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Research Report:

A critical discourse analysis of the operation of power and ideology in COVID-19 vaccine Twitter commentary

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Declaration

I, Ivana Jokanovic, declare that this research report is my own, unaided work. It is submitted for the Master of Arts in Social and Psychological Research degree at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination at this or any other university.

Signed: 

Date: 13/03/2023

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A critical discourse analysis of the operation of power and ideology in Covid-19 vaccine Twitter commentary

Abstract

Since its emergence in early 2020, the Covid-19 pandemic has drastically altered the lives of people across the world. Whilst the effects of the pandemic have currently subsided, the most prominent preventative measure for minimizing severe infection in those most vulnerable to the disease included the recent scientific developments of Covid-19 vaccines. A multitude of discourses that promote the use of vaccines exist alongside discourses that challenge the efficacy of vaccines. The research report aimed to provide a greater comprehension of the existing discourses and ideologies of Covid-19 vaccine acceptance and reluctance in South Africa as revealed by Twitter commentaries. Naturally occurring data generated between February 2021 and February 2022 was collected from Twitter in the form of Tweets authored by South African influencers, and comments constructed by Twitter users in response to influencer content. This report utilised Fairclough's model of critical discourse analysis which consisted of three phases that began with a textual analysis, followed by a processing analysis, and concluded with a social analysis. Vaccine hesitant discourses functioned as the foundations of cultural, religious, familial, and political ideologies – which broadly constructed a reality in which the Covid-19 vaccine was deemed as risky and potentially lethal. The primary discourses that shed light on the ideologies underpinning Covid-19 vaccine acceptance included medical-scientific and biological discourses. These discourses were deemed to be functions of the ideology of evidence-based medicine and the educational institutional state apparatus. The functioning of these ideologies constructed a reality in which scientific institutions and knowledge were deemed as trustworthy and the Covid-19 vaccine was constructed as a life-saving intervention. This research contributes to the literature on vaccine discourses in the era of social media and Covid-19. This report's findings may provide opportunities for productive communication and intervention with the occurrence of similar divisive phenomena in South African digital spaces.

Keywords

Covid-19; critical discourse analysis; social media; South Africa; Twitter; vaccines

Introduction

Since its emergence in early 2020, the Covid-19 pandemic has drastically altered the lives of people across the globe (Canham, 2021; Gittings et al., 2021; Imtyaz et al., 2020; Naidu, 2020). Many have succumbed to the disease whilst the world had endured a series of lockdowns that resulted in unprecedented societal and economic disruptions (Durmaz & Hengirmen, 2022; Karim, 2020). Advanced international protocols and varying government policies were implemented to minimise the impacts of the pandemic (Sebeelo, 2023). Whilst the effects of the pandemic have currently subsided, the most prominent preventative measure for minimizing severe infection in those most vulnerable to the disease included the recent scientific developments of Covid-19 vaccines (Ndwandwe & Wiysonge, 2021). Vaccination provided hope for the end of the globally widespread proportions of the coronavirus and the enormous death toll. However, some authors observed that the phenomenon of vaccine hesitancy was a significant obstacle to the successful mitigation of the Covid-19 pandemic (Cooper et al., 2021a; Cooper et al., 2021b; Machingaidze & Wiysonge, 2021). Alongside advocacy for the protection that vaccination may offer, concerns abounded about Covid-19 vaccine efficacy and its side-effects (Rosselli et al., 2016; Schwartz, 2012; Wilson & Wiysonge, 2020). To better understand these seemingly contrasting discourses, considered as either pro- or anti-vaccination, a focused exploration of the discourses was justified. An important consideration regarding the discourses that emerged during the Covid-19 pandemic was that they were constructed within the context of the digital age. This enabled the mass sharing of information on social media where conflicting sentiments about inoculation were instantly communicated to others across the world (Rosselli et al., 2016; Schwartz, 2012; Wilson & Wiysonge, 2020). Previous research has illustrated the power of social media influencers (SMIs) because of their enhanced ability to impact public opinions and online discourses due to their massive audiences (Al-Rawi et al., 2021; Freberg et al., 2011; Srour et al., 2022). Influencers may promote vaccine reluctance or vaccine acceptance within the Covid-19 immunisation debate thereby influencing the dominant discourses regarding this topic on the social media landscape (Al-Rawi et al., 2021). A critical investigation of South African influencer-generated discourses regarding Covid-19 vaccination was warranted alongside an exploration of the comments constructed by South African Twitter users in response to influencers.

Rationale

A proliferation of discourses that promotes the use of vaccines and vaccination exists alongside discourses that challenge vaccination and the efficacy of vaccines (Rosselli et al., 2016; Schwartz, 2012; Wilson & Wiysonge, 2020). While the divide has occurred along the lines of the science of public health and pharmaceutical treatment on the one hand, and proponents of anti-vaccination and their suspicion of vaccine efficacy and harm on the other hand; discourses reflect a myriad of factors that include contending ideologies in relation to class, religion, geopolitics and people's beliefs about the common good set against individual liberties and rights to choice (Bucholtz, 2000; Schwartz, 2012). Since Covid-19 is still considered a novel disease, research is needed to closely address contending discourses of Covid-19 vaccine reluctance as well as acceptance in the South African context (Cooper et al., 2021a; Cooper et al., 2021b; Machingaidze & Wiysonge, 2021). Discourses on Covid-19 vaccines reflected on social media platforms such as Twitter may provide valuable insights. This is due to the ability of social media to enable the globally influenced mass sharing of information that is not constricted by time and space (Rosselli et al., 2016; Schwartz, 2012; Wilson & Wiysonge, 2020). Twitter was the chosen site for data collection due to the platform's reputation for data accessibility granted to academics and researchers (Ahmed et al., 2017). However, a limitation of investigating Covid-19 discourses on Twitter is that social media exchanges regarding the pandemic may not represent the discourses of all population groups because of South Africa's digital divide that coalesces around vast the class chasm. Some people either lack the skills to navigate the internet or may not have access to digital technology and social media due to poor socio-economic factors (Bornman, 2015). It is important to acknowledge this contextual consideration, but the focus of this report pertains to online Twitter commentary about Covid-19 vaccination.

The research report aims to provide a greater comprehension of the existing discourses and ideologies of Covid-19 vaccine acceptance and reluctance in South Africa as revealed by Twitter commentaries. Naturally occurring data was collected from Twitter in the form of Tweets authored by South African influencers, and comments generated by Twitter users in response to influencer content. The study followed a non-probability, criterion-based sampling strategy, where the units of analysis were Tweets that were generated between February 2021 and February 2022. The sample comprised of Tweets and comments that were primarily concerned with the topic of Covid-19 vaccination and were deemed relevant to the South African context. The data collected for this study comprised of four stimulus Tweets

that were generated by the Department of Health and three South African influencers, as well as 15 comments authored by ordinary social media users in response to the stimulus Tweets. Tweets authored by Steve Hofmeyr, Pearl Thusi, Redi Tlhabi, and the Department of Health were chosen to represent different positions in the Covid-19 vaccination debate – namely positions of vaccine hesitance and ambiguity as well as vaccination promotion. Although it could not be guaranteed that the chosen Twitter commentators were located in South Africa; discursive relevance to the South African context was ensured through the selection of Tweets authored by verified South African influencers because these influencers were likely to have a predominantly South African online following. The sample size of 19 Twitter commentaries was determined by the achievement of saturation and the data was analysed through the utilisation of Fairclough's model of critical discourse analysis. This research theoretically contributes to the literature on vaccine discourses in the era of social media and Covid-19. Based on an analysis of Twitter commentary, the aim is to provide a greater understanding of Covid-19 discourses and ideologies that relate to vaccine acceptance and vaccine hesitance in South Africa. In addition, this study seeks to be practically significant by illuminating a greater understanding of the existing discourses regarding a polarizing topic like Covid-19 vaccination. These insights may provide opportunities for productive communication and intervention with the occurrence of similar divisive phenomena (Al-Rawi et al., 2021; Ulinnuha et al., 2013).

Research aims

i) To explore Covid-19 vaccine Twitter discourses of people residing in South Africa.

ii) To explore discourses that shed light on the ideologies that underpin Covid-19 vaccine acceptance.

iii) To explore discourses that shed light on the ideologies that underpin Covid-19 vaccine hesitancy.

Literature Review

Introduction

For the past three years, the world has suffered the drastic impacts brought on by the Covid-19 pandemic (Durmaz & Hengirmen, 2022; Philips, 2020). Vaccines against the SARS-CoV-2 virus, which is commonly regarded as the coronavirus or Covid-19 have been developed and inoculation programmes have been implemented across the globe to control and mitigate the consequences of the disease (Ndwandwe & Wiysonge, 2021). However, vaccine hesitancy in the context of the digital age has been argued to pose a significant obstacle to the successful mitigation of the current pandemic (Cooper et al., 2021a; Cooper et al., 2021b; Machingaidze & Wiysonge, 2021). Therefore, this literature review defines and contextualizes vaccine hesitancy during the Covid-19 pandemic with reference to the influences of prior pandemics as well as the history of vaccine reluctance. The influential role of the internet and the democratization of interactive knowledge production with social media exchanges of discourses is also discussed (Durmaz & Hengirmen, 2022; Rosselli et al., 2016; Schwartz, 2012). Research on vaccine refusal or reluctance in the age of Covid-19 is limited in South Africa (Cooper at el., 2021a). In addition, most public health research that investigates the influence of social media in relation to hesitation for vaccination oversimplifies discourses and largely ignores the roles of ideology and power relations thereby, invalidating discourses that compete with dominant scientific discourses and ideologies (Al-Rawi et al., 2021; Durmaz & Hengirmen, 2022; Karunatilake, 2021; Rosselli et al., 2016). Therefore, the aims of this proposed research report are framed as especially relevant in the context of South African investigations of online vaccine discourses during the age of the coronavirus pandemic.

Contextualizing the Covid-19 pandemic

The beginning of Covid-19 may be traced back to Wuhan, China, where towards the end of 2019 an unknown virus which was later identified as SARS-CoV-2 spread rapidly across societies and nations on a global scale (Durmaz & Hengirmen, 2022). In the early months of 2020, the World Health Organisation proclaimed this viral surge as the Covid-19 pandemic (Durmaz & Hengirmen, 2022). Faced with many uncertainties regarding the progression of the virus and its lack of established medical treatment during the early stages of the

pandemic, governments across the world, including the South African government, have acted in collaboration with scientific authorities to implement social distancing measures, hand hygiene, and mask-wearing mandates to mitigate the contagion of Covid-19 (Durmaz & Hengirmen, 2022; Karim, 2020; Sebeelo, 2023). These measures were largely life-altering and everyday societal functioning was turned on its head. Children stopped attending school in-person, many categories of employees shifted from working at offices to working from home, areas of socializing and entertainment were shut down, alcohol and tobacco sales were temporarily prohibited, and the once free movement of people was restricted (Kohler et al., 2023; Sebeelo, 2023). Action outside these legal restrictions was deemed criminal (Sebeelo, 2023). It should also be noted that South Africa's lockdown protocols had a disproportionately negative effect on the impoverished. There is a stark socioeconomic disparity among people residing in the country which may be traced back to South Africa's past of colonialism and apartheid (Fassin, 2003; Sebeelo, 2023). The consequences of these oppressive historical events resulted in many of the country's poor people having to reside in places known as informal settlements -which may be characterised by overcrowding, high crime rates, and lacking basic amenities and sanitation services (Sebeelo, 2023). These living conditions coupled with lockdown protocols worsened the socio-economic prospects of the impoverished and exposed them to a greater risk of Covid-19 infection. Pandemic-related protocols were in a constant state of flux due to the occurrence of Covid-19 waves which were distinguished by a surge of SARS-CoV-2 infections (National Institute for Communicable Diseases, 2021). These viral surges put immense pressure on the healthcare system and its workers due to the rise of Covid-19 related hospitalisations (Gray, 2021; National Institute for Communicable Diseases, 2021). Therefore, lockdown restrictions became more stringent with the occurrence of a Covid-19 wave (National Institute for Communicable Diseases, 2021; Sebeelo, 2023). These conditions, amongst others, in the context of death and disease characterized the Covid-19 pandemic (Canham, 2021; Gittings et al., 2021; Imtyaz et al., 2020; Naidu, 2020). The recent scientific developments of Covid-19 vaccines provided hope for the prevention of severe infection in those most vulnerable to the disease as well as a return to normalcy (Ndwandwe & Wiysonge, 2021; Wouters et al., 2021).

A brief account of contemporary pandemics

The phenomena of pandemics, public health vaccination programmes, and vaccine hesitancy precede the SARS-CoV-2 virus (Khan et al., 2021; Phillips, 2020; Wilson & Wiysonge, 2020; Wiyeh et al., 2019). Humanity has lived through a range of life-threatening disease outbreaks (Khan et al., 2021; Philips, 2020). Some examples of such disease outbreaks that have historically had devastating impacts across the world and in South African history include the bubonic plague, the Spanish Flu of 1918, polio, HIV/AIDS as well as the swine flu (Fassim, 2003; Khan et al., 2021; Philips, 2020). Although most of these diseases are now merely considered a part of history, the HIV/AIDS pandemic may be traced back to the early 1980s and its devastating effects are still prevalent in South Africa (Fassim, 2003; Naidu, 2020; Philips, 2020). The suspicion of the AIDS pandemic's etiology, origins, treatment, and its imbrication in social and economic inequality, geopolitics, and poverty continues to linger and inform how people respond to the current pandemic. Impoverished countries have experienced the highest case load and deaths of the AIDS pandemic (Andrus et al., 2021 Fassim, 2003). The development and implementation of antiretroviral therapies have been effective in reducing the severity of symptoms and premature mortality of those infected by HIV/AIDS. However, four decades since its global onset, AIDS is still largely deemed as a potentially fatal disease (Gona et al., 2020). While vaccines have been developed for some viruses, others like AIDS remain without preventative inoculations. This may potentially feed into distrust of vaccines. Vaccine hesitancy is however not limited to the Global South. For instance, measles outbreaks in wealthy North American communities point to vaccine hesitancy even among educated and wealthy elites (Sanyaolu et al., 2019). In addition, it is argued that in recent years public attitudes that oppose vaccination have become predominant in countries that are characterized by democratic political beliefs and high levels of education among citizens (Wilson & Wiysonge, 2020). It is however worth noting that since no vaccination was developed for a long-standing and devastating pandemic like HIV/AIDS, it may not be totally surprising that some people will be suspicious of the speed with which the Covid-19 vaccine was developed and distributed in the current pandemic (Canham, 2021).

The Covid-19 Vaccine

It typically takes years to produce and evaluate a candidate vaccine for its safety and efficacy, however, the scientific community accelerated the development of an effective inoculation against SARS-CoV-2 due to the devastating impact of the virus across the globe (Mellet &

Pepper, 2021, Ndwandwe & Wiysonge, 2021). Vaccines are tested in several clinical trials before approval is gained for public distribution. The first stage of vaccination testing occurs in a laboratory by administering the vaccine to living animals or cellular cultures (Mellet & Pepper, 2021). The use of animal testing in biomedical experimentation is considered part of standard practice in the scientific method to ensure that medications are safe for humans (Hajar, 2011). Vaccines may only proceed to human trials when promising results are achieved at the laboratory stage (Mellet & Pepper, 2021). Inoculations for public distribution are approved if effective results are shown throughout an additional four phases of clinical trials (Mellet & Pepper, 2021; Ndwandwe & Wiysonge, 2021). Although the Covid-19 vaccine was developed with unprecedented speed, it had not been exempted from these various stages of clinical testing (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021).

