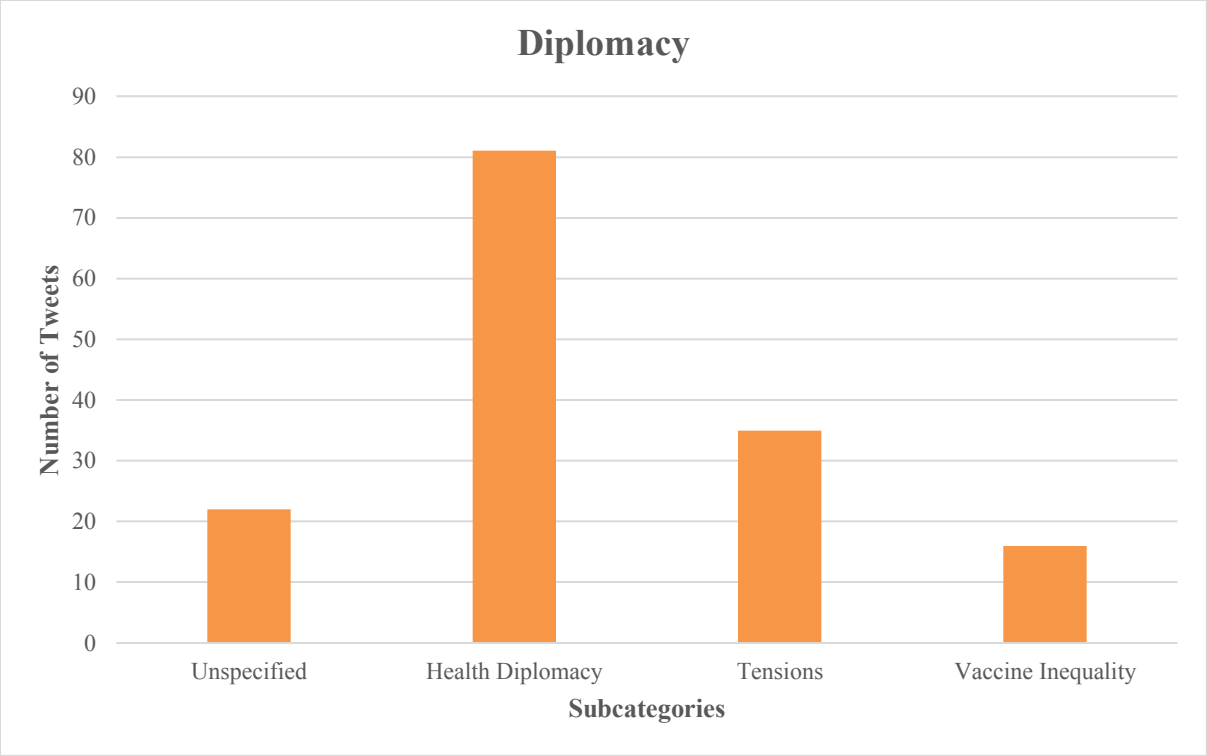

Figure 8 The number of tweets per subcategory for Diplomacy code.

Overview

Both datasets featured commentary on relationships between various governments and how the pandemic reinforced and strained them. Tweets in this category included commentary that politicians were using the emergence of this new variant to exercise control by imposing more restrictions and travel bans.

In Dataset A, users commented on the progression of the Covid-19 outbreak moving from an epidemic to a pandemic highlighting global tensions between various countries and providing an opportunity for countries to improve their relations through health diplomacy. This category showcases the potential for a geopolitical shift in power from the United States to China, with increasing offers of assistance potentially leading to exercising soft power.

Health Diplomacy

Health diplomacy has focused on international collaboration to protect national, commercial and human interests from the spread of disease (Gauttam, Singh & Kaur, 2020). This subcategory accounted for 2.7% of the overall dataset with 76 tweets in Dataset A and 5 tweets in Dataset B.

Users in Dataset A highlighted China's efforts to assist in combating Covid-19 by providing medical supplies, and personal protective equipment (PPE), and flying in doctors from China. Cuba and South Korea were also mentioned in tweets commenting on their assistance in providing aid to countries impacted by Covid-19.

User's commentary in this subcategory not only showcased international efforts from China to assist the world in preparing for the pandemic, but some tweets, such as the example below, were also accompanied by praise for collaborative efforts to provide aid internationally.