South Africa's Covid-19 immunisation campaign began in February 2021, less than a year after the World Health Organisation's declaration of the Covid-19 pandemic (Cooper et al., 2021a; Durmaz & Hengirmen, 2022). The South African government procured Covid-19 inoculations manufactured by Pfizer and Johnson & Johnson (Cooper et al., 2021a). These vaccines were approved by the United States Food and Drug Administration (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). South Africa's phase-based vaccination rollout consisted of three stages. The goal of the country's immunisation campaign was to ultimately achieve herd immunity, but groups deemed as more vulnerable to contracting the virus and developing severe symptoms were prioritised. Healthcare workers were the first population group to be offered the Covid-19 vaccine due to their increased risk of exposure to infection (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021; Cooper et al., 2021a; Maneze et al., 2022). The second phase of the rollout made Covid-19 vaccines available to essential workers and people over 60 years of age. Adults over the age of 18 qualified for vaccination in the final phase of South Africa's campaign (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021; Cooper et al., 2021a).

Vaccine hesitancy

Even though vaccine reluctance is a phenomenon that occurs across the globe, it is acknowledged that hesitance to vaccinate is greatly influenced by contextual factors as well as by the specific vaccine in question (MacDonald & SAGE Working Group on Vaccine Hesitancy, 2015; Rosselli et al., 2016). The scientific development of vaccines has successfully prevented several diseases such as smallpox and the human papillovirus (Ndwandwe & Wiysonge, 2021; Schwartz, 2012; Wiyeh et al., 2019). However, reluctance amongst some members of society regarding the reception of vaccination immunization against preventable illnesses is argued to have surfaced with the first administration of vaccines in the eighteenth century (Rosselli et al., 2016; Schwartz, 2012). Historically, common concerns regarding inoculation include the enforcement of laws that oblige people to vaccinate and thus, violate individual autonomy (Maneze et al., 2022; Schwartz, 2012). For instance, in 1827, the state of Boston required all school-goers to be vaccinated against smallpox as a precondition for attending school (Cole & Swendiman, 2014; Schwartz, 2012). Concerns circulated regarding the possible implementation of mandatory Covid-19 vaccination laws both globally and in South Africa (Maneze et al., 2022; Van Aardt, 2021). Although Covid-19 immunisation had not been made mandatory at a national level in South Africa, some corporations and tertiary educational institutions implemented compulsory vaccination policies during the Covid-19 pandemic (Broughton, 2022; Khumalo, 2021; University of the Witwatersrand, 2022). This was a highly contested issue because it contradicts the democratic right to bodily integrity, which is enshrined in the South African Constitution, 1996 (Government of South Africa, 2023). The creation of a democratic Constitution may be deemed as both a political and legal feat in South Africa's recent history. The formulation of this document in the mid-1990s marked a new era for South Africans in which the values of humanity and equality displaced the racist and oppressive policies of the former apartheid regime (Langa, 2006). It is, therefore, unsurprising that mandatory immunisation is a highly contested and politicized topic in the South African context.

A second historical concern regarding vaccination that may be relevant to the current pandemic is the perception that the side effects of vaccines are more detrimental than the illnesses that vaccines are said to counteract (Schwartz, 2012). In the late twentieth century, there had been a widely held belief that measles vaccines cause autism in children due to the influence of Western media. However, this has since been disproved (Conis, 2019; Schwartz, 2012). Disinformation negatively affects how people respond to vaccination and they,

therefore, may refuse to get vaccinated as the alleged risks outweigh the benefits (Schwartz, 2012; Wilson & Wiysonge, 2020). Only one death has been directly linked to Covid-19 vaccination in South Africa (Ellis, 2022). The deceased person developed Guillain-Barre Syndrome – a rare side-effect of vaccination (Hasan et al., 2021). Several theories are circulating on social media about the origins of the SARS-CoV-2 virus. Some people argue that the disease was developed as a weapon or that the pandemic has been caused by cellular towers (Durmaz & Hengirmen, 2022; Wilson & Wiysonge, 2020). Although these supposed origins of the disease are perceived as misguided by the scientific community, it should be noted that the actual origin of Covid-19 is still unknown. If people were to ascribe the initial source of the pandemic to something like biomedical weaponry or cellular towers, then it would be unlikely that they would believe that vaccination against Covid-19 would protect them against severe illness. In addition, some religious leaders argued that the pandemic was meant to test the faith of congregants and that prayer and obedience were sufficient for preventing contagion and severe disease (Mugari & Obioha, 2021).

The concept of vaccine hesitancy may, therefore, not be considered a novel phenomenon that is unique to the twenty-first century. Before the global spread of the coronavirus, the World Health Organisation claimed that the phenomenon of vaccination refusal was among the greatest risks to people's wellbeing across the globe (Rosselli et al., 2016; Wilson & Wiysonge, 2020). This supposed risk to global wellbeing and health has become a salient concern in the present context of the Covid-19 pandemic (Machingaidze & Wiysonge, 2021; Wilson & Wiysonge, 2020). The medico-scientific literature on vaccine hesitancy broadly defines the phenomenon as a multifaceted occurrence that is predominantly characterized by a person's unwillingness or delayed compliance with the reception of a vaccine in the context where inoculation services are accessible (MacDonald & SAGE Working Group on Vaccine Hesitancy, 2015; Rosselli et al., 2016; Wiyeh et al., 2019). By contrast, vaccine acceptance is conceived of as a behavioural response in which people are receptive to vaccination services without any concerns or delays (MacDonald & SAGE Working Group on Vaccine Hesitancy, 2015). People are thus categorised according to their confidence in the medical discourses regarding inoculation as well as their timeous behavioural responses to vaccine reception, or lack thereof. From the perspective of the scientific community, it may be argued that vaccine hesitancy is something that needs to be empirically investigated and rectified because the reasons that people provide for their reluctance to receive any form of vaccination are

deemed as invalid and misinformed (Rosselli et al., 2016; Wilson & Wiysonge, 2020; Wiyeh et al., 2019).

Covid-19 and Vaccine Hesitancy in the Digital Age

Concerns about vaccine hesitancy are further amplified because social media has enabled the mass sharing of information across the world where sentiments supporting vaccine hesitancy or vaccine acceptance may be instantly communicated to others (Rosselli et al., 2016; Schwartz, 2012; Wilson & Wiysonge, 2020). Social media platforms allow for the interactive sharing and co-construction of knowledge and information by ordinary people across the globe (Durmaz & Hengirmen, 2022; Rosselli et al., 2016; Schwartz, 2012). The discourses on social media regarding Covid-19 vaccines are not directly controlled by scientific or government institutions thereby making digital social engagement about vaccines more democratic in nature (Rosselli et al., 2016; Schwartz, 2012). However, some members of the scientific community regard these institutionally unregulated social media platforms as spaces that should be monitored and kept in check (Rosselli et al., 2016; Durmaz & Hengirmen, 2022; Wang et al., 2021; Wilson & Wiysonge, 2020). The World Health Organisation warns of an 'infodemic' accompanying the Covid-19 pandemic. This means that due to the speed and unregulated nature of sharing information on social media, there is too much available intelligence that is considered either scientifically accurate or objectively false (Durmaz & Hengirmen, 2022; Wang et al., 2021). On the other hand, governments, pharmaceutical companies, and members of the scientific community also champion and promote the use of vaccinations on social media networks like Twitter (Durmaz & Hengirmen, 2022; Roselli et al., 2016). In addition, some medical dissenters suggest a lack of total consensus even within the scientific community. Therefore, social media platforms pose as interactive spaces where contesting discourses regarding vaccination acceptance or reluctance may be debated and the once presumed one-directional authority of the medical sciences may be challenged (Rosseli et al., 2016; Wang et al., 2021).

Previous research using social media data to investigate health beliefs as well as attitudes and discourses of vaccine hesitancy has predominantly adopted a public health approach that operates from a positivist paradigm (Durmaz & Hengirmen, 2022; Wang et al., 202; Wilson & Wiysonge, 2020). Twitter has been especially recommended by some researchers as a rich potential source of social media data that could help to reveal public discourses regarding

important public health issues such as vaccine acceptance and vaccine hesitancy (Durmaz & Hengirmen, 2022; Rosselli et al., 2016). Using Twitter for vaccine and discursive research is pertinent within the context of the Covid-19 pandemic and the digital age because the data regarding vaccine hesitancy is in a constant state of flux globally. In addition, research regarding the phenomenon of vaccine reluctance, and its associated discourses, is limited within the South African context (Cooper et al., 2021a). It should be noted, however, that discourses from the perspective of medical science research are oversimplified and merely equated to public opinion. The fundamental roles of ideology and power relations that are communicated through these discourses are largely ignored in the literature regarding vaccine acceptance and reluctance both globally and nationally.

The current pandemic has illuminated the pre-existing constructs of vaccine hesitancy and vaccine acceptance and the unregulated role of social media has been identified as an area of concern for public health (Rosselli et al., 2016; Schwartz, 2012; Wilson & Wiysonge, 2020). Power relations are transformed and even subverted through the discourses expressed on online social networks like Twitter (Rosseli et al., 2016; Schwartz, 2012). However, public health research regarding social media discourses may be considered limited and essentialist because the roles of power and ideology as expressed through discourses are largely ignored (Durmaz & Hengirmen, 2022; Rosselli et al., 2016). In addition, more research is needed to address the phenomena of Covid-19 vaccine reluctance as well as acceptance in the South African context (Cooper et al., 2021a). Therefore, the following research questions will guide the investigations of this research report:

i) What discourses are communicated about Covid-19 vaccines on Twitter by people residing in South Africa?
ii) What discourses shed light on the ideologies that underpin Covid-19 vaccine acceptance?
iii) What discourses shed light on the ideologies that underpin Covid-19 vaccine hesitancy?

Theoretical Framework

Critical Theory

A critical theoretical approach to language asserts that speech and textual communications, such as Tweets, are modes of social action that are shaped by socio-historical factors as well as dominant discourses that serve the powerful (Bouvier & Machin, 2018; Creswell, 2007; Janks, 1997; Perren & Jennings, 2005; Wodak, 2011). Therefore, it is vital to acknowledge South Africa's current political and socio-economic context; as well as its history of colonialism, apartheid, neoliberalism, and the HIV/AIDS pandemic in relation to the present discourses surrounding Covid-19 vaccines (Bank, 1996; Fassim, 2003; Jarstad, 2021; Phelan & Dawes, 2018; Wakefield, 2022). It would be reductionistic to argue that the phenomena of vaccine acceptance and vaccine hesitancy are purely results of individual cognitive processes (MacDonald & SAGE Working Group on Vaccine Hesitancy, 2015; Rosselli et al., 2016; Wang et al., 2021). Rather, these phenomena are inherently social in nature, and they are created and maintained through the distribution and reception of ideologies that are communicated through linguistic discourses.

Social reality is subject to transformation because people are considered as acting upon the world as well as being acted upon by the world through the adoption or rejection of dominant ideologies (Alvesson & Karreman, 2000; Huckin, 1997; Ulinnuha et al., 2013). The use of a critical theoretical approach will allow for the interpretation of Twitter commentaries regarding Covid-19 vaccines as forms of social action that reproduce or challenge dominant ideologies through online discourses (Bouvier & Machin, 2018; Creswell, 2007; Janks, 1997).

Althusser's formulation of ideology and ideological state apparatuses

Althusser proposes a theory of ideology that largely derives from the Marxist school of thought (Althusser, 2006; Durrheim et al., 2011). According to Marxism, ideology is a dream-like depiction of reality that is shaped by reality, but is essentially a hallucination of sorts (Althusser, 2006). Ideologies distort reality to support the interests of those in power (Jansiz, 2014; Kleven, 1993; Nielsen, 1980). Althusser (2006) pays tribute to Marxist conceptualisations of the processes by which production and labour in a capitalist society are reconstituted through institutionalisation processes of dominant ideologies. Althusser (2006) argues that ideology is material because it can be observed through people's actions,

behaviour, and participation in cultural practices. Scrolling and reading social media content as well as writing a Tweet could then be considered ideological practices that can be observed in material reality. It can therefore be said that ideology is both real and imaginary because it may be defined as people's abstract mental representations about their connections to the external social world (Althusser, 2006).

In addition, ideology works to transform people into individual 'subjects' through processes of the provocation of the subject as an individual and the internalisation of societal values (Althusser, 2006). People are made to recognize themselves through these ideological processes (Althusser, 2006). Learning, recognising, and responding to the name that was assigned to you by your parents is a continuous practice of ideology as well as a function because internalising your name makes you an individual subject. The recognition of oneself as either pro-vaccination or anti-vaccination and one's subsequent social actions, such as writing a Tweet about Covid-19 vaccines, form another example of how ideologies function to constitute people as individuals that are subjected to ideology. Ideologies are always embedded in institutional frameworks, as well as the actions of those institutional frameworks. These institutional frameworks of ideology are known as ideological state apparatuses (Althusser, 2006). Althusser (2006) conceives of the following ideological state apparatuses: cultural, trade-union, communications, political, legal, familial, educational, and religious (Althusser, 2006). It should also be noted that ideology may be regarded as closely related to relations of power, but that these relations of ideological power are not unidirectional in nature (Canham, 2014). Ideologies that relate to dominant discourses, as dictated by certain institutional frameworks, could be challenged by ideologies that are expressed by opposing discourses that resist those dominant ideologies (Canham, 2014; Fairclough, 2013; van Dijk, 1995; Wodak, 2011).

Foucauldian power-knowledge

Discourses may be defined as forms of speech or written text that are closely linked to social practices and/or social institutions (Alvesson & Karreman, 2000; Fairclough, 2013). Dominant discourses may be regarded as functions of dominant ideologies that serve to perpetuate unequal power relations (van Dijk, 1995). Discourse lies at the center of knowledge creation because discourses may be understood as language-based modes of representation (Palmary, 2011). Foucauldian conceptualisations of power and knowledge illuminate the bi-directional and closely bound relationship of knowledge and power, as well

as the role of this relationship in creating subjects out of people (Foucault, 1980; Gallagher, 2008; Roberts, 2005; Rose, 1988). Power enables the creation of knowledge, and the possession of knowledge gives rise to the ability to exercise power (Foucault, 1980; Roberts, 2005). It must be acknowledged that Foucault referred to power in the performative sense; power takes the form of reactions to other actions (Gallagher, 2008). Power is therefore not something that a person or institution can gain or own, but it is a dynamic exercise that consequently culminates in the categorisations of people in comparative subject positions (Foucault, 1980; Gallagher, 2008; Rose, 1988). For instance, the categorisations of being considered psychologically normal versus abnormal; being considered pro-vaccination or anti-vaccination, are examples of the subjectivations of people as a result of exercises of the power-knowledge process.

Another important distinction of Foucauldian power-knowledge is that it is not confined to influential institutions, collectives, or individuals. Rather, power can be exercised by all people in different settings and different ways (Foucault, 1980; Gallagher, 2008). For example, upon hearing the news that Australia deported Novak Djokovic due to his unwillingness to receive a Covid-19 vaccine before the 2022 Australian Open, an ordinary person may label and subject the famous tennis player to the categorisation of being an anti-vaxxer on social media. A knowledge of what vaccines are, as well as the categories of being pro- and anti-vaccination, are necessary for the commentator to exert power-knowledge over the tennis player and therefore constitute him as a subject of the anti-vaccination movement. It may be argued, however, that a person's ability to exercise power-knowledge may be dependent on external factors such as exhibiting a high socio-economic status. For example, social media influencers have the power to spread information and discourses to massive online audiences for personal gain (Freberg et al., 2011; Srour et al., 2022; Weismueller et al., 2021). However, the ability of an influencer to instantaneously shape people's ideological leanings and stances towards Covid-19 vaccination through power-knowledge is limited by the fact that their followers are active participants in the social construction of knowledge, and they may possess their own counter-ideologies (van Dijk, 1995). In addition, social media platforms can be observed as spaces of panoptic power-knowledge practices. If social media platforms were a kind of panopticon, then they would function as spaces that regulate the behaviour of social media users (Foucault, 1980; Roberts, 2005). When people use social media, most are aware that their online activity is, or at the very least could be, observed. Some of these observations by others are made explicit in the form of likes, comments, re-

Tweets, etc. whilst others remain unacknowledged. However, people are generally aware that their actions online could be observed by others, and their online behaviour is thus disciplined by this knowledge of constant observation (Roberts, 2005).

A potential constraint of using naturally occurring online data is the lack of verifiable socio-demographic information about social media users (Jowett, 2015; McCormick et al., 2015). Twitter does not require its users to provide information about their race, gender, religious affiliation, or socio-economic class (McCormick et al., 2015). In addition, social media users may provide inaccurate information about themselves online (Jowett, 2015). It is important to take note of this because a critical analysis of power and ideology should refer to sociodemographic factors, such as gender, religion, race, or class – all of which may be implicated in unequal power relations (Bouvier & Machin, 2018; Creswell, 2007). However, it should be emphasized that both ideology and power are exemplified through performative and discursive practices in the social world; and power cannot be seen as innate to particular identities (Althusser, 2006; Gallagher, 2008). Therefore, the discursive orientation and positioning of these aspects of identity relating to power are of more interest than, for instance, the actual gender or racial identities of Twitter users that generate discourses about Covid-19 vaccines (Janks, 1997; Jowett, 2015). Therefore, aspects of identity such as those regarding race, gender, class, or religion, will be explored should these identity orientations be made relevant through discursive practices in Covid-19 vaccine Twitter commentary.

Methods

Research method

This study used a qualitative research design within a constructionist paradigm. A qualitative research design, informed by critical discourse analysis, was useful for providing in-depth understanding of the discourses that were communicated textually on Twitter regarding Covid-19 vaccines and vaccine uptake in South Africa (Vaismoradi et al., 2013). The use of a constructionist paradigm emphasizes that reality is created through social interactions which are in turn constructed through verbal speech and written text (Alvesson & Karreman, 2000; Huckin, 1997).

Social media platforms like Twitter are important sites of research for tracking and making meaning of emergent discourses (Durmaz & Hengirmen, 2022; Rosselli et al., 2016; Wang et al., 2021). Before the invention and widespread use of social media, dominant discourses that favoured powerful groups were primarily created and regulated through institutions and distributed to the public for consumption (Bouvier & Machin, 2018). The processes of the creation and distribution of dominant discourses and their ideologies have been disrupted by interactive online platforms such as Twitter (Bouvier & Machin, 2018; Rosselli et al., 2016; Schwartz, 2012; Wang et al., 2021). This potential for discursive and ideological disruption is limited because of South Africa's digital divide. Some people either lack the skills to navigate the internet or do not have access to digital technology and social media due to poor socio-economic factors (Bornman, 2015). It is important to acknowledge this contextual consideration, but the focus of this report pertains to online Twitter commentary about Covid-19 vaccination. The potential for anonymous speech acts often allows for uncensored communication to express individual views, engage with commentary, share and 'like' views that align with users' ideological leanings (Durmaz & Hengirmen, 2022). However, the potential for online anonymity may also give rise to what is known as 'trolling', whereby people deliberately construct inflammatory comments on social media because their real identities are concealed (Jowett, 2015). Nonetheless, Twitter allows ordinary people to either challenge or conform to the ideologies communicated through language practices (Althusser, 2006; Rosselli et al., 2016). Therefore, Twitter commentary may reveal the dominant discourses surrounding Covid-19 vaccines as well as alternative perspectives that disrupt dominant ideologies which serve to maintain the status quo (Bouvier & Machin, 2018; Rosselli et al., 2016; Wang et al., 2021).

Sampling procedure

This study followed a non-probability, criterion-based sampling technique where the units of analysis were Tweets and comments that met this report's inclusion criteria (Laher & Botha, 2012). Tweets and comments were sampled if they were written in the English language and if they were published between February 2021 and February 2022 because the Covid-19 vaccination program in South Africa was initially implemented in February 2021 (Cooper et al., 2021a). The sample comprised of Tweets and comments that were primarily concerned with the topic of Covid-19 vaccination and were deemed relevant to the South African context. The data collected for this study comprised of four stimulus Tweets generated by the Department of Health and three South African influencers, as well as 15 comments authored by ordinary social media users in response to the stimulus Tweets. The sampling of stimulus Tweets published by influential South African Twitter accounts ensured that the Covid-19 vaccination discourses that emerged were contextually relevant. This is further elaborated upon in the data collection section. The sample size was determined by the achievement of saturation (Kleinheksel et al., 2020; Laher & Botha, 2012). Saturation positively contributes to the trustworthiness of the research findings (Kleinheksel et al., 2020). This is because data was collected until the researcher felt that no new discourses relating to the research aims were found to emerge. Therefore, the findings, which were based on the sampled Twitter discourses, can be considered somewhat representative of the more broadly existing discourses regarding Covid-19 vaccines in South Africa.

Data collection

The data for this report was collected from Twitter with the use of Microsoft's snipping tool. The data collected for this study ultimately comprised of four stimulus Tweets generated by the Department of Health and three South African influencers, as well as 15 comments authored by ordinary social media users in response to the stimulus Tweets. Social media influencers also referred to as SMIs, can spark public debate as well as influence the attitudes of their followers through their production of digital content (Droz-dit-Busset, 2022; Freberg et al., 2011; Srour et al., 2022). Influencers are distinct from ordinary social media users because of their large online followings (Freberg et al., 2011; Srour et al., 2022). Although there is no universally accepted cut-off for the number of followers a user needs to have to be considered an influencer – these celebrities generally have audiences comprising of thousands or even millions of followers. The identities of influencers on Twitter are verified by the platform and influential accounts are distinctively marked with a blue badge which

indicates that a user or organisation is well-known by the public (Twitter Help Center, 2023). It should be noted that Elon Musk's purchase of Twitter resulted in the platform's blue badge verification becoming a matter of contestation, however, the data collection for this research report preceded Musk's controversial acquisition of the social media site. Nonetheless, internet celebrities have the power to influence public discourses and to perpetuate or challenge dominant ideologies due to their ability to spread information on a massive scale (Al-Rawi et al., 2021; Droz-dit-Busset, 2022; Weismueller et al., 2021). This ability to shape public discourses in the context of the Covid-19 pandemic and vaccination debate justified the collection of Tweets generated by South African influencers. Tweets authored by Steve Hofmeyr, Pearl Thusi, Redi Tlhabi, and the Department of Health were chosen to represent different positions in the Covid-19 vaccination debate – namely positions of vaccine hesitance and ambiguity as well as vaccination promotion. Steve Hofmeyr is an Afrikaans musician and South African celebrity who has over 300 000 followers on Twitter. Pearl Thusi is a South African actress and celebrity with over three million followers on Twitter; and Redi Tlhabi is a South African journalist, author, and media personality with over 600 000 followers on Twitter. The collection of Tweets authored by South African influencers was useful because of the guaranteed relevance of Covid-19 vaccination discourses to the South African context. Although the nationalities of Twitter users who commented on influencer-generated content could not be verified, it may be argued that South African influencers are more likely to produce their content for a largely South African audience. Therefore, discourses generated by users who commented on the chosen stimulus Tweets were also deemed relevant to the South African context. Comments were chosen for analysis based on their relevance to the Covid-19 vaccination debate as well as their analytical potential. Commentaries that simply conveyed agreement or disagreement with influencers, such as with the use of a single word or emoticon, were excluded. Several commentators who responded to influencer-generated Tweets had done so to clarify the logistics regarding vaccination in South Africa, and these were also excluded due to their limited relevance to the research topic and restricted analytical potential.

Data analysis

The data were analysed through the employment of an adapted model of Fairclough's critical discourse analysis which considers discourses as multifaceted and made up of three interconnected fundamental components (Fairclough, 1989, 1995, as cited in Janks, 1997). These components may be considered the text itself, as the way a text is created,

disseminated, and comprehended by others, and the contextually informed socio-historical influences that impact the two aforementioned components (Janks, 1997). I have attempted to understand the Twitter commentaries that met the sampling criteria through repetitive reading before proceeding with any form of analysis. The commentaries were then critically analysed at the textual-level, the sentence-level as well at the level of specific phrases and words (Huckin, 1997). This type of detailed textual analysis may also be considered a descriptive analysis of the discourses present in the data (Janks, 1997). Commentaries on the Twitter platform were acknowledged as having been written and disseminated to the public within a unique and fundamentally influential socio-historical context (Alvesson & Karreman, 2000; Huckin, 1997). Interpretation of the creation, dissemination, and reception of Tweets was informed by processing analysis; whilst social analysis accounted for explanations about the socio-historical roots of discourses and ideologies implicated in unequal power relations (Fairclough, 2013; Janks, 1997). This analytic strategy is further summarised in Table I. The CDA model used in this report is described as 'adapted' because the procedural steps of the textual analysis are largely informed by utilising a close-range discourse analysis, which is described by Alvesson and Karreman (2000). Although Fairclough (2013) emphasises the importance of attending to social injustices and ethical practices in critical discourse analysis, he does not provide a specified protocol for conducting a textual analysis. A critical discourse analysis was useful for addressing the aims of this proposed research report because this type of analysis provided valuable insights regarding the ideologies and relations of power that are implicitly communicated in Twitter discourses regarding Covid-19 vaccines (Bouvier & Machin, 2018; Ulinnuha et al., 2013; van Dijk, 1995). Discourses were not merely described by using the CDA approach, but the relations of power and ideology that are present within these discourses were critically interrogated and discussed in the following chapter (Fairclough, 2013; van Dijk, 1995; Wodak, 2011).

Table I

An Adaptation of Fairclough's CDA Model

1. Textual analysis	Discursive analysis of the text, sentences that form the text, and analysis of the phrases/words within the text (Huckin, 1997). Textual analysis is informed by utilizing a close-range discourse analysis (Alvesson & Karreman, 2000). This level of analytic investigation may be divided into four steps that include the: a) Description of the Tweet's micro-context. b) Identification of discourses based on the social practices and structures that are referred to within Twitter commentary. c) Identification of how Twitter commentators discursively construct themselves and others. d) Investigation and critical evaluation of the claims, logic of arguments, and the implications of these discursive claims.
2. Processing analysis	Description of the socio-historical context of the production, dissemination, and comprehension of Tweets relating to Covid-19 vaccine acceptance and vaccine hesitancy (Janks, 1997).
3. Social analysis	a) Identification of social injustices within the Covid-19 vaccine debate, as revealed through textual analysis, and the evaluation of their relationship to power, ideology, and existing power structures (Fairclough, 2013). b) Identification of alternative discourses and ideologies that challenge social injustices and unequal power relations (Fairclough, 2013). c) Explanation of the socio-historical origins of discourses and ideologies implicated in unequal power relations (Janks, 1997).

Reflexivity

It may be said that every aspect of writing this research proposal has been influenced by the subjective decisions I have made in collaboration with my research supervisor and therefore, no aspect of this proposed research report may be deemed objective (Finlay, 2002a; Finlay, 2002b; Sriprakash & Mukhopadhyay, 2015). For instance, my interest in researching discourses of Covid-19 vaccines arose out of personal experiences where I encountered tense and uncomfortable social interactions amongst people that strongly opposed those who disagreed with their own beliefs about Covid-19 vaccines. As a person that has been vaccinated and one who believes in the lifesaving possibilities of vaccines, I am at risk of

colluding with pro-vaxers and this may potentially bias my interpretation and meaning-making of the data. I am however aware of this potential bias, and I have attempted to give both pro- and anti-views sufficient reflection and space in my analysis. Therefore, while I do not claim to hold a neutral position, in addition to a critical reading by my research supervisor, I have attempted to hold myself accountable by engaging the power and ideologies operating in all the data that was sampled. In addition to this, it should be acknowledged that I have a strong personal interest in writing this research report and in choosing a topic that may be deemed relevant in current academic discourses so that I may successfully obtain a master's qualification.

Ethical considerations

The study used naturally occurring textual data which is publicly available on the Twitter social media platform (Durmaz & Hengirmen, 2022). Therefore, consent did not have to be received as Twitter commentary is in the public realm (Durmaz & Hengirmen, 2022; Fuchs, 2017; Jowett, 2015; Sinnenberg et al., 2017). Twitter account users must agree to the platform's conditions of service in which they are informed that potentially all the Tweets that users generate could be read and used by any member of the public (Bolderston et al., 2022; Sinnenberg et al., 2017). In addition, most social media platforms provide options for users to alter their privacy settings to make their data less publicly accessible, and this includes Twitter. Therefore, Twitter users may choose whether to limit the accessibility of their data. Although it may be argued that some users do not read the terms and conditions for using Twitter, engagement with influencer-generated content may serve as a further indication that commentators are aware that their data is publicly accessible (Fuchs, 2017). Influencers earn their celebrity status by producing digital content for public engagement - often in exchange for financial gain (Droz-dit-Busset, 2022). It is for this reason that the identities of South African influencers are disclosed in this study. However, names and any other potential identifications of users who responded to influencer content were removed from the collected comments in an attempt to ensure the anonymity of ordinary social media users (Durmaz & Hengirmen, 2022). Anonymity and confidentiality cannot be guaranteed because there is a possibility of uncovering the source of such online data through conducting an internet search (Jowett, 2015). However, the use of pseudonyms reduces the traceability of the data. Only essential data was collected in compliance with the POPI Act, and the collected data was kept on the researcher's computer in a file protected by a password. The researcher has completed ethics training as part of the PSYC7022A Masters research module

and the researcher received the relevant ethical clearance for this research report (protocol number: MASPR/22/04W, see Appendix A). The research findings are presented in the following chapter.

Findings and Discussion

The findings that address the objectives of this research report are presented and discussed in this chapter. The first aim of this study was to explore the Covid-19 vaccine Twitter discourses of people residing in South Africa. This study also sought to investigate discourses that shed light on the ideologies that underpin Covid-19 vaccine acceptance and to explore the discourses that shed light on the ideologies that underpin Covid-19 vaccine hesitancy. An adapted model of Fairclough's critical discourse analysis was used to evaluate online discourses and ideologies that were deemed relevant to the Covid-19 vaccination debate in South Africa (Fairclough, 1989, 1995, as cited in Janks, 1997). Twitter commentaries initiated by the Department of Health's announcement of its vaccination campaign are presented and critically engaged in the first section of this chapter. This is followed by a discussion of Steve Hofmeyr's vaccine hesitant Tweet and its consequent commentary among Twitter platform users. An exploration of public responses to Pearl Thusi's ambiguous stance toward vaccination is also presented. The final section of this chapter discusses Redi Tlhabi's endorsement of Covid-19 vaccination and the subsequent criticism of this support by Twitter commentators.

South Africa Ramps Up Its Vaccination Programme

In the following section of this report's research findings, we explore a stimulus Tweet authored by the Department of Health during the early stages of South Africa's Covid-19 vaccination campaign, and four comments by Twitter users that responded to the stimulus Tweet. These responses are constructed by users who go by the names Marty, David Van Niekerk, For-Choice-01, and Kyle Khoza. An adapted model of Fairclough's critical discourse analysis is used, beginning with a textual analysis, followed by a processing analysis, and concluding with a social analysis for each comment and Tweet.

Stimulus Text: Tweet A



Textual analysis of Tweet A

Stimulus text A was authored by the Department of Health's Twitter page on March first, 2021. This was done in the context of the Covid-19 pandemic during the early stages of the vaccination rollout campaign (Cooper et al., 2021a). The phrases 'South Africa' and 'country' indicate that the Tweet draws on a nationalist discourse. The phrases 'vaccinate' and 'vaccination programme' implicates a medical-scientific discourse. Discourses may be defined as forms of speech or written text that are closely linked to social practices and/or social institutions (Alvesson & Karreman, 2000; Fairclough, 2013). Discourses are also largely ideological and there is thus a multifaceted convergence between language, social practices, ideology, and power (Fairclough, 2013; van Dijk, 1995; Wodak, 2011). In this way, a nationalist discourse may be defined as a textual representation that is indicative of the socially constructed practices and beliefs associated with nationalist political ideology. Similarly, a medical scientific discourse may be defined as the discursive representation of medical-scientific practices, such as textually representing the social practice of receiving an inoculation against Covid-19. The use of the phrase 'Johnson&Johnson vaccine' implicates the role of capital through big pharma in the Covid-19 pandemic. Therefore, a capitalist discourse is utilised in Tweet A to linguistically construct socio-economic practices related to

capitalism, such as the Department of Health's procurement of vaccines from the multinational pharmaceutical corporation 'Johnson&Johnson". The Tweet constructs the Department of Health as goal-oriented, transparent, and reliable. The quality of goal orientation may be inferred through the connotation of the word "aims". Transparency is constructed through the specificity of the batch and brand of vaccines that were delivered to South Africa. The use of a visual image draws the attention of readers to the Department of Health's Tweet. This may be considered a type of foregrounding because vaccine acceptance is emphasised with the use of this visual aid (Huckin, 1997). Reliability is constructed through the visual image of several people wearing masks and receiving inoculations which were dated as 'Thursday, 25 Feb'. The image constructs South Africans receiving vaccination as receptive, compliant, and helpful to the nation's supposedly collective goal of achieving the Covid-19 vaccination of over a million people by the end of March 2021.