> *"It's so admirable and frankly* heart-warming *to see China & Cuba, despite being constantly vilified by the west, send supplies and doctors to help Italy battle COVID-19. Italy isn't receiving any such help from the EU or US"* (Dataset A, 15 March 2020).

Through China's health diplomacy and outreach to many countries that have political tensions with the US, this could be an attempt to shift the geopolitical soft power balance in China's favour, supporting literature by Bergsten (2022) on their battle for economic dominance.

Dataset B looked at comments and reports on countries providing aid through medical supplies, medical professionals, and medications to help each other during the pandemic. This was not very prevalent in Dataset B with no notable announcements of providing aid or assistance to South Africa. One tweet, featured below, did include a call to provide support and assistance to South Africa and neighbouring countries to help with the Omicron outbreak and their discovery.

> *"I don't know what South Africa and their neighbouring countries need to combat the Omicron variant, but I would like to see a concerted effort to provide them with whatever they need. We need to send the message that we are in this together." (Dataset B, 30 November 2021)*

Tensions

This subcategory looked at tensions between various governments and how this was highlighted by the onslaught of Covid-19 and later the Omicron variant. This theme was only present in Dataset A and accounted for 35 tweets. Key commentary focused on tensions surrounding China, the US, Taiwan, and Iran.

Linking back to the commentary raised on health diplomacy, the United States and China's power struggle and former President Donald Trump's trade war. Examples below included expressions of frustration that the US refused to cooperate with China and Cuba because of Cold War rivalries, despite these countries being in the best positions to assist in combatting the COVID-19 pandemic. Tweets also showcased the impact that former president Donald Trump's trade tariffs would have on obtaining medical supplies.

> *"The US simply refuses to cooperate with the world to combat Coronavirus, especially China and Cuba (the countries leading the effort and best positioned to help) because of antiquated Cold War rivalries. Would be laughable if it wasn't so infuriating."* (Dataset A, 15 March 2020)

> *"There is still no signal that the #US is willing to help the world battle COVID-19. In this respect, the US cannot be compared to China which de facto took the leading role and is acting like a real superpower. #Coronavirus"*

Tweets drawing on these tariffs noted that they impacted importing essential medical supplies and that these have hampered preparation for the pandemic. Further commentary compared the US's measures to not only protect citizens but provide aid globally.

In Dataset A, users commented on the World Health Assembly (WHA) excluding Taiwan from the international meeting on Coronavirus due to ongoing tensions with China. Taiwan has been excluded from the WHO and subsequently WHA due to China's objections (Chen, 2020). One comment also noted that Taiwan was able to reduce the impact of COVID-19 due to its distrust of China.

Users also commented on the ongoing tensions between the US and Iran[7]. Comments accused Iran's strategic partnership with China as the reason for the spread of COVID-19 within the country, with several tweets critiquing this appeal blaming Iran's strategic partnership with China as the reason for COVID-19 impacting the country and noting that these sanctions would not have prevented Iran from implementing travel bans and quarantines. Chinese-Affiliated media organisations shared tweets stating that China calls for the immediate lifting of sanctions on Iran as they are interfering with Iran's fight against Covid-19, putting livelihoods and economies at risk, drawing on a statement by the Chinese Foreign Ministry Spokesperson, Geng Shuang, such as the example below.

> *"#FMsays Such inhuman sanctions will only make things worse for those in difficulties, Geng said, adding that China urges relevant countries to immediately lift such sanctions on #Iran…Continuing unilateral sanctions on #Iran at such a critical moment will have a severe impact on the country's fight against the novel #coronavirus, Foreign Ministry spokesman Geng Shuang said after Iranian President Hassan Rouhani's accusation on US sanctions."* (Dataset A, 16 March 2020)

[7] To contextualise these comments, the US has placed an array of sanctions on Iran broadly centred around science and trade (Bootwala, 2020). These sanctions began in response to a group of radical students seizing the American embassy in Tehran in 1979 and have continued to expand over the years (Sen, 2018; Bootwala, 2020). These sanctions have economically impacted Iran as a foreign economy as they are dependent on the country's reliance on trade and allyship with the US. China and Russia have aided in the economic survival of Iran (Bootwala, 2020). Iran's former Minister of Foreign Affairs, Mohammed Javad Zarif appealed to the United Nations for US sanctions to be dropped amidst the COVID-19 pandemic as the virus swept through the country (Zarif, 2020).