The use of nationalist and scientific-medical discourses appears to be consistent with the Department of Health as a governmental institution concerned with the medical well-being of the nation's residents. There is a clear promotion of Covid-19 vaccine acceptance. The Tweet indicates that the department "ramps up its vaccination programme". Ramping up might be read as a sign of efficiency, dedication, and purpose. In this context, since the government has done its job, any failings cannot be attributed to them but to those meant to access the vaccine. It may be argued that the use of the phrase 'South Africa aims' (rather than 'The Department aims') is used to deflect sole responsibility from the government for the successful rollout of the vaccination campaign. However, it may additionally be argued that the Department strategically used this phrase of 'South Africa' to invoke a nationalist and collective responsibility of the country's residents to accept and take up vaccination. Afterall, the people in the image receiving vaccinations appear to be doing so voluntarily due to their relaxed body language and their direct orientation towards the camera. Therefore, the text constructs the responsibility of a successful vaccination campaign as reliant on voluntary and compliant individuals in South Africa. In addition, the cooperation of large pharmaceutical corporations is constructed as a vital component of the vaccination rollout in South Africa.

The responsibility for the attainment of the goals of the Department of Health is, therefore, placed on the shoulders of individual South Africans and large foreign corporations. In the context of the contested efficacy of vaccines, the pharmaceutical companies referenced in the Tweet have been validated by countries in the Global North and hail from the United States. The contestations that I reference refer to the vaccines manufactured in Russia and India, and

which were not used in South Africa (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). Referencing North American-manufactured vaccines does the work of leaning on scientific consensus which rides on discourses of standards. In this regard, if a hyper-capitalist and wealthy country can use this vaccine, then a country part of the Global South such as South Africa is fortunate to have it and should take it up urgently. Afterall, poorer African countries largely used Indian and Chinese vaccines because they could not afford to secure Euro-American brands in advance like some wealthy countries (Wouters et al., 2021). Interestingly, the text constructs the Department of Health as dependent on others, rather than as an authoritative entity that has the power to achieve its goals independently. This may be linked to the ethical implications of forcing individuals to vaccinate, but it may also be indicative of the country's reliance on imports and knowledge from Western nations as well as South Africa's position in a globalised world (Sebeelo, 2023).

Processing Analysis of Tweet A

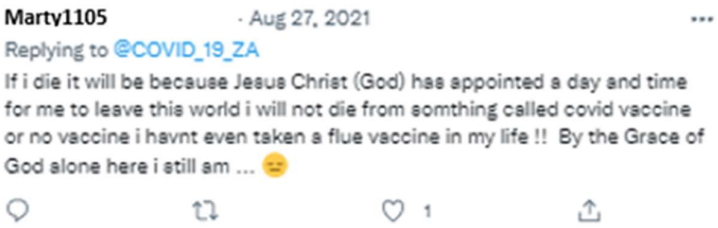
Tweet A was produced and disseminated on the Twitter platform. This illustrates the government's knowledge of the rise of social media in the digital age, and it may be argued that the Department of Health strategically used Twitter to reach a large number of South African residents as a target audience for the promotion of their vaccination campaign. The Department's Twitter page indicates that as of 2022, the page has over 87 000 followers which entails a substantially large audience. However, according to Statistics South Africa (Stats SA), the country's population comprised 60,14 million people in 2021. In addition, there is a digital divide and economic wealth gap in South Africa, so a relatively large proportion of South African residents do not have access to social media (Bornman, 2015). Therefore, Tweet A's dissemination was limited to an audience that has access to smartphones and is proficient in digital technology and social media literacy. It is, however, important to qualify this by noting that Tweets travel beyond direct followers and can be seen by followers of those who engaged with the Tweet by either 'liking' or retweeting it. Moreover, those influenced by ideologies conveyed by Tweets might influence those in their realm of influence including family, friends, colleagues, and other communities of influence.

Social analysis of Tweet A

Tweet A draws on nationalist, scientific-medical discourses, and corporation or capitalist discourses to promote vaccine acceptance. These dominant discourses and their ideological

orientations are predominantly enabled and maintained through influential institutions - but they may also be perpetuated by people in everyday life (Althusser, 2006; van Dijk, 1995). This is exemplified by the Department of Health's Tweet because nationalist, capitalist and medical-scientific discourses are perpetuated by a sector of the South African government that is primarily concerned with governing the status of people's health in the country. These discourses may be regarded as dominant and ideological in nature because of the unequal amount of power that is afforded to the social institutions and practices that dominant discourses represent and perpetuate (Fairclough, 2013). The corporation discourse utilised in Tweet A is a function of capitalist ideology and capitalism as an economic system is commonly associated with democratic systems of governance in the 21st century as well as socio-economic inequality (Kleven, 1993; Phelan & Dawes, 2018). Tweet A may be argued to comprise of ideologies that are functions of the political ideological state apparatus as described by Althusser (2006). This is because the nationalist discourse utilized in Tweet A is a function of political ideology that is materialised through social practices dictated by political institutions like the Department of Health. The scientific-medical discourse could be argued to be a function of the educational state apparatus (Althusser, 2006). However, in the context of the Covid-19 pandemic, medical-scientific knowledge and discourses were used to justify fundamentally political decisions related to governance (Sebeelo, 2023). On one hand, Tweet A uses scientific-medical discourse as a function of political ideology to promote the voluntary and democratic decision-making to vaccinate. On the other hand, Tweet A uses scientific-medical discourse to justify its political motivations to vaccinate over a million people in South Africa by the end of March 2021.

Comment A.1



Textual analysis of Comment A.1

Marty constructed Comment A.1 on August 27th, 2021, in response to Tweet A which was authored by the Department of Health's Twitter page. Although this comment was authored

almost six months after Stimulus Text A, the Covid-19 pandemic and the vaccination rollout in South Africa was still ongoing during this period. Marty utilises a religious discourse in their comment, and this may be inferred from the phrase "By the Grace of God". Specifically, a Christian discourse is drawn on by the comment which may be observed due to the comment's mention of "Jesus Christ (God)". Although it is critiqued, a scientific-medical discourse is also utilised. This may be observed through the comment's references to the "covid vaccine or no vaccine… flue vaccine". Marty constructs themselves as a person of faith who is submissive to God. The author constructs God as powerful because the comment states "If i die it will be because Jesus Christ (God) has appointed a day and time for me to leave this world". The use of a lowercase "i" is consistent throughout the text whereas the words "God" and "Jesus Christ" are capitalised. In addition, the word "covid", which is conventionally written with an uppercase c, is also written in lowercase. The emphasis given to religion with the use of capital letters is a form of foregrounding – a discursive strategy used to emphasise the importance of Christianity in Marty's comment (Huckin, 1997). On the other hand, Marty uses the discursive move of backgrounding to minimize the importance of themselves as well as Covid-19 by using lowercase letters for "i" and "covid". (Huckin, 1997). This manner of using uppercase and lowercase letters is consistent with the text's prioritisation of God and Christianity over individualism and the scientific creation of vaccines. The text constructs itself as sceptical about the ability of vaccines to prevent sickness and death: "i will not die from something called covid vaccine or no vaccine". The phrase "i will not die" shows that the commentator constructs themselves as having some form of control regarding whether they live or die due to their religion. By extension, the comment constructs the Covid-19 vaccine as having no preventative benefit or power over the commentator's health and vitality.

Marty uses religious and scientific-medical discourses to construct scepticism regarding the benefits of vaccines and to prioritise the power of God and religion. Christian religion provides the commentator with more control over how they will or will not die when compared to preventative effects of vaccination. The text constructs death as a religious matter that is determined by God rather than a biological phenomenon which can in some instances be prevented through vaccination.

Processing analysis of Comment A.1

Marty constructed their comment on the 27th of August 2021 during the Covid-19 pandemic. During this period, the Covid-19 pandemic was characterised by uncertainty due to the significant disruption of people's lives because of lockdowns, sickness, and death, as well as the novelty of Covid-19 vaccines (Durmaz & Hengirmen; Machingaidze & Wiysonge, 2021; Mellet & Pepper, 2021; Sebeelo, 2023). The context of the digital age produced a space where uncertainty and scepticism regarding the pandemic and Covid-19 vaccines could be communicated online using social media platforms like Twitter (Durmaz & Hengirmen, 2022). It was in this context that Comment A.1 was created and disseminated.

Social analysis of Comment A.1

Marty draws on Christian and scientific-medical discourses to reject the Covid-19 vaccination campaign as described by Tweet A. Therefore, the comment may be described as promoting vaccine hesitancy to reclaim control over life and death. Marty states that only God, and not the virus nor the vaccine, may determine when the commentator dies. This Christian discourse is a function of the religious ideological state apparatus (Althusser, 2006). According to Althusser (2006), ideologies are always embedded in institutional frameworks and these frameworks are known as ideological state apparatuses. This is because influential institutions, such as the Church, dictate the social practices and rituals that subjects of religious ideology must enact for that ideology to materialise in the social world. This materialisation of religious ideology in the social world perpetuates that ideology by reinforcing itself both in people's imaginations and their social practices (Althusser, 2006). Marty's comment discursively reclaims power over death from Covid-19, the Department of Health, and the medical community, and instead attributes this power to the commentator's own religious beliefs. Therefore, Marty employs the counter ideology of religion through their utilisation of a Christian discourse (van Dijk, 1995). Marty's discursive construction of their comment on Twitter may be deemed as a social action that challenges the dominant ideologies of capitalism, nationalism, and medical science presented in Tweet A (Bouvier & Machin, 2018; Creswell, 2007; Janks, 1997).

Comment A.2



Textual analysis of Comment A.2

The Covid-19 pandemic and the vaccination rollout in South Africa was still ongoing when Van Niekerk authored Comment A.2 almost nine months after Stimulus Text A. Reference to alcohol sales might be read in relation to the government's ban on alcohol sales during the coronavirus peaks in the country (Kohler et al., 2023; Sebeelo, 2023). These bans were instituted on the understanding that consuming alcohol led to a loss of inhibitions and encouraged risky behaviours such as not observing Covid-19 prevention protocols. The use of the phrase 'buy alcohol' indicates that the text draws on a consumerist discourse. It implies that the 'vaccination problem' in South Africa can be solved by targeting buyers and consumers of alcohol. Political discourses relating to policy, governance, and public health administration and surveillance are also utilised. This may be inferred from the sentence "Make it mandatory to produce your vaccination card/ QR code". The word 'mandatory' indicates that the text introduces the idea of a mandatory vaccination policy for the purchase of alcohol. In addition, the text's reference to a 'vaccination card/ QR code' relates to the administrative procedures followed during the Covid-19 vaccination rollout – both in South Africa and globally (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). Democratic discourse is utilised by the text which is evident through the commentator's address of the Department of Health's Twitter page "@Covid_19_ZA" as well as the address of the South African President "@CyrilRamaphosa". This direct and casual address of the president and a governmental department could only occur in the context of a democratic country that supports freedom of speech.

The text constructs itself as relevant to the interest of the South African president as well as the Department of Health through the introduction of "Hey @Covid_19_ZA & @CyrilRamaphosa, here's an idea". This casual tone constructs the commentator as confident

and equal to prominent people of political importance. David Van Niekerk portrays themselves as being able to offer a viable solution to President Ramaphosa and the Department of Health regarding the country's "Vaccination problem". The comment employs sarcasm to address the president and the Department of Health, to appear rational and competent "Hey… here's an idea…You're welcome". The commentator constructs themselves as rational, logical, and practical which may be inferred from the sentence "Vaccination problem solved instantly". By extension, the text constructs the Department of Health and the president as incapable of creating a similar solution. In addition, David Van Niekerk constructs people that purchase alcohol as those who do not wish to receive a Covid-19 vaccination. In this way, alcohol consumers are constructed as vaccine hesitant and as contributors to the country's "Vaccination problem". It may additionally be argued that Van Niekerk situates himself as morally superior because access to alcohol is framed as the cause of socially-immoral decision-making – which in this case is vaccination refusal.

David Van Niekerk's suggestion for solving South Africa's 'vaccination problem' by only allowing vaccinated people (i.e., those who possess Covid-19 vaccination certificates) to purchase alcohol, demonstrates that the author advocates for Covid-19 vaccine acceptance. The comment makes the argument that those who are hesitant to vaccinate are likely to purchase alcohol and that making alcohol inaccessible to those who are not vaccinated will solve Covid-19 vaccine hesitancy. This implies that vaccine hesitant individuals value the ability to purchase alcohol more than their reasons to delay or refuse Covid-19 vaccination. David Van Niekerk oversimplifies the notion of vaccine hesitancy and stereotypes people who are not receptive to Covid-19 vaccination by assuming that they are frequent consumers of alcohol. This is known as presupposition because the author relies on the assumption that all vaccine hesitant people also consume alcohol (Huckin, 1997). On the other hand, it may also be argued that the comment constructs all South Africans as consumers of alcohol, rather than only those who are vaccine hesitant. However, this would still be considered a stereotype.

Processing analysis of Comment A.2

David Van Niekerk constructed Comment A.2 on the 26$^{th\ of}$ November 2021 in response to the Department of Health's promotion of the national vaccination rollout. This demonstrates the unique context of communication over a social media platform such as Twitter because a Tweet may be responded to months after it is initially posted since there is no time limit for

potential discursive interaction. November 2021 was a period during which the opportunity to receive a Covid-19 vaccination in South Africa was available to several age groups (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). This was also a period during which the vaccination rollout was more established in the country and when public conversation about mandatory Covid-19 vaccination began to gain traction (Khumalo, 2021). Although the nationality of the commentator cannot be validated, it can be reasonably assumed that the commentator is either a resident or a citizen of South Africa because the text demonstrates local knowledge as well as an interest in the country's response to the Covid-19 pandemic. Therefore, Comment A.2 was digitally produced and disseminated on Twitter by an author with an interest in South African politics during the Covid-19 pandemic and vaccination rollout.

Social analysis of Comment A.2

Van Niekerk utilises consumerist and political discourses to implicitly promote vaccine acceptance through their argument of prohibiting the sale of alcohol to unvaccinated people in South Africa. The consumerist discourse identified by the comment's allusion to the act of purchasing and consuming alcoholic beverages may be regarded as a dominant discourse that functions to perpetuate the globally pervasive ideology of consumption as well as the economic system of capitalism. Consumerist ideology functions as a mental framework that results in people inherently evaluating social value based on the ability to purchase material products (Jansiz, 2014). Capitalism gives rise to the ideology of consumerism because as more people adopt identities based on consumerist ideology, more money is generated for corporations that produce saleable products such as alcoholic drinks (Jansiz, 2014). Although Van Niekerk does not explicitly promote the purchase or consumption of alcohol, the commentator discursively subjects South Africans who are hesitant towards Covid-19 inoculation as buyers and consumers of alcohol. Van Niekerk's categorisation of vaccine hesitant people as alcohol consumers is thus an exercise of Foucauldian power-knowledge (Gallagher, 2008; Rose, 1988). The commentator discursively demonstrates knowledge about the practice of alcohol consumption, South Africa's temporary prohibition of alcohol sales, knowledge about vaccine hesitance, as well as knowledge about the reception of vaccination certificates following Covid-19 immunisation. Van Niekerk uses this knowledge to exercise power by subjecting all people suspicious of vaccination as alcohol consumers. The consumption of alcohol is constructed as so prominent by Van Niekerk that limiting the ability to purchase alcohol based on vaccination status would instantly solve the issue of

vaccine hesitancy in South Africa. Therefore, Van Niekerk draws on the ideology of consumption using a consumerist discourse to promote vaccine acceptance.

Comment A.2's use of political discourses is a function of both legal and political ideological state apparatuses (Althusser, 2006). Ideologies of law and politics are embedded in frameworks perpetuated by powerful institutions such as the Constitutional Court or the government. Van Niekerk's allusion to a mandatory vaccination policy for the purchase of alcohol operates from an ideologically legal institutional framework. This is because it indicates some knowledge that such a policy would need to be enforced legally by a governing body. A political ideological state apparatus may be identified through the democratic discourse employed by Van Niekerk used to publicly address figures of political importance in South Africa without fear of punishment. Van Niekerk utilises a democratic discourse to criticise the response of South African politicians and government departments about the problem of vaccine hesitancy, as well as people who do not wish to receive a Covid-19 vaccination. Ironically, the comment benefits from the democratic notion of freedom of speech to promote a mandatory vaccination policy that minimises freedom of choice (Kleven, 1993).

Comment A.3



Textual analysis of Comment A.3.

Comment A.3 was constructed on June 19th, 2021, in response to Tweet A. The comment uses a scientific-medical discourse which is observed through the inclusion of medical terminology in the text, such as "co-morbidities", "vaccine", "blood-clotting" and "aneurysm". The Twitter user 'For-Choice-01' constructs themselves as requiring more information from the Department of Health to make an informed decision regarding vaccination. This may be observed in the comment's appeal to the Department's Twitter page "Please… make it clear". This constructs the Department of Health's communication with the public about the potential side effects of the vaccine as ambiguous rather than transparent. In addition, the comment constructs itself as cautious and concerned about potential side effects of the Covid-19 vaccine such as "blood clotting". The commentator uses a scientific-medical discourse to request transparency from the Department of Health and to question the safety of Covid-19 vaccines for people who suffer from additional medical conditions. The comment may be deemed as vaccine hesitant due to the twice repeated reference as well as the emphasis placed on the word "EXCLUDE" i.e., people who should be excluded from receiving a Covid-19 vaccine.

Processing analysis of Comment A.3

The direct appeal constructed by the Twitter user "For-Choice-01" to the Department of Health's Twitter page demonstrates the interactive and democratic nature of Twitter exchanges because an ordinary person can communicate with a governmental department by writing a comment on the platform (Durmaz & Hengirmen, 2022; Rosseli et al., 2016). However, the Department of Health's Twitter page did not respond to this appeal. The comment was authored on the 19th of June 2021 during the Covid-19 pandemic. During this period, the efficacy of Covid-19 vaccines was questioned by some due to how quickly the vaccine was developed, approved, and distributed to the public (Machingaidze & Wiysonge, 2021; Mellet & Pepper, 2021, Ndwandwe & Wiysonge, 2021). The vaccination rollout in South Africa began approximately one year after the country experienced its first pandemic-related lockdown (Cooper et al., 2021a; Durmaz & Hengirmen, 2022). The elderly and people with co-morbidities were thought to be the most vulnerable to becoming severely ill or even dying as a result of contracting Covid-19. Consequently, inoculation against the virus would seem most appropriate to these vulnerable groups (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021; Gray,

2021). However, scepticism regarding the potential side effects of the vaccine would be equally warranted. The context of the digital age produced a space where this uncertainty and scepticism regarding Covid-19 vaccines could be communicated online using social media platforms like Twitter. It also created a space where people could exchange up-to-date information in an ever-changing pandemic environment.

Social analysis of Comment A.3

Comment A.3 uses a scientific-medical discourse to question the safety of the Covid-19 vaccines that are promoted by Tweet A. Comment A.3. illustrates the power of possessing the correct information and sharing this information transparently. The scientific-medical discourse employed by Comment A.3. could then be said to act as a function of the communications ideological state apparatus (Althusser, 2006). This is because, before the invention of the internet and social media platforms like Twitter, institutions of government and mass media largely controlled the information communicated to the public and were thus able to perpetuate dominant ideologies such as the ideology of consumerism or capitalism more exclusively (Jansiz, 2014; van Dijk, 1995). However social media platforms allow for a democratic exchange of information by enabling the possibility of digital communication between governmental organisations such as the Department of Health and ordinary Twitter users (Durmaz & Hengirmen, 2022; Schwartz, 2012). Therefore, there is an enhanced potential for people to publicly question the ideologies communicated by powerful institutions through the social construction of knowledge. Comment A.3 draws attention to the issue of potential side-effects of immunisation which are not addressed by the Department of Health's Tweet. In doing so, the commentator exercises power-knowledge by subjecting the Department of Health to an institutional structure that withholds valuable information from the public (Gallagher, 2008). Communication from the Department of Health regarding the issue of potential vaccine side-effects could have minimised the uncertainty described by Comment A.3. On the other hand, if there was a potential for developing serious vaccine-related side effects and if the Department of Health disclosed this information, this could have resulted in more people becoming reluctant to receive a Covid-19 vaccine.

Comment A.4.



Textual analysis of Comment A.4.

Comment A.4 was authored on April 15th, 2021, by Kyle Khoza in response to the Department of Health's Tweet. The commentator draws on a nationalist discourse which may be observed with the inclusion of the quotation "In South Africa our land" - which is the final line of South Africa's national anthem. Khoza uses this quotation from the anthem ironically to emphasise how badly the government is failing at upholding the ideals that the song's lyrics convey. The text constructs Kyle Khoza as concerned about the lives of South Africans because of a slow Covid-19 vaccination rollout. The comment states that "many people are going to die because of this" and then elaborates on the Department of Health failing to meet their goal of vaccinating 1.1 million people by the end of March 2021. Therefore, Khoza constructs the Department of Health as unreliable and negligent regarding the prevention of Covid-19 related deaths in South Africa due to the insufficient number of vaccinated people. Comment A.4. may be deemed as accepting of Covid-19 vaccination. This is because Kyle Khoza states that "many people are going to die" because of not receiving inoculation against Covid-19. Vaccines are implicitly argued to prevent Covid-19 related deaths. However, the

commentator attributes responsibility for the lack of Covid-19 vaccination in South Africa to the Department of Health's slow vaccination rollout rather than to vaccine hesitancy. It should be noted that Khoza does not provide any statistics for the number of vaccinated people in South Africa but responds to Tweet A's target goal by stating "you can't even make your own deadlines and are so far from reaching them".

Processing analysis of Comment A.4

Tweet A was posted by the Department of Health's Twitter page which announced the country's goal of vaccinating 1.1 million South African residents by the end of March 2021. Khoza holds the Department of Health accountable for not achieving this goal during this early stage of the Covid-19 vaccination rollout in South Africa. This call for accountability is unsurprising because South Africa's Covid-19 vaccination rollout has been described as flawed and drawn-out (Gray, 2021). The commentator's critique of the Department's vaccination rollout is achieved because of the interactive and democratic nature of communication on Twitter (Durmaz & Hengirmen, 2022; Rosseli et al., 2016).

Social analysis of Comment A.4

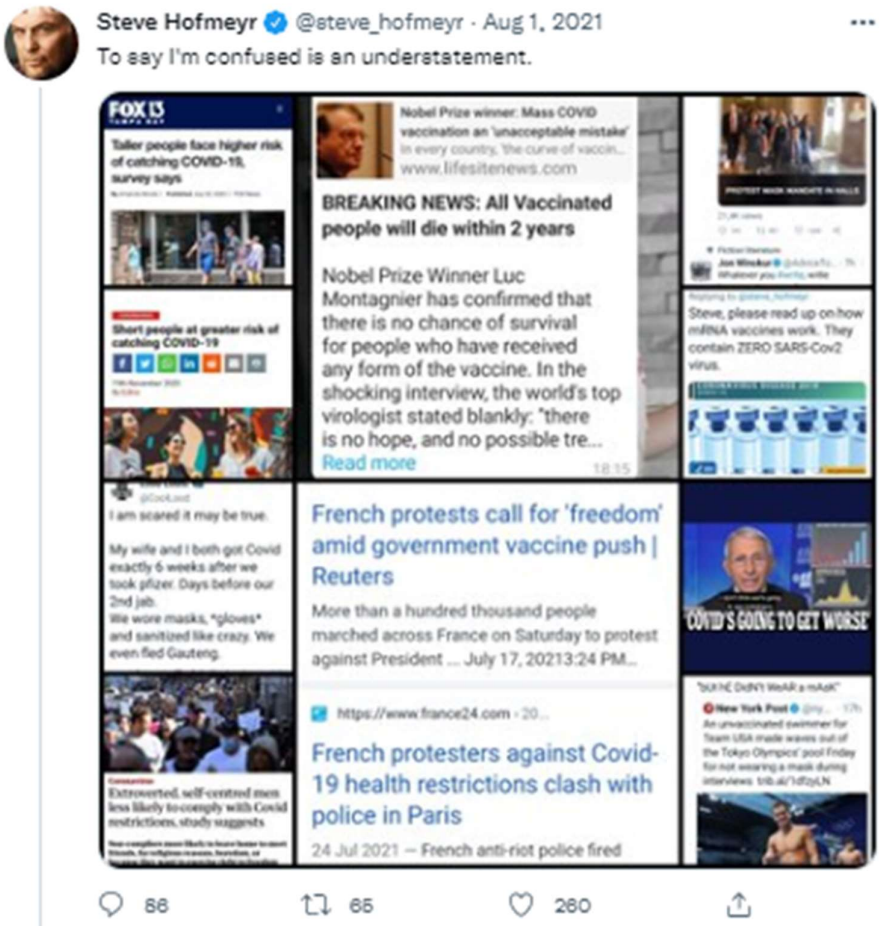
Kyle Khoza uses a nationalist discourse to critique the Department of Health's failure to vaccinate 1.1 million people by the end of March 2021. This discourse may be deemed to be a function of the political ideological state apparatus (Althusser, 2006). This is because the comment draws on the democratic value of freedom of speech and demonstrates knowledge about South African politics as well as knowledge about who possesses power and responsibility for protecting lives in South Africa (Kleven, 1993). Khoza's construction of Comment A.4 on Twitter may be regarded as a social action that exercises power-knowledge over the Department of Health. This is because the possession of knowledge gives rise to the ability to exercise power (Roberts, 2005). Power is not confined to influential institutions such as the Department of Health, but it may also be exercised by ordinary people like Khoza in various settings including social media contexts like Twitter (Gallagher, 2008). Khoza uses their knowledge about the Department of Health and social media literacy to exercise power-knowledge in the form of a constructed critique directed at the Department of Health. The comment draws on democratic political ideology in the context of the digital age to publicly hold the government accountable in a digital space (Bornman, 2015; Fassin, 2003). The availability of Covid-19 vaccines is constructed as a matter of life and death, and the Department of Health is identified as a power structure that has the control to provide the

means to preventing deaths in South Africa. The Department of Health's slow vaccination rollout is identified as a social injustice that has fatal consequences.

Playing For Time

In the previous section, a stimulus Tweet authored by the Department of Health was presented with four comments that responded to this governmental department. The democratic nature of Twitter was discussed and the discursive construction of comments as forms of social practices was presented. The remaining stimulus texts that are put forward in this research report are authored by South African social media influencers. In the following section, we explore a stimulus Tweet by the Afrikaans musician and social media influencer, Steve Hofmeyr, and four commentaries by Twitter users that responded to him. The first response is authored by the commentator who goes by the name of Sifiso Mkhize. This is followed by an exploration of an interactive comment thread between the users Swifty01 and Fanta Fan. The remaining comments that are investigated in the section are authored by Bartee Nel and Mark Clayton. Like the preceding analytical frame used, we begin with a textual analysis, followed by a processing analysis, and conclude with a social analysis. This approach relies on using an adapted model of Fairclough's critical discourse analysis as a framework.

Stimulus Text: Tweet B



Collage referenced in Tweet B



Textual analysis of Tweet B

Tweet B consists of three parts, a collage and two narrative commentaries by Steve Hofmeyr. A collage accompanied by the Hofmeyr's comment "To say I'm confused is an understatement" was posted on the first of August 2021. This initial post was followed by an additional comment constructed by the author on the second of August 2021 which stated, "I'd like to play for time until more surety, but one could also die waiting". Tweet B was

written approximately five months after the start of the South African Covid-19 vaccination rollout (Cooper et al., 2021a). The inclusion of a collage as a visual aid draws readers' attention to the Hofmeyr's Tweet (Huckin, 1997; Janks, 1997). Hofmeyr draws on several discourses in their construction of Tweet B including, media, political/democratic, Western, scientific, biological, and individualist discourses. Discourses may be defined as forms of speech or written text that are closely linked to social practices and/or social institutions (Alvesson & Karreman, 2000; Fairclough, 2013). The inclusion of what appear to be screenshots of news headlines in the collage, such as "BREAKING NEWS: All vaccinated people will die within 2 years" and "French protesters against Covid-19 health restrictions clash with police in Paris", provides evidence for Tweet B's utilisation of a media discourse. The collage refers to French protests on two occasions and this is indicative of political and democratic discourses. France has a democratic government and the right to protest may be considered a political act that is legally exercised by citizens residing in democratic countries. A tension between French law enforcement - "police in Paris" and French citizens - "French protesters" is highlighted by the word "clash", indicating a conflict of interest between ordinary individuals and those implementing Covid-19 restrictions and policies. Although Tweet B is written by a South African Afrikaans author, there are several references to Western countries whereas South Africa is only referred to at one point in the compilation of screenshots - "We even fled Gauteng".

Supposed news of a French virologist's condemnation of Covid-19 vaccines along with news headlines about Covid-19 protests in France are centrally assembled within the collage. This can be regarded as foregrounding in critical discourse analysis because the headlines in the centre of the collage are emphasised more due to their increased allocation of space and enhanced legibility (Huckin, 1997). The headline "BREAKING NEWS: All vaccinated people will die within 2 years" is situated as at the top of the central column and thus commands immediate attention from the reader. The bottom right of the collage shows an image of Dr Fauci, the Chief Medical Advisor of the United States with the caption "COVID'S GOING TO GET WORSE". The inclusion of many Western sources in the Tweeted collage, which is presumably intended for a South African audience, is indicative of the utilisation of a Western discourse. Mignolo (2009) critiques such conceptions of universal knowledge by arguing for epistemic disobedience by countries in the global South. Knowledge is always discursively constructed in a unique socio-historical context; however, the Western notion of universalism insidiously presents itself as superior to non-Western

forms of knowledge and discourses due to its so-called objectivity and its negation of social influences (Janks, 1997; Mignolo, 2009). Hofmeyr additionally draws on a scientific discourse which is employed throughout the entirety of the collage. For example, the section headlined as "BREAKING NEWS: All vaccinated people will die within 2 years". This reference to vaccination as well as predicting the effects of vaccination are indicative of scientific discourse. Additional indicators of a scientific discourse include Steve Hofmeyr's citation of a "virologist" as well as references to "health restrictions" and risk factors for contracting Covid-19. A biological discourse is used in Tweet B due to the text's references to death in the collage ("vaccinated people will die") and within the narrative commentary ("one could also die waiting"). An individualist discourse is utilised in the narrative commentary of Tweet B which may be observed in the words "I'm", "I'd", and "one". The narrative commentary written in Tweet B does not include a reference to any other person or group apart from the author.

Hofmeyr constructs themselves as conflicted and undecided regarding Covid-19 vaccination. The initial narrative commentary in Tweet B portrays the author as "confused" regarding the conflicting information that is presented about Covid-19 and vaccines in the collage. For instance, the collage contains a screenshot that states "Taller people face higher risk of catching COVID-19, survey says". Bellow this image a headline reads "Short people at greater risk for catching COVID-19". The contrast presented in this example constructs scientific evidence about Covid-19 as inconsistent and untrustworthy. Ridiculing science is an example of what van Dijk (1995) and Canham (2014) termed as counter ideology. The additional commentary written on the second of August attempts to construct the author as adopting a cautious but balanced stance regarding Covid-19 vaccination. The first part of this follow-up commentary states, "I'd like to play for time until more surety…". The comment proposes a delay with the use of the phrase "play for time" which can be perceived as a vaccine hesitant stance. However, the comment then states "but one could also die waiting". The inclusion of the word "but" constructs the author as having considered the potential disadvantage of delaying vaccination, which would be dying from Covid-19. The use of the word "one" rather than the word "I" for the phrase "one could die waiting" linguistically distances the author from the idea of personally dying from Covid-19.