Vaccine Inequality

This theme was only found in Dataset B and accounted for 16 tweets. When emergency approval of the first mRNA coronavirus vaccines was approved, high-income countries such as the US, Canada, EU and the UK placed large pre-orders on vaccines, 2-3 times more than what their population required (Oehler & Vega, 2021). This led to these countries acquiring the ability to vaccinate all of their citizens multiple times over, whilst lower-income countries were left to fend for themselves (Oehler & Vega, 2021). The inequality of vaccine distribution mirrored global economic realities, and as wealthier nations vaccinated their populations, the closer they came to overcoming the pandemic (Oehler & Vega, 2021).

Users in Dataset B shared critiques of the above-mentioned countries for implementing travel restrictions against southern African countries while also hoarding vaccines. Users commented on the US's call for citizens to get their Covid-19 vaccine boosters when the bigger concerns should be getting more individuals vaccinated to avoid future variants emerging. Users noted that the emergence of a new variant is a reminder that, despite vaccination rates in the developed world, the pandemic remains a global issue. The tweet below is an example of this. As wealthier nations aim to achieve pre-pandemic normalcy, the realisation remains that as long as the pandemic continues in other parts of the globe, the world will not be rid of Covid-19 (Oehler & Vega, 2021). Users in this category did note that not only was lack of access an issue, but concerns around hesitancy as well, shown in the second tweet below.

> *""Vaccine inequality ... threatens global efforts to overcome the pandemic…The Omicron variant should be a wake-up call to the world …Until everyone is vaccinated, everyone will be at risk."*
>
> *— a great address to the nation and world by South Africa President @CyrilRamaphosa"* (Dataset B, 28 November 2021)

This category also featured some discussion of the Trade-Related Intellectual Property Rights (TRIPS) waiver. The TRIPS agreement is a multilateral agreement on intellectual property that plays a key role in facilitating trade in knowledge and creativity and is a legal recognition of the links between intellectual property and trade (World Trade Organisation, 2022). The TRIPS agreement placed restrictions on sharing technology of vaccines, medication, and life-saving

medical equipment during the pandemic (Singh, 2020). Commentary in this subcategory expressed that if the world is concerned countries opposing the TRIPS waiver, which prevents low-income countries from achieving vaccine equality.

Prejudice

This code was only present in Dataset A and was the smallest category with only 42 tweets. And accounted for tweets showcasing or providing commentary on racism, xenophobia, and sharing stereotypes. Despite this code only being accounted for in Dataset A, it overlaps with discussions across datasets under Blame and Diplomacy.

Prior studies (Dubey, 2020; Schild et al., 2020; Ziems et al., 2020; Criss et al., 2021; Lloret-Pineda et al., 2022) showcased that the Covid-19 pandemic brought about an increase in xenophobia and hate speech in online spaces targeted towards people of Asian descent However, users in both datasets did not display many cases of hate speech and xenophobia in line with these studies, but instead featured more commentary surrounding prejudice and the Covid-19 pandemic. There were only three tweets in this category expressing profanities and placing blame on China for the outbreak of Covid-19, as seen in the first tweet shown below. These tweets support Viladrich (2021) claim that rapidly spreading diseases are often associated with people of colour, framing Chinese people as viral vectors. An additional three tweets drew on stereotypes surrounding Chinese cuisine being “abnormal”, leading to Covid-19, that Chinese people were inherently deceptive and dishonest, and a comment stating that as the virus came from China, hopefully, it “won’t last”, drawing on perceptions of Chinese products being lower quality (Schniederjans, Cao & Olson, 2004). Examples are shown in the second and third tweets below.

"Fuck this Covid-19 and Fuck China, sick bastards." (Dataset A, 11 March 2020)

"...We did tell China that there are things like CHICKEN and Beef, but they continued eating Rats, Bats and that Dick look-alike thing...look now we are all sick" (Dataset A, 13 March 2020)

"...Stay safe out there. On a lighter note. It's made in China, so hopefully it won't last." (Dataset A, 16 March 2020)

Users noted that referring to Covid-19 as the "Wuhan virus" or "Chinese virus" noting that this alignment of the virus as being "foreign" was dangerous and xenophobic. This link could not only lead to racial hatred but racial stigmatisation. Users further noted that blaming China for the Covid-19 outbreak could be considered a reason to justify racism. Several comments also tie into politicians' use of these phrases and how they perpetuate stigma around Asian individuals and can lead to instances of hate crimes.