Although Hofmeyr presents themselves as adopting a balanced stance toward Covid-19 vaccination with the inclusion of the phrase "one could die waiting", Tweet B clearly constructs an argument that advocates for vaccine hesitancy. The curated collage of news

headlines presented in Tweet B does not include a single instance of evidence that supports the efficacy of Covid-19 vaccines, and it excludes South African news related to the pandemic. This is known as omission in critical discourse analysis, and it is a powerful discursive strategy because if a piece of information is not mentioned in a text then a reader usually does not think about it and consequently cannot adequately interrogate the claims of the writer – especially if the reader does not possess knowledge about the topic or a counter ideology to the argument presented (Huckin, 1997; van Dijk, 1995). Each screenshot included either demonstrates French social unrest regarding Covid-19 vaccination, potential negative consequences of vaccination, or conflicting evidence about risk factors for contagion. The culmination of this information within the collage presents a stance that demonstrates a vaccine hesitant argument that is constructed as legitimate with the inclusion of Western sources of knowledge from the "world's top virologist" Luc Montagnier as well as Dr Fauci.

Processing analysis of Tweet B

Tweet B was produced and disseminated on Twitter in August 2021 during South Africa's Covid-19 vaccination rollout (Cooper et al., 2021; Gray, 2021). The Tweet was authored by Steve Hofmeyr – an Afrikaans musician and South African celebrity who has over 300 000 followers on Twitter. Hofmeyer has positioned himself as an Afrikaner nationalist and activist for Afrikaans culture against a purported white genocide in post-apartheid South Africa (Moses, 2019). His vaccine hesitance may therefore be read as part of his broader protection and advocacy of Afrikaaner people and culture. The collage included in Tweet B may be assumed to have been curated by the author due to the section on the right which states "Replying to @steve_hofmeyr / Steve, please read up on how mRNA vaccines work". This indicates that the person who curated the collage took a screenshot of Steve Hofmeyr's Twitter page to assemble the collage. Tweet B also shows that the author did not repost the collage from another Twitter user. Therefore, it is likely that the author created the collage themself to construct Tweet B. This is significant because the collage, assembled from a careful selection of screenshots, is used as a piece of evidence that validates a vaccine hesitant stance. Tweets are not censored or monitored for their scientific accuracy; however, the dissemination of a Tweet provides an opportunity for the public to engage with the text (Durmaz & Hengirmen, 2022). Therefore, the potential for public scrutiny could have promoted Tweet B's follow-up commentary which was authored a day later "I'd like to play for time until more surety, but one could also die waiting".

Social analysis of Tweet B

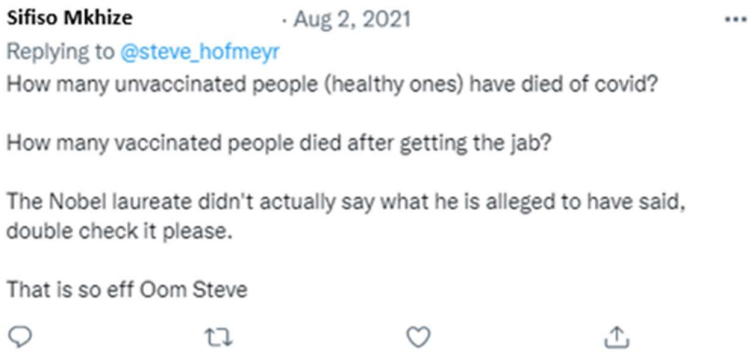
The Covid-19 pandemic has brought the influence of scientific research in informing data-driven policies to the forefront. Lockdown policies as well as Covid-19 vaccination rollouts became prominent social events globally. The way that the pandemic was responded to by governments and international scientific bodies, such as the World Health Organisation, highlighted the convergence between value-laden politics and scientific research (Sebeelo, 2023). This overt convergence between politics and science gave rise to public criticism which can be observed in Tweet B. The political/democratic discourse utilised by Tweet B is a result of a political ideological state apparatus (Althusser, 2006). Democratic political ideology in Tweet B subjects people affected by Covid-19 restrictions and vaccination campaigns as having the right to protest and to make informed decisions about whether or not to vaccinate. The author's large Twitter following presents him as a social media influencer. Influencers who overtly adopt a political ideology have the power to spread information to a broad audience and to initiate political activism through the utilisation of a political discourse (Weismueller et al., 2021). Hofmeyr's status as an influencer allows him to use his massive online audience as a resource to discursively exercise power by perpetuating a vaccine hesitant stance that aligns with his personal interests (van Dijk, 1995). Hofmeyr subverts the legitimacy of the dominant ideology of evidence-based medicine with the counter ideology of the political ISA. Evidence-based medicine ideology prioritises the prevention of illnesses but negates people's subjective values (Karunatilake, 2021). Hofmeyr's Tweet could be regarded as having the potential to persuade many people to agree with the influencer's vaccine hesitant stance. This kind of persuasion may be deemed as problematic if readers of Hofmeyr's Tweet do not possess their own counter-ideologies but undiscerningly adopt Hofmeyr's arguments due to the musician's elevated social status (van Dijk, 1995).

Tweet B's 'evidence' for adopting a hesitant stance to vaccination takes the form of a collage which utilises a scientific discourse. This scientific discourse is a function of the educational ideological state apparatus (Althusser, 2006). Hofmeyr ultimately offers a right-wing agenda that appears to be well-informed due to the seeming range of articles he collages. Tweet B curates the information presented in the collage to demonstrate an alternative perspective that questions the legitimacy of science due to conflicting scientific results. Contradictory findings are not uncommon in research due to differences in methodologies, sampling strategies and ideological positions assumed and used across studies. However, the notions of universalism and objectivism which are commonly associated with positivist research give

rise to the expectation that research findings should be consistent across studies. In addition, the studies referred to in the collage do not appear have been published in peer-reviewed journals. Nonetheless, Tweet B attempts to educate and inform its audience about Covid-19 vaccines and policies through the utilisation of a scientific discourse that constructs a vaccine hesitant argument.

The curation of a collage consisting of news headlines in Tweet B draws on a media discourse that is a function of the communications ideological state apparatus (Althusser, 2006). Power can be exercised through the adoption of a communications ideological state apparatus. Hofmeyr's selective curation of information communicates a vaccine hesitant message, which is disseminated to a platform with over 300 000 potential recipients that may be considered an exercise of power-knowledge (Foucault, 1980; Roberts, 2005). The communication of a vaccine hesitant message is exercised through a media discourse that has the potential to influence further knowledge production through public engagement with Tweet B.

Comment B.1



Textual analysis of Comment B.1

Sifiso Mkhize authored Comment B.1 on the second of August 2021, in response to Steve Hofmeyr's Tweet B. Mkhize utilises biological, medical/scientific, and political discourses in their comment. The text's references to death are indicative of a biological discourse. The references to health, "covid", as well as "vaccinated" and "unvaccinated" people are indicative of a medical-scientific discourse. A political discourse is also drawn on by Mkhize and this may be observed by the commentator's reference to the "eff" – a South African left-wing political party known as the Economic Freedom Fighters (Jarstad, 2021). Mkhize

utilises a selection of discourses that were initially observed in the textual analysis of Hofmeyr's Tweet B.

Sifiso Mkhize constructs Steve Hofmeyr as naïve due to Tweet B's vaccine hesitant stance - which is based on misinformation. This may be observed in Comment B.1's inclusion of two rhetorical questions: "How many unvaccinated people… have died of covid?" and "How many vaccinated people died after getting the jab?". These questions serve to interrogate the logic of the evidence that is provided in Tweet B's collage. This is further substantiated when Mkhize states that "The Nobel laureate didn't actually say what he is alleged to have said, double check it please". Sifiso Mkhize recontextualises the scientific discourse initially utilised by Hofmeyr in order to exert power over the influencer and to reproduce the dominant ideology of evidence-based medicine (Fairclough, 2013; Karunatilake, 2021). Writing from a critical linguistic tradition, Wodak (2011) observes that such rhetorical devices are used by social actors to compete for ideological dominance. Mkhize constructs themselves as better informed when compared to Steve Hofmeyr. Sifiso Mkhize uses biological, medical-scientific, and political discourses to criticize Steve Hofmeyr's vaccine hesitant message, and by extension, adopts an accepting stance towards Covid-19 vaccination. Mkhize uses the same discourses that were initially utilised by Hofmeyr in Tweet B to ultimately subvert Hofmeyr's argument, and to promote vaccine acceptance. Comment B.1 does not provide any statistics or answers to the rhetorical questions posed, and it does not state what "The Nobel laureate" said. Therefore, Mkhize does not attempt to educate Hofmeyr by providing the accurate scientific information, but rather questions and criticises the logic of Hofmeyr's arguments presented by Tweet B.

In addition, the commentator constructs themselves as respectfully critical towards Steve Hofmeyr and this may be observed with the inclusion of the word "please" after the comment requests that the author of Tweet B fact-checks for the legitimacy of the information that is included in the collage. Mkhize addresses the author of Tweet B as "Oom Steve". "Oom" is the Afrikaans word for uncle, and this type of address is typically used to show respect. It also shows that the commentator is aware of Steve Hofmeyr's Afrikaans background and that the commentator is further emphasising Hofmeyr's ethnicity to the broader Twitter audience. The capitalisation of "Oom" mid-sentence further supports the argument that Comment B.1 attempts to convey a respectfully critical tone. On the other hand, the commentator could have addressed the Afrikaans musician as "Oom Steve" to convey sarcasm. The sarcastic humour potentially domesticates Hofmeyer and distances him from scientific knowledge.

This may be observed with analysis of the full concluding sentence of Comment B.1: "That is so eff Oom Steve". The Economic Freedom Fighters, commonly known as the EFF, are a radical pan-African political party in South Africa. Comment B.1 uses lowercase letters for "eff", and uses "eff" as an adjective to describe the misinformation that is presented in Tweet B. It may be concluded that Comment B.1 criticises the misinformation in Tweet B by likening it to the EFF. This reference to the EFF could have served to construct an insult toward Tweet B's Afrikaans author, because the EFF gained notoriety for singing a song with the lyrics "Kill the Boer" (Jarstad, 2021).

Processing analysis of Comment B.1

Mkhize directly addressed Steve Hofmeyr as the target audience of the text by engaging with Tweet B's comments section. This means that Mkhize could have anticipated that members of the broader public could read and engage with the comment, even though Mkhize received no response. Had Mkhize sent Comment B.1 in the form of a direct message to Steve Hofmeyr, then the text would be deemed as part of a private interaction between the two parties. However, Mkhize makes a public statement about Covid-19 misinformation by disseminating the text on a publicly accessible comments thread. The abundance of information and the speed with which intelligence is communicated on social media platforms like Twitter, has led to an 'infodemic' where it has become difficult to distinguish between legitimate and false information (Durmaz & Hengirmen, 2022; Wang et al., 202). Comment B.1 addresses the problem of Covid-19 misinformation through its critique of Tweet B's selectively curated 'evidence' which Mkhize constructs as illogical. Comment B.1 implicitly states that there are very few deaths due to Covid-19 vaccination when compared to deaths by contagion of unvaccinated people. This claim holds legitimacy because as of August 2022, only one death has been directly linked to Covid-19 vaccination in South Africa (Ellis, 2022). The deceased person developed Guillain-Barre Syndrome – a rare side-effect of vaccination (Hasan et al., 2021).

Social analysis of Comment B.1

Sifiso Mkhize's construction of Comment B.1 may be deemed as a social action that exercises power over Tweet B (Gallagher, 2008). Although the author of Tweet B may be considered an influencer who exercises social media authority by having a large following; Mkhize constructs implicit knowledge about the safety of Covid-19 inoculations that subverts the vaccine hesitant argument communicated by Tweet B (Roberts, 2005; Weismueller et al.,

2022). Mkhize additionally exercises power-knowledge over Steve Hofmeyr, by likening Hofmeyr's vaccine hesitant argument to a pan-African political party with the use of a political discourse. Therefore, Mkhize demonstrates knowledge of the political polarisation between the EFF and Afrikaners who subscribe to right-wing politics (Jarstad, 2021).

Mkhize uses biological and medical-scientific discourses in their comment to reproduce the dominant ideology of evidence-based medicine (Karunatilake, 2021). This ideology negates people's subjective experiences and values. The ideology of evidence-based medicine rather prioritises the efficacy of treatments and preventative measures such as vaccines (Karunatilake, 2021). Comment B.1 constructs reality through its adoption of evidence-based medicine ideology. This may be observed when the text attempts to evaluate the efficacy of Covid-19 vaccines by alluding to the importance of statistical evidence, such as the number of deaths due to Covid-19 when compared to the number of deaths following vaccination. Evidence-based medicine ideology may be deemed as a function of both cultural and educational ideological state apparatuses (Althusser, 2006). This is because the credence afforded to scientific evidence has become a dominant value in medical and academic institutions (Karunatilake, 2021).

Comment Thread B.2



Textual analysis of Comment Thread B.2

Comment thread B.2 consists of four interactive comments authored by two commentators (Swifty01 and Fanta Fan) between the second and the third of August 2021. Swifty01 initiated the discussion with Comment B.2.1 which was authored in response to Tweet B "Replying to @steve_hofmeyr". Comment B.2.2 was constructed by Fanta Fan in response to Comment B.2.1. Swifty01 then replied to Fanta Fan with Comment B.2.3 and finally, Fanta Fan ended the discussion with Comment B.2.4. Swifty01 draws on scientific and biological discourses in Comment B.2.1. This may be observed with the text's utilisation of the phrase's "trend", "Fully vaccine people", "extremely ill", and "dying from Covid or side effects". The text uses the phrases "my wife", "best friend", and "mom", which demonstrates that a familial discourse is employed to provide anecdotal evidence for the alleged adverse side-effects of Covid-19 vaccines. Comment B.2.1 also uses an Afrikaans discourse "EK WAG MAAR !!" which can be loosely translated to 'I will wait'. This echoes Hofmeyr's assertion that he will wait it out. Fanta Fan responds to Swifty01's assertion that getting vaccinated against Covid-19 may lead to contagion by drawing on a medical-scientific discourse in Comment B.2.2 "the vaccine takes +-14 days to reach efficacy". Swifty01 constructs

Comment B.2.3 to respond to Fanta Fan by using the same medical-scientific discourse as evidenced with the phrases “adverse effects” and “double vaccinated” to negate the efficacy of Covid-19 vaccines. Fanta Fan then utilises an irrationality discourse in Comment B.2.4 to dismiss the claim that people accurately report deaths due to the Covid-19 vaccine “people report… things without fully considering what they are reporting”. Here, the rebuttal appeals to common sense derived from the evidence of science.

Comment B.2.1 and Comment B.2.3 were constructed by the same author – Swifty01. Swifty01 expresses alignment with Hofmeyr’s vaccine hesitant position by stating “I feel the same way” in Comment B.2.1. In addition, the commentator constructs themselves as aware of Steve Hofmeyr’s Afrikaans background which is perhaps indicative of the commentator’s own Afrikaans identity. This is observed through Comment B.2.1’s final sentence “EK WAG MAAR !!”, which translates to ‘I’m just waiting’ in English. This notion of waiting and delay is further indicative of a vaccine hesitant stance constructed by Swifty01. Comment B.2.1 constructs Tweet B as legitimate and trustworthy. Both comments B.2.1 and B.2.3 construct people who have received two doses of a Covid-19 vaccine as vulnerable to extreme illness and death.