Within the discussion under Blame, there are examples in both datasets that suggests that assignments of blame towards China and South Africa may be rooted in racial scapegoating and prejudice. Referring to the literature on Orientalism (Said, 2003) and historical perceptions of Asia (Shim, 1998; Lee, 2017), it could be argued that the strong assignment of Blame on China's wet markets could be perceived as a form and racial prejudice. Similarly, responses from Global North regions such as the US, UK and Europe's reaction to the Omicron variant could be considered a result of negative and colonial perceptions of Africa held by the west (Flint & Hewitt, 2015; Poncian, 2015; Dionne & Seay, 2020).

Another theme that emerged in this chapter is the prevalence of the US and China's ongoing battle for power and global economic dominance. With the reoccurring mention of mismanagement and transparency, discussions in this chapter supports discussions by Foster (2021) who notes that China faced a loss of performance legitimacy due to the pandemic.

Chapter 5: Conclusion

Through a content analysis of the top 3000 most shared tweets across two datasets, this thesis identified common themes which emerged from Twitter users' commentary about Covid-19 and the Omicron variant in relation to the countries in which they were identified.

The two separate datasets captured discussions at two different stages of the Covid-19 pandemic. Dataset A focused on commentary on China and Covid-19 at the beginning of the pandemic in March of 2020, with data gathered over the course of a week from the day of the World Health Organization's announcement declaring that Covid-19 had become a pandemic. Dataset B focused on commentary on South Africa and the Omicron variant, in November of 2021, with data gathered from the course of a week from the day of the World Health Organization's announcement declaring that the Omicron variant had become a variant of concern.

Despite these timeframes being approximately 20 months apart, there was still a prominent overlap in themes that were inductively identified. These were categorised as Crisis Updates, General Commentary, Humour, Blame, Diplomacy and Prejudice.

- **Crisis Updates** was the largest and most prominent theme across both datasets, which categorised update about the outbreaks as they unfolded.

  This included breaking news, important information, advice on how to prevent the spread of the virus and health and science updates. Both datasets primarily focused on breaking news, as Covid-19 spread across the world. Given that this timeframe was the start of the pandemic in 2020, this information was new and urgent information that was being shared across the world in response to an unfamiliar threat. This was accompanied by health and science updates as early research emerged, government responses to infections, and advice on how to stop the spread of the virus. Dataset B had less frequent advice and information on how to stop the spread and had information more focused on South Africa's Omicron statistics rather than its prominence across the globe. Amidst this

category, there were many citations of government and global officials when sharing information.

The prominence of this code supports literature on Weller et. al. (2014) and Shu et. al. (2020) who's research showcases how social media can be used to disseminate important information during a crisis, as well as monitor new developments and potentially ease mental health through the knowledge acquired.

- **General Commentary** was the second largest theme overall and included responses and reactions to the outbreaks. This category included commentary on the impacts that the outbreak had on recreational activities and societal structures, critiques on the responses and media coverage of the outbreak, praise of the responses and coverage, comments on disinformation and conspiracy theories and experiences of those who were impacted.

  Albeit broad, the content in this category supports work by Thelwall & Thelwall (2020) and Weller et. al. (2014) who both suggest that during a crisis, members of the public will likely tweet about their situations, emotional reactions monitor new developments and express sympathy.

  This category was more prominent in Dataset A in comparison to Dataset B. Dataset A featured a lot of commentary expressing anxieties and concern over the spread of Covid-19 and ongoing developments, with many countries experiencing their first lockdown protocols in attempt to contain the virus. Occurring at a later stage in the pandemic, Dataset B showcased less concern, and more critique of the media for sensationalism and causing panic and anxiety. Despite implementations such as travel bans and stricter restrictions occurring in certain countries, these implementations and impacts were less severe in comparison to 2020. Dataset A also showcased a lot of commentary critiquing transparency and distrust of China for withholding information about Covid-19. Dataset B showed the aftermath of this in relation to South Africa, praising scientists for informing the world about their Omicron discovery.

- **Blame** featured commentary assigning blame for the emergence and spread of Covid-19 and the Omicron variant, and discussions of accountability and consequence. This category included discussions of where the outbreaks originated from and restrictions on travel as a result.

  This code featured juxtaposing commentary when it came to assignments of blame when comparing both datasets. Dataset A featured a clear narrative placing blame on both China and the US, claiming that these governments should face consequences for the outbreaks, lack of transparency and lack of preparation for the pandemic. Dataset B featured more discussion in defence of South Africa, praising their transparency and critiquing the assignment of blame for the outbreak of Omicron. Commentary on travel restrictions were featured across both categories. However, Dataset A more so featured announcements of restrictions in response to the pandemic. Whilst Dataset B featured comments critiquing Global Responses to place restrictions and bans on South Africa, claiming this choice would not be effective in stopping the spread of Omicron and calling these actions discriminatory.

- **Diplomacy** was amongst the smaller categories, featuring commentary on international relations between various governments in response to the Covid-19 pandemic and emergence of the Omicron variant. This category included discussion of health diplomacy, vaccine inequality and political tensions and vaccine inequality. Both datasets featured commentary on relationships between governments and how the pandemic reinforced or strained them.

  Dataset A had a heavier focus on tensions and health diplomacy, showing opposing commentary on China's health diplomacy efforts. Some commentary praised their efforts, whilst others theorised that this was a ploy to exercise soft power and gain control. Tensions were also more prominently raised in Dataset A noting that ongoing trade issues, such as tariffs implemented by the US, were putting both livelihoods and economics at risk. Given that Dataset B was collected after the creation of the Covid-19 vaccine, it featured commentary on vaccine inequality, and how intellectual property

issues such as TRIPS and was causing the rollout of vaccines to be halted. These comments also showcased the power held by wealthier nations.

- **Humour** was a fairly small category, featuring jokes, memes, and humorous commentary about the outbreaks. Despite the size of this category, the two most retweeted tweets across both datasets fell into this category. This supports literature by Thelwall & Thelwall (2020) and Chido, Broughton and Michalski (2020) who note that social media is used to share laughter and humour, boosting the audience of a tweet, and making it more likely to be shared.

- **Prejudice** was the smallest category and only featured commentary from Dataset A and accounted for tweets showcasing or commenting on racism, xenophobia or sharing stereotypes. The size of this category contradicts some prior studies (Dubey 2020; Schild et al., 2020; Ziems et al., 2020; Criss et al. 2021; Lloret-Pineda et al., 2020) which showcased that the Covid-19 pandemic brought an increase in xenophobia and hate speech online.

This thesis not only aimed to identify these themes but answer the questions research questions below.

5.1 Does commentary in both datasets reinforce stereotypical perceptions of Asia and Africa?

Racial stigma

Previous studies showcased prominent cases of racism, hate speech and xenophobia when looking at the COVID-19 pandemic (Dubey, 2020; Schild et al., 2020; Ziems et al., 2020; Criss et al., 2021; Lloret-Pineda et al., 2022). However, these datasets did not showcase many explicit examples of this. Dataset A did showcase examples of the terms “Wuhan virus” and “Chinese virus” as well as microaggressions aligning with the narrative that China was the country of origin for Covid-19, assigning blame to them. The commentary noted that this assignment of

blame was not necessarily racist, defending these terms. However, some comments showcasing this assignment can still be aligned with racial stigma, anti-Asian Covid-19 hate and stereotypical constructions of Chinese individuals.

Some tweets in Dataset A allude to racial stigma, but this is circumstantial. An example of this is the referral to Chinese wet markets which is prominent throughout Dataset A. Several tweets called for the banning of wet markets, with literature deeming them as an ideal breeding ground for infectious diseases (He et al., 2020). Calling for the banning of wet markets due to animal consumption could potentially tie into stereotypical notions outlined by Gregory Lee of China as being immoral and unclean (Lee, 2017). Dataset A has multiple tweets that comment on the fact that several viruses began in China, including Swine Flu and the Spanish flu. These correlations could be interpreted as a further reinforcement of perceiving China as a place of disease (Lee, 2017).