Comments B.2.2 and B.2.4 were authored by the user Fanta Fan, and these texts oppose the vaccine hesitant stance constructed by Swifty01’s comments. Fanta Fan constructs Swifry01 as unknowledgeable about how a Covid-19 vaccine could become an effective preventative measure against contagion. This is done through Comment B.2.2’s assertion that “the vaccine takes +-14 days to reach efficacy”, which constructs people who have died of Covid-19 following inoculation as people who have contracted the virus and died before the vaccine became effective – rather than as a side effect of vaccination. Fanta Fan’s Comment B.2.4 constructs people who have reported severe side effects and deaths due to the Covid-19 vaccine as irrational and impulsive because “people report…things without fully considering what they are reporting”. By extension, the commentator constructs themselves as knowledgeable, thoughtful, and rational.

Swifty01’s use of scientific and biological discourses in Comment B.2.1 is in direct response to Hofmeyr’s Tweet B, which initially used scientific and biological discourses. The word “trend” imitates scientific notions of prediction in Tweet B’s collage. Swifty01’s assertion that “Fully vaccine people [are] getting extremely ill and dying from Covid or side effects” aligns with one of the headlines included in Tweet B’s collage “BREAKING NEWS: All

vaccinated people will die within 2 years". Swifty01 substantiates the vaccine hesitant view constructed by Hofmeyr through their expression of agreement "I feel the same way," as well as with the provision of anecdotal evidence. Swifty01'rebuttal of Fanta Fan's supportive argument of vaccine efficacy extends Swifty01's vaccine hesitant position. On the other hand, Fanta Fan constructs a stance which promotes Covid-19 vaccine acceptance in Comment B.2.2 and Comment B.2.4.

Therefore, Comment thread B.2. is constructed of two opposing positions in the vaccine debate. However, in Comment B.2.3 Swifty01 begins the text by writing "very true," before constructing a text that disagrees with Comment B.2.2. Fanta Fan follows a similar pattern with Comment B.2.4 by starting the text with "Yes," before disagreeing with Comment B.2.3. Both the phrase "very true" and use of the word "Yes", may be deemed as expressions of agreement in the context of a textual debate. Although Fanta Fan and Swifty01 construct opposing positions in the Covid-19 vaccine debate, they both use expressions of agreement in Comments B.2.3 and B.2.4. These expressions of pseudo-agreement may have been included in the comments to avoid engaging in direct conflict about the topic. On the other hand, it may be argued that these expressions of agreement are constructed as practices for recruiting the previous argument in support of the present argument being made, contrary to its poster's initial meaning. Therefore, agreements make use of prior discursive material to forward an opposing agenda.

Processing analysis of Comment Thread B.2

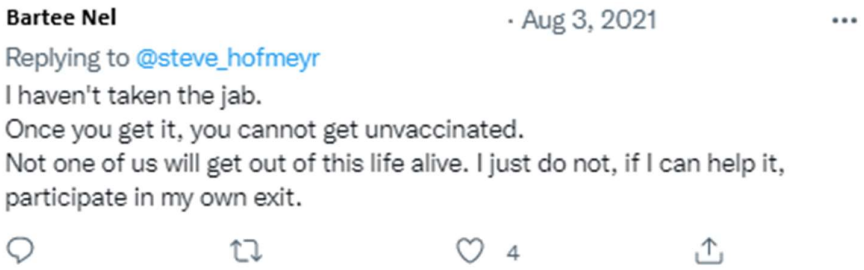
Comment thread B.2 consists of four interactive comments authored by two commentators, Swifty01 and Fanta Fan. The comment thread shows two opposing stances toward vaccination that are constructed based on different information sources. Comments B.2.1 and B.2.3 use a familial discourse to provide anecdotal evidence to construct a vaccine hesitant argument. On the other hand, Comments 2.2 and 2.4 rely on the utilisation of a medical-scientific discourse which undermines the legitimacy of the anecdotal experiences relating to vaccine hesitancy.

Social analysis of Comment Thread B.2

A familial discourse is used by Swifty01 to construct support for a vaccine hesitant stance through the provision of anecdotal evidence. The relaying of Covid-19 vaccine experiences of friends and family may be considered a function of the familial ideological state apparatus (Althusser, 2006). It lends proximity and legitimacy to the commentator (van Dijk, 1995).

Literature on vaccine hesitancy has identified people's reliance on learning about vaccines through their familial and social networks as a potential contributor to the adoption of a distrustful stance towards inoculation (Schwartz, 2012). However, it should not be considered surprising that people learn about vaccines from their social networks rather than solely by reading scientific journals. Afterall, the average person is less likely to read journal articles than they are to engage with social media. People function in the social world through interactive verbal and written communication acts, which may be argued to result in the utilisation of discourses that are shaped by ideologies (Alvesson & Karreman, 2000). An ideology of evidence-based medicine would prioritise information sources that rely on empirical evidence, whilst negating any personal experiences that are not supported by science (Karunatilake, 2021). It is through this ideology that Fanta Fan's Comments B.2.2 and B.2.4 discursively undermine the legitimacy of anecdotal experiences in order to reproduce the dominant medical-scientific discourse that advocates for vaccine acceptance. Therefore, Fanta Fan's comments uphold the educational and cultural ideological state apparatuses, which propagate the socially constructed value of the medical-scientific discourse by subjectivising opponents of this discourse as irrational and inconsiderate.

Comment B.3



Textual analysis of Comment B.3

Bartee Nel constructed Comment B.3 on the third of August 2021, in response to Tweet B which was authored by Steve Hofmeyr. The commentator draws on medical-scientific, biological, and spatial discourses. The text's inclusion of the word "unvaccinated" and its reference to the "jab", which is a colloquial term that was adopted for Covid-19 vaccines, provide evidence for a medical-scientific discourse. The comment's construction of human mortality is indicative of the utilisation of a biological discourse, and this may be observed in the sentence "Not one of us will get out of this life alive". Additionally, a spatial discourse is

utilised for the metaphorical representation of life as a physical space. Life is constructed as a space that has an "exit" and something that is ultimately possible to "get out" of through the act of dying.

Bartee Nel textually constructs people as mortal beings who cannot escape death. The author does not exclude themselves from this inevitable fate but rather appeals to a sense of collective fate with the phrase "Not one of us". However, the inevitability of death does not stop Bartee Nel from attempting to delay it. The text suggests that through rejection of inoculation, death can potentially be avoided: "I haven't taken the jab… I just do not, if I can help it, participate in my own exit". The commentator implicitly suggests that those who are willing to receive a Covid-19 vaccine are potentially willing to "participate in [their] own exit" - meaning their death. Here, Bartee Nel contends that once administered, the vaccine cannot be undone and is akin to self-annihilation. However, Nel does not directly state that getting immunised is suicide, but rather uses the discursive strategies of metaphor and insinuation (Huckin, 1997). Metaphor could have been used by the author to construct a euphemism of death as an exit because the words 'death' and 'suicide' have negative connotations both locally and internationally. In addition, Nel implicitly insinuates that people who are willing to receive a Covid-19 vaccine are willing to commit suicide. Insinuation is often used as a discursive strategy to avoid critique through plausible deniability (Huckin, 1997). Therefore, the commentator adopts a vaccine hesitant stance that is justified by the concern of finality regarding vaccination because "once you get it, you cannot get unvaccinated". Furthermore, Bartee Nel constructs Covid-19 vaccines as potentially fatal and those adopting a pro-vaccination approach as essentially willing to commit suicide by participating in their death.

Processing analysis of Comment B.3

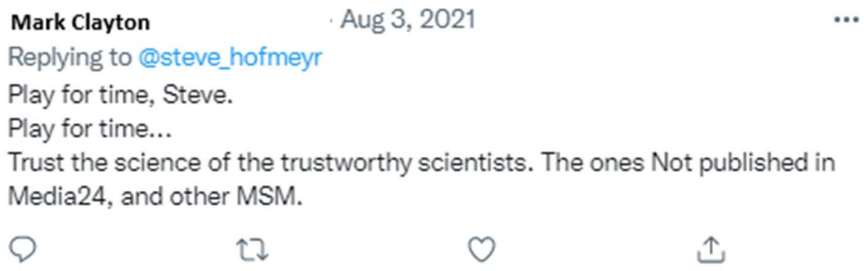
Comment B.3 was produced and disseminated on Twitter on the third of August 2021. This period was characterised by South Africa's Covid-19 vaccination rollout that occurred during the second year of the Covid-19 pandemic (Cooper et al., 2021; Gray, 2021). Since the start of the pandemic, the number of deaths due to Covid-19 was regularly reported by the media, using conventional platforms, such as radio and television, as well as digital social media platforms. The emphasis placed on death and mortality in Comment B.3 is unsurprising because the occurrence of the pandemic shone a spotlight on mass death and human vulnerability. Uncertainty surrounding the shifting Covid-19 regulations as well as the

implementation of novel vaccines resulted in the rise of suspicions about institutions and practices traditionally construed as trustworthy (Ndwandwe & Wiysonge, 2021; Sebeelo, 2023). It was in this context that Bartee Nel constructed and disseminated Comment B.3 for a public Twitter audience.

Social analysis of Comment B.3

Bartee Nel uses biological, spatial, and medical-scientific discourses to construct a vaccine hesitant position. The author utilises spatial and biological discourses to construct life as a physical space in which human beings are mortal. A medical-scientific discourse is used to construct vaccines as permanent and potentially fatal. Nel constructs themselves as occupying the subject position of an 'anti-vaxxer' because the commentator openly states their vaccination status by writing "I haven't taken the jab". Through the discursive, and likely physical act of refusing to receive a Covid-19 vaccination, Bartee Nel resists the dominant ideology of evidence-based medicine – an ideology that prioritises the prevention of illnesses but negates people's subjective values (Karunatilake, 2021). For example, the value of deeming suicide as an unfavourable act, that should be avoided at the risk of potentially contracting Covid-19, is illustrated in Comment B.3. The author refuses to "participate in [their] own exit", implying that those who are willing to receive a Covid-19 vaccine are willing to risk committing suicide. The author does not overtly state this but rather justifies their own vaccine hesitancy through their value of deeming suicide as unfavourable. This allusion to suicide may be indicative of a cultural or religious ideological state apparatus (Althusser, 2006). Suicide is generally frowned upon in society and it is considered a taboo. This may stem from religious beliefs such as those found in Christianity, Islam, and Judaism. It cannot be known whether Bartee Nel is religious, however, the connotation that accompanies the concept of suicide by vaccination as worse than death by Covid-19 contraction is indicative of cultural and religious ideology. The author exercises power-knowledge by discursively refusing vaccination to construct the idea that vaccine acceptance is akin to suicide acceptance. Even though death is constructed as inescapable, Bartee Nel constructs vaccine rejection as a means to avoid suicide; thereby reclaiming some power over mortality because one cannot avoid dying but one can avoid committing suicide.

Comment B.4



Textual analysis of Comment B.4

Comment B.4 was constructed by Mark Clayton on the third of August 2021, in response to Tweet B which was authored by Steve Hofmeyr. Clayton draws on scientific and media discourses in their construction of Comment B.4. This may be observed in reading the following phrases of the text: "Trust the science…trustworthy scientists… Not… Media24, and other MSM". 'MSM' is considered an abbreviation for mainstream media. The utilisation of these discourses is in direct response to the stimulus text, Tweet B, which also used media and scientific discourses. Mark Clayton constructs Steve Hofmeyr as misguided and unknowledgeable about science and vaccines. This is because Mark Clayton instructs Steve Hofmeyr to "Trust the science of trustworthy scientists… Not published in Media24, and other MSM". The collage in Tweet B includes sources from France24, the New York Post, and Fox 13 Tampa Bay to construct a vaccine hesitant argument. Therefore, Mark Clayton criticises the reliability of Steve Hofmeyr's sources as well as the vaccine hesitant argument constructed in Tweet B. Mark Clayton constructs himself as knowledgeable about evaluating trustworthy sources of scientific findings, but the author does not mention where people can find these published sources of trustworthy science. Ultimately, science is constructed as reliable, and the media are positioned as untrustworthy. Comment B.4 essentially uses the same scientific and media discourses as Tweet B to criticise Steve Hofmeyr's vaccine hesitant stance and to promote Covid-19 vaccine acceptance. Mark Clayton uses repetition to subvert the validity of Steve Hofmeyr's argument and to convey sarcasm. Evidence for sarcasm may be observed in Clayton's repetition of the phrase "Play for time, Steve. / Play for time…" – a phrase which was initially written by Steve Hofmeyr in Tweet B. This is sarcastic because "Play for time" suggests the promotion of a delay for vaccination, however, following this repetition Mark Clayton immediately criticises this stance by stating "Trust the science of trustworthy scientists". The repetition of words or phrases discursively functions to construct a degree of emphasis through foregrounding (Huckin, 1997; van Dijk. 1995). In

this instance, Clayton emphasises Hofmeyr's vaccine hesitance by repeating Hofmeyr's phrase "Play for time".

Processing analysis of Comment B.4

Comment B.4 was produced and disseminated on Twitter on the third of August 2021 during South Africa's Covid-19 vaccination rollout (Cooper et al., 2021a). The comment was constructed by Mark Clayton in response to Steve Hofmeyr. Clayton directly addresses the author of Tweet B as "Steve". This suggests a degree of familiarity with Steve Hofmeyr which may be assumed to have been constructed through social media exchanges rather than through personal familiarity. Mark Clayton publicly critiques Steve Hofmeyr's Tweet by directly responding to it with the construction of Comment B.4. The context of the 'infodemic' that has arisen due to the digital age is also significant because Mark Clayton refers to the issue of sourcing reliable scientific information (Durmaz & Hengirmen, 2022; Wang et al., 2021).

Social analysis of Comment B.4

Mark Clayton draws on the same scientific and media discourses, initially utilised in Tweet B, to construct a position of vaccine acceptance that is presented as knowledgeable and educated. The scientific discourse may be deemed a function of the educational ideological state apparatus (Althusser, 2006). Educational institutions that have been influenced by Western schooling systems tend to favour knowledge claims produced by the scientific method as superior to other forms of knowledge. Due to South Africa's history of colonisation, its present-day education system has been influenced by the West, and the use of the English language throughout many schools and universities is just one indication of this. In line with this educational ideology, it may be argued that Mark Clayton attempts to educate Steve Hofmeyr by criticizing the information shared in mainstream media outlets as untrustworthy with the utilisation of media discourse. A media discourse may be deemed to be a function of the communications ideological state apparatus; and the influence of information shared by the media is acknowledged but it is constructed as unreliable by Comment B.4. (Althusser, 2006). The potential for interactive communication on social media that allows for the very construction of Comment B.4 in response to Tweet B may also be considered a function of communications ideology.

Mark Clayton exercises power-knowledge through the adoption of a communications ideological state apparatus that ultimately reproduces dominant educational ideology

(Roberts, 2005). Mark Clayton exercises power-knowledge over Steve Hofmeyr because the author possesses information that the influencer does not. Namely, the author demonstrates an implicit knowledge about peer-reviewed sources of scientific information but chooses not to share where Hofmeyr, or others possessing a similar vaccine hesitant position, could seek more reliable sources of information. Therefore, the discursive act of gatekeeping crucial information sources reveals an unequal power dynamic between those possessing knowledge about reliable sources of information and those who do not. Knowledge about scientific journals and the peer-review process is typically gained at the tertiary education stage. Therefore, those who did not attend university may understandably question the trustworthiness of science. If people are not informed about the difference between a study that is published in a peer-reviewed journal versus a sensationalist news article, then the conflation of these two different information sources as equally reliable may occur.

Vaccination is a Touchy Subject

Social media influencers have the power to spread information and discourses to massive online audiences for personal gain (Freberg et al., 2011; Srour et al., 2022; Weismueller et al., 2021). However, the ability of an influencer to instantaneously shape people's ideological leanings and stances towards Covid-19 vaccination is limited by the fact that their followers are active participants in the social construction of knowledge, and they may possess their own counter-ideologies (van Dijk, 1995). This was demonstrated with the exploration of Steve Hofmeyr's vaccine hesitant Tweet and the comments that followed – which demonstrated contending positions of both suspicion and acceptance of vaccination in response to Hofmeyr. In the following section, we explore a stimulus Tweet by another social media influencer and actor, Pearl Thusi, and five comments by Twitter users that responded to her. These are by users who go by the names Change the Movement, Clari X, Logos, A. R. Ramey, and Noah. Like the preceding analytical frame used, we begin with a textual analysis, followed by a process analysis, and conclude with a social analysis. This approach relies on Fairclough's critical discourse analysis framework.

Stimulus Text: Tweet C



Textual analysis of Tweet C

Tweet C was constructed on the 16th of July 2021 by Pearl Thusi – a South African actress and celebrity with over three million followers on Twitter. Pearl Thusi draws on medical-scientific and moral discourses. Discourses may be defined as forms of speech or written text that are closely linked to social practices and/or social institutions (Alvesson & Karreman, 2000; Fairclough, 2013). A medical scientific discourse may therefore be defined as the discursive representation of medical-scientific practices, such as the textual representation of the social practice of receiving an inoculation against Covid-19. The text's reference to people "being vaccinated" provides evidence for a medical-scientific discourse. Moral discourse is also utilised, and this may be observed in Thusi beginning her question with "Is it ok that people…?!". Questioning whether something is considered socially acceptable or just provides evidence for a moral discourse at work (Kleven, 1993). Discourses are also largely ideological and there is a multifaceted convergence between language, social practices, ideology, and power (Fairclough, 2013; van Dijk, 1995; Wodak, 2011). In this way, a moral discourse may be defined as a textual representation that is indicative of the socially constructed practices and beliefs associated with morality - which are closely associated with liberal ideology (Kleven, 1993). In addition, the word "judgy" is used in the construction of Tweet C – which has a negative connotation and references the characteristic of being judgemental towards others. Pearl Thusi labels people who are accepting of the Covid-19 vaccine as "judgy" or judgemental towards those who are vaccine hesitant in Tweet C (Huckin, 1997). Although Covid-19 is not explicitly mentioned in the Tweet, it may be reasonably inferred that Thusi was specifically referring to Covid-19 vaccines due to the public debate and controversy about Covid-19 vaccination during South Africa's Covid-19 vaccine rollout. The author constructs the judgement imposed on vaccine hesitant people by those who are pro-vaccination as extreme through the discursive strategy of topicalisation –

which functions to draw the reader's attention to a particular concept (Huckin, 1997). This may be observed with the repeated use and emphasis placed on the word "intense". The degree of judgement expressed by "people who get vaccinated" is described as "so intensely judgy" and "pretty intense". The use of an exclamation mark following the construction of Thusi's question adds an emotive emphasis to the question of hypercriticism and fairness "Is it ok that people…?!". Therefore, the author discursively constructs themselves as holding people who are pro-vaccination accountable for the extreme judgement, they supposedly impose on those who are vaccine hesitant.

Pearl Thusi's Tweet constructs an ambiguous stance in the Covid-19 debate. On the one hand, the text constructs people who are pro-vaccination as extremely judgemental. This places those who choose vaccination as less socially likable because the attribute of being judgemental is framed in a negative light. The author critiques the hypercriticism expressed by vaccine accepters through the construction of a moralistic question posed to their Twitter following. Ironically the question "Is it okay that people who get vaccinated are so intensely judgy?!" stereotypes and casts judgment on people who are accepting of vaccination. Thusi uses the discursive strategy of presupposition to construct a generalised assumption that all vaccinated people are judgemental (Huckin, 1997). This would categorise Tweet C as constructing a vaccine hesitant stance. On the other hand, in conclusion of Tweet C, Thusi states "(This is not me saying I'm against being vaccinated.)". The author does not directly state that they are pro-vaccination either. In addition, she does not disclose whether or not she has taken the vaccine. The omission of a clear stance in favour or against vaccination could be indicative of the role of responsibility that may be felt by a social media influencer with a mass Twitter following. Alternatively, this ambiguity could be due to an acknowledgment of potential public scrutiny that could ensue following the overt construction of a vaccine hesitant stance (Huckin, 1997).

Processing analysis of Tweet C

Tweet C was produced and disseminated on Twitter on the 16th of July 2021 during South Africa's Covid-19 vaccination rollout (Cooper et al., 2021a). The Tweet was authored by Pearl Thusi – a South African actress and celebrity with over three million followers on Twitter. The magnitude of the author's Twitter following additionally categorises them as a social media influencer. The question posed in Tweet C by Thusi is not a rhetorical one - it is

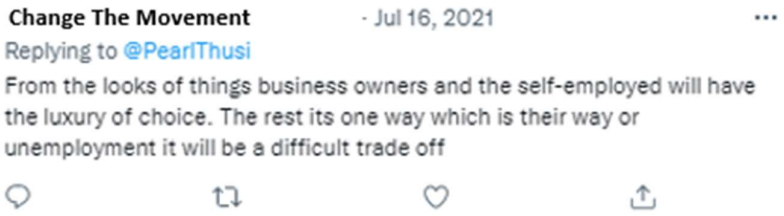
rather constructed within a context that aims to foster a public debate and this enables online social interaction between influencers and ordinary Twitter users.

Social analysis of Tweet C

Moral discourse is used in Tweet C to construct people who are considered pro-vaccination as extremely judgemental towards those who reject Covid-19 vaccination. The concept of morality may be defined as a dynamic collection of socially negotiated principles that are concerned with social justice and social responsibility (Dew et al., 2015; Kleven, 1993). Even though the meaning of moral or immoral is socially negotiated, there is an unequal distribution of power regarding who gets to decide what is considered just and who is responsible for ensuring that there is fairness in society (Kleven, 1993). Therefore, the moral discourse utilised by Thusi may be considered a dominant discourse because it illustrates the unequal balance of power regarding the control that medical-scientific institutions exercise for dictating the terms of morality in the context of the Covid-19 pandemic (Fairclough, 2013; van Dijk, 1995). People who were inoculated against the coronavirus were framed as contributors towards herd immunity – ultimately gaining the social approval of the scientific institutions that promoted vaccination as a healthy and moral social action (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). The conceptualisation of vaccination as a moral issue became evident with the promotion of Covid-19 vaccination for young people with no comorbidities. Even though young people were not considered to be at-risk for severe infection, the reduced likelihood of transmitting the virus to elders or throughout wider society by vaccinating was constructed as a collective responsibility (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). If Pearl Thusi's Tweet is read in this context, then it is plausible that people deemed as vaccine hesitant could have been socially framed as making an unhealthy choice that was ultimately immoral according to those who support vaccination. Pearl Thusi's construction of extreme judgement being directed towards unvaccinated people by those who are vaccinated may be related to the Foucauldian concept of governmentality (Dew et al., 2015). This suggests that social behaviour related to health practices, such as the practice of vaccination, is not only controlled by the state but also by people's regulation of others in everyday life (Dew et al., 2015).

However, Pearl Thusi also casts judgement by questioning the fairness and morality of the judgement that is passed by people who are accepting of vaccines. This moral discourse may be deemed to be a function of liberal ideology and acts as a counter-ideology to the dominant ideology of evidence-based medicine (Karunatilake, 2021; Kleven, 1993; van Dijk, 1995). A tension between the liberal ideals of individual autonomy and social responsibility is illustrated in Thusi's Tweet (Dew et al., 2015; Kleven, 1993). Those who are suspicious of vaccination have the right to bodily integrity, whereas people who are accepting of vaccination have a right to freedom of speech (Government of South Africa, 2023; Kleven, 1993). This kind of moral ideological tension is characteristic of liberal ideology and has previously been debated by scholars (Kleven, 1993; Phelan & Dawes, 2018). Therefore, the institutional frameworks encompassing moral discourses and liberal ideology would be the cultural ideological state apparatus and the political ideological state apparatus (Althusser, 2006). Being "judgy" is culturally negotiated as a negative characteristic and liberalism is bound to democratic political ideals and institutions (Kleven, 1993; Phelan & Dawes, 2018). In sum, moral discourse in this context may be read as arising from an unequal power dynamic between those who choose to vaccinate and those who choose not to vaccinate (Kleven, 1993). Pearl Thusi questions the fairness, and thus the morality, of passing judgement toward those refusing vaccination. However, the author does this by blaming all people who vaccinate for this injustice rather than holding specific individuals accountable. This results in a distortion of reality which is ultimately characteristic of all ideologies including moral ideology (Kleven, 1993; Nielsen, 1980).

Comment C.1



Textual analysis of Comment C.1

The Twitter user "Change The Movement" constructed Comment C.1 on the 16th of July 2021 in response to Tweet C – which was authored by Pearl Thusi. The commentator draws

on several discourses that are distinct from the ones utilised in the stimulus text, Tweet C. An entrepreneurship discourse is used to construct "business owners and the self-employed" as having the freedom of "choice" regarding vaccination. Although vaccination is not explicitly mentioned, it may be inferred that the phrase "luxury of choice" is referring to people's ability to choose or reject vaccination because the topic of the stimulus text was about Covid-19 vaccination. An employability discourse is used to construct those working for corporations and organisations as restricted in their choice to vaccinate because "its one way which is their way or unemployment". This allusion to the restriction of choice for the employed, and the presence of the "luxury of choice" for entrepreneurs are indications of a discourse of choice. It is interesting that the word "luxury" is used to describe the ability to choose instead of the more conventional phrases 'freedom of choice' or 'right to choose'. Luxury has the connotation of affluence, which is possessed by a few rather than afforded to the many. Therefore, the ability to reject vaccination is constructed as a privilege afforded to entrepreneurs rather than a right for all South Africans.

The author constructs themselves as concerned about the potential implementation of mandatory vaccination policies in the workplace, which would ultimately infringe upon employees' freedom to choose whether or not to get vaccinated against Covid-19. Comment C.1 constructs employees as facing a "difficult trade-off" between vaccination or "unemployment". Therefore, vaccine hesitant people who are employed in organisations which adopt a mandatory vaccination policy are forced to choose between their bodily integrity and their livelihood. On the other hand, "business owners and the self-employed" are constructed as having more freedom because they do not need to comply with the requirements and policies of employers. Comment C.1 does not respond to the question posed by Pearl Thusi about whether vaccinated people are judgemental. Instead, the author uses the comment thread section of Tweet C as a platform to present an argument that illustrates the disparity between the employed and the self-employed within the Covid-19 vaccination debate in South Africa. It may be argued that Comment C.1 constructs a vaccine hesitant position by emphasising individual choice – which would not be afforded to employees with the adoption of mandatory vaccination policies in the workplace.

Processing analysis of Comment C.1

Comment C.1 was produced and disseminated on Twitter on the 16th of July 2021 during South Africa's Covid-19 vaccination rollout (Cooper et al., 2021a). The comment was

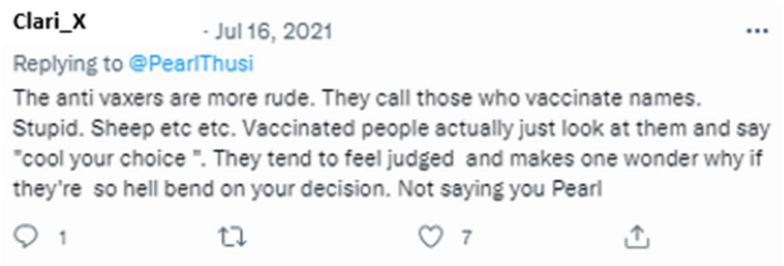
constructed in response to Tweet C, which was authored by Pearl Thusi. Throughout 2021 and 2022, various corporations implemented mandatory Covid-19 vaccination policies for their staff, meaning that employees either had to get vaccinated or they had face the risk of retrenchment if they could not provide a 'valid' or acceptable reason for exemption (Broughton, 2022; Khumalo, 2021). The possibility of retrenchment over vaccination refusal could be read as especially daunting in the South African context. The county's high unemployment rate classifies those who are both employed as well as self-employed as occupying a privileged socio-economic position. Unemployment damages personal and familial wellbeing and it is also a known cause of poverty, and inequality, as well as exposes people to violence (Wakefield, 2022).

Social analysis of Comment C.1

The utilisation of choice, entrepreneurship, and employability discourses in Comment C.1 are indications of a liberal ideology at work. Liberal ideology values a market-driven capitalist economy, autonomy, and freedom (Kleven, 1993; Phelan & Dawes, 2018). Comment C.1's construction of choosing unemployment as a difficulty is indicative of the author valuing employment in a market-driven capitalist economy, thereby adopting a liberal ideology. The notion of employers and corporations implementing mandatory vaccination policies is critiqued because it is constructed as coercive. People are forced into making a "difficult trade-off" between inoculation and losing their livelihoods within a context of high unemployment. This type of coercion is rejected in liberal ideology because it values personal choice over any infringement on autonomy (Phelan & Dawes, 2018). Tension is constructed when liberal ideals operate within a neoliberal economic landscape. This is because the implementation of mandatory vaccination policies in the workplace may be deemed neoliberal in the sense that the efficiency of the market-driven economy is prioritised over personal choice (Phelan & Dawes, 2018). It may be argued that mandatory vaccination policies were implemented by corporations to return to pre-pandemic working conditions and to enhance profit and capitalist accumulation following the negative economic impact in the wake of a series of hard lockdowns. Therefore, the prioritisation of the return of the market to pre-pandemic conditions may be deemed as resulting from a neoliberal ideal because it coercively infringes on employees' bodily integrity and personal choice to vaccinate. In addition, the reliance on capitalist efficiencies to regulate citizens might be read as governments succumbing to market forces and ceding their own role to the market. Consequently, one might suggest that pandemics expose power shifts under advanced

capitalism. The presence of such contradictory discourses may be indicative of wide-reaching discrepancies in society (Perren & Jennings, 2005). Therefore, the discursive tension between liberalism and neoliberalism in Comment C.1 may be indicative of existing contradictions between the liberal ideals of South African democracy and its neoliberalist economy.

Comment C.2



Textual analysis of Comment C.2

Comment C.2 by Clari_X was constructed on the 16th of July 2021, in response to Tweet C which was authored by Pearl Thusi. Clari_X draws on medical-scientific and moral discourses – the same discourses initially utilised in Tweet C. The text's reference to "vaccinated people" provides evidence for a medical-scientific discourse. Moral discourse is also utilised, and this may be observed by the author's classification of people in binary groups of "anti vaxxers" and "those who get vaccinated" (Dew et al., 2015). Values deemed as socially negative are constructed as belonging to vaccine hesitant people because they are presented as being offensive and "more rude" and they are collectively labelled as "anti vaxxers" (Huckin, 1997, van Dijk, 1995). The label of "anti vaxxers" is a politically loaded term which it is associated with a global movement which rejects all vaccinations – and not only the novel Covid-19 vaccine. Therefore Clari_X uses the discursive strategy of presupposition to construct the assumption that those who are suspicious of Covid-19 vaccines reject all inoculations (Huckin, 1997). On the other hand, people who are pro-vaccination are constructed as being non-judgemental and accepting of others' choices because they say "cool your choice" to vaccine opposers (van Dijk, 1995). Clari_X uses a moral discourse to essentially construct anti-vaxxers as bad and those who are pro-vaccination as good. The discursive action of presenting one group as bad and the other as good based on social values provides evidence for the utilisation of moral discourse.

The author constructs themselves as a person who supports Covid-19 vaccination. This is because Comment C.2 constructs a scathing critique of how "anti vaxxers" treat "those who vaccinate". Clari_X does not explicitly state that they are pro-vaccination, but this may be inferred because vaccine opposers are described as "rude" – which makes it unlikely that the author identifies with the anti-vaxxer group. In addition, vaccine hesitant individuals are constructed as offensive because "They call those who vaccinate names. Stupid. Sheep, etc etc". The word 'sheep' has the connotation of describing people who cannot think independently because they 'follow the herd'. In addition, anti-vaxxers are constructed as the judgemental group as opposed to those who are pro-vaccination, because opposers are "so hell bend[t] on your decision". This contradicts the argument presented by the stimulus text, Tweet C, which constructed vaccine recipients as judgmental. Finally, the author of the stimulus text, Pearl Thusi is implicitly constructed as vaccine hesitant because the comment concludes with "Not saying, you Pearl". This means that despite Tweet C's concluding statement "(This is not me saying I'm against being vaccinated.)", it was ultimately comprehended as vaccine