Dataset A showcased a lot of distrust and critique around China and its governance. Tweets commenting on this typically discussed China's mismanagement and lack of transparency which led the Covid-19 epidemic to become a pandemic, whilst others related to geopolitics and ongoing tensions between China and the US. Albeit the stigma of Chinese people being deceptive and dishonest supports Shim's discussion of Yellow Peril and villainous portrayals, it could also be argued that this distrust stems from a lack of transparency and accountability at the start of the crisis. The way that people respond to a crisis is influenced by who is held accountable and what information people receive (Bakker et al., 2018). The World Health Organization declared the outbreak of coronavirus a pandemic on March 12th 2020, yet Dataset A showcased 60 tweets sharing information that the first Covid-19 case could be traced back to the 17th of November 2019 as shared by Chinese media (Ma, 2020). This revelation sparked a discussion that China knew about the virus much sooner than anticipated and had the opportunity to allow the world to prepare. The lack of transparency has led audiences to have a negative sentiment toward China as they did not share this information, nor did they take accountability at the time the first case was identified. When considering the management of a crisis, there are 5 stages: detection, prevention/preparation, containment, recovery, and learning (Fearn-Banks,

2007). When China detected the virus, they implemented prevention and containment strategies, and at the time that the epidemic became a pandemic, they boarded on recovery.

Commentary in Dataset B mentions racial dynamics that may contribute towards the assignment of blame and the reason behind the travel bans. One could speculate that had the variant been identified in a wealthier country with more influence there would not have been such an abrasive reaction. The decision to ban southern African countries that had not identified any cases of Omicron could be considered a xenophobic tendency of blaming out groups and increasing in-group protectiveness (Clissold et al., 2020). This also contributes to the homogenisation of the African continent, as a blanket punishment was given to countries that just shared proximity with South Africa and Botswana.

This speculation is supported in Dataset B despite Omicron being identified in EU countries, with cases in the Netherlands preceding South Africa's discovery. This supports discussions by Viladrich (2021) noting that rapidly spreading infectious diseases are typically associated with people of colour, being framed as "viral vectors". When EU countries were not met with the same response as South Africa, commentary in Dataset B claimed that this was a case of discrimination / racial bias.

In addition to this, the Omicron variant brought about a new idea adopted by Global North countries that South Africa's Covid-19 testing was untrustworthy and would not be accepted for travel (Malan, 2021). Despite the praise, commentary, and frequent quotes about South African health and science experts displayed in Dataset B, it could be argued that this decision alludes to colonial-era stigmas of African people being less intelligent, and a display of the legacy of imperialism, where the attitudes and ideas of wealthy, powerful countries gaining universal validity (Said, 2003; Dubois, 2005; Dionne & Seay, 2020).

Racial Scapegoating

Both datasets showcased what Friedman (2022) referred to as "racial" scapegoating through stigmatisation. This is showcased in Dataset A through Trump's referral to Covid-19 as the "Chinse Virus" and "Wuhan Virus". Despite earlier discussion on commentary noting that the

emphasis on the origin of the virus not inherently being racist, commentary in Dataset A suggested that Trump's usage of the terms coincided with diverting blame and dismissing his lack of preparation for the pandemic. The effectiveness of scapegoating as a political strategy depends on pre-existing belief systems in the culture which shape how daily experience and media messages are interpreted (Friedman et al., 2022). Drawing on discourses of orientalism and historical discrimination against Asian migrants in the US and how this translates into media (Shim, 1998; Said, 2003), we can see how Trump may be leaning into historical perceptions and already existing stigma to make use of racial scapegoating.

Commentary in Dataset B could also be interpreted as racial scapegoating. The decision to cut southern Africa off made by the Global North was condemned and arguably unjustified based on statements by various officials, scientists, and health professionals (CBS News, 2021; Reuters, 2021; WHO Africa, 2021). Looking at past health crises that African countries have faced may suggest a pattern of behaviour (Coombs, 2004). However, despite African countries dealing with epidemics such as Ebola in West Africa and HIV/AIDs, these epidemics were managed relatively well (Malan, 2021). This, paired with the fact that southern African countries with no identified Omicron cases were included in travel bans, suggests that Global North countries may be contributing to not only racial scapegoating, but reinforcing the stigma of Africa being known as the "diseased continent" (Flint & Hewitt, 2015).

5.2 Do the datasets reveal the broader commentary on geopolitical tensions that were potentially heightened during the pandemic?

Both Datasets A and B reinforce broader commentary on geopolitical tensions that were heightened during the pandemic. Dataset A reveals commentary on China's soft power and how they obtain and exercised their influence during the early stages of the pandemic, and highlighted ongoing tensions between China and the US, the US and Iran and China and Taiwan. Dataset B highlighted issues of inequality and how geopolitical tensions were heightened concerning Trade

Intellectual Property Rights (TRIPS), vaccine distribution and access to resources during the pandemic.

Influence

China's influence is made prominent in Dataset A through codes of Diplomacy and General Commentary. The global influence that China has contributes to its ability to exercise soft power and the choices that are made amidst the pandemic. As the leading global manufacturer, China has a great influence on global supply chains. As Covid-19 rapidly spread, global shortages of medical equipment and pharmaceuticals occurred. This incident also leads Global North countries such as the US and European countries to reconsider their dependence on China for such supplies, considering other manufacturers in future.

China is one of the largest donors of foreign aid (Bergsten, 2022), and this is showcased in the health diplomacy subcategory where they supplied medical aid to many countries, with several tweets expressing gratitude for their efforts and support. China's outreach is what Foster (2021) conceptualised as 'COVID Diplomacy', which was likely an attempt to regain performance legitimacy that was at risk with the outbreak of the pandemic. There was also commentary comparing China's effort to that of the US and EU, which may transpire into attracting support from lower-income countries (Bergsten, 2022) and potentially using the crisis to their advantage as an opportunity to extort the pandemic as a soft power tool (Gauttam, Singh & Kaur, 2020)

An example of this is showcased in Dataset A concerning Iran. Iran's foreign economy has suffered greatly due to US sanctions impacting trade with US allies. Alongside Russia, China has assisted Iran to support their economic survival (Bootwala, 2020). Dataset A features commentary across several codes about Iran as their COVID-19 cases rapidly increase. Tweets showcased critique of Iran's partnership with China, citing it as the reason for their COVID-19 outbreak to become so severe. Tweets mentioned that Iran did not implement travel bans on flights coming from China, which could be interpreted as China exercising soft power over Iran through economic support. Dataset A also featured commentary critiquing Iran's minister of foreign affairs for appealing for US sanctions on Iran to be dropped to assist them in surviving

the pandemic, claiming that their economic alliance with China was the reason for their COVID-19 outbreak.

Another example of China's influence is concerning Taiwan. Dataset A featured commentary about Taiwan being excluded from the WHA's global meeting about coronavirus. Taiwan is one of Asia's larger economies with a population of over 23 million, but it has been excluded from WHO, and subsequently WHA since 1972 due to China's objection (Chen, 2020). Taiwan has a comprehensive healthcare system and is an active member of the international health community, but its lack of membership in WHO undermines global health and caused Taiwanese people to be faced with inequality and neglect (Chen, 2020).

Power and Inequality

A theme that was prominently mentioned in Dataset B was power imbalances between high-income and low-income countries with responses to Omicron and vaccine inequality, drawing on the Global North – Global South divide. This can be seen in Dataset B's frequent mention of travel bans. Following WHO's announcement, several countries implemented a travel ban on not only South Africa but other southern African countries which had not yet identified cases of Omicron. This decision was contested by the South African government, WHO and esteemed professionals in the fields of health and science. This would severely impact the economies of these countries which were trying to recover after nearly 2 years of the Covid-19 pandemic.

Users in Dataset B showcased Omicron being identified in multiple European countries, with some cases tracing back to before South Africa's discovery, yet these countries were not faced with the same travel bans that were implemented in Southern African countries. In addition to this, there were no notable announcements of health diplomacy through providing aid to the southern African countries impacted by travel restrictions. At this stage of the pandemic, vaccines were available and accessible in most parts of the world, but high-income countries had placed large pre-orders on vaccines, this presented a critical shortage of vaccines, which become inaccessible to low-income countries (Gauttam, Singh & Kaur, 2020). The inequality of vaccine distribution allowed higher-income countries such as the US, EU, UK and Canada to return to normalcy, re-open their borders and strengthen their economies. In contrast to Dataset A, South

Africa could easily be shut out by wealthier countries. This mirrors global economic realities, showcasing that countries with less power are at a great disadvantage (Oehler & Vega, 2021).

Building on the conversation of inequality Dataset B also touches on South Africa being in talks with Pfizer and Merck to gain access to Covid-19 treatment pills. This reinforces the consequences of TRIPS and builds on a larger discussion about unequal access to medical equipment and medication due to intellectual property rights. In contrast to Dataset A, there was no mention of efforts of health diplomacy and South Africa receiving any foreign aid to combat Omicron, despite such adverse reactions to the discovery. This displays how the ongoing and systematic transfer of value from the Global South to the Global North, as discussed by (Higginbottom, 2018), is one-sided. They further note that this applies to the exploitation of workers and manufacturers in the Global South, but it could be argued in the case of Omicron that this extends to knowledge production as a form of labour that can be exploited. South Africa being met with praise from Global North governance for their scientific discovery and transparency whilst also being issued with travel bans showcases a one-sided transfer of value. This reinforces Sharma et al's (2022) discussion on the Global North's increasing protectionism during the pandemic whilst South Africa continues to struggle and appeal for access to resources. This speaks to Higginbottom's work noting that imperialism in the 21st century does not necessarily rule through colonial means, but indirectly through alliances with national elites (2018).

China vs the US

Lastly, contributing towards geopolitical tensions is the prevalence of the "China vs The US" narrative in Dataset A. This is showcased not only in the Diplomacy code, but comments across categories allude to ongoing tensions, the struggle for global leadership, and how trade tariffs impacted the US during the pandemic.

Tensions between the US and China were present predating the Covid-19 pandemic, but Dataset A featured frequent commentary about the US and China's trade war and how it was negatively impacting the US as Covid-19 emerged. China has rapidly risen as a global economic superpower, with an economy larger than the US (Bergsten, 2022). However, mutually imposed

tariffs between China and the US have caused challenges to their relationship (Yu, 2020). These challenges were highlighted in Dataset A, showcasing critiques of the US government for its failure to cooperate with China to appropriately prepare for the pandemic.

There were comments both praising and critiquing the US and China in Dataset A for their responses, constantly comparing them as competitors for global leadership. An example of this is featured in health diplomacy, as China donated supplies to countries in need, and commentary questioned why the US wasn't assisting and providing aid. However, China also faced a lot of critiques, questioning, accusations of dishonesty and calls for transparency in Dataset A, which supports Foster's (2021) discussion, noting that they risked the loss of performance legitimacy in the eyes of a global audience.

5.3 Conclusion and Recommendations for Future Research

Blame, transparency, and media critiques were prominent themes across both datasets and contribute to the literature on crisis communication, as establishing who is responsible and can be held accountable for a crisis impact the way that people respond and view the actors involved (Bakker et al., 2018). Critiques and observations about the media's contribution to panic and anxiety support literature by Said (2003) who notes that in line with Orientalism, some Western media organisations can stir up the world against a foreign evil, which in the context of this dissertation, is China and South Africa as the source of the virus and variant.

The datasets used for this thesis are not representative of all populations due to issues surrounding access and the digital divide, but still provide valuable insight into users' responses and reactions to the Covid-19 pandemic and Omicron outbreak. The prominence of the Crisis Updates and General Commentary codes support literature noting that Twitter is an important platform for breaking news and can be an important vehicle for disseminating health information and can be used for members of the public to tweet emotional reactions and share their situations (Weller et al., 2014; Thelwall & Thelwall, 2020).

Amidst lockdowns, travel restrictions and social distancing, social media became an important mode of communication in everyday life, with Twitter in particular, an important tool to disseminate information (Rosenberg, Syed & Rezaie, 2020; Saud, Mashud & Ida, 2020; Thelwall & Thelwall, 2020). The most retweeted messages can be analysed to get an indication of what information users deemed as important to share amidst a crisis (Weller, 2014), but also allows researchers to observe perspectives and commentary about the parties involved. Findings showcased that the discussion on Covid-19 and Omicron extended beyond the crisis itself but allowed users to comment on broader geopolitical tensions and reiterate inequalities and stigmas that pertain to the Global South. This thesis showcases how online commentary can be reflective of some global realities, and examining social media commentary can provide valuable insight into perspectives on global crises and issues.

This thesis raises an important question of online information and how users value and trust sources as well as deem some more legitimate over others. Geopolitics can play a large role in shaping the perspectives and responses that users have in relation to a crisis. Despite not being a primary focus of this dissertation, further research should be conducted on how users perceive the legitimacy of certain "official" sources and navigate online information.

Lastly, an important observation within this thesis is how Twitter users made use of the platform to challenge decisions made by global leaders and the narratives that they convey. The top shared tweets being humorous in nature supports literature by Obadare (2009) who notes that humour is one of the most important marks of resisting power elites. Despite the power and influence held by countries such as the US and China, they were still susceptible to challenges and critique from a global audience through participatory engagement. Despite changes in the platform limiting access for research, this observation is applicable for future research on social media platforms.

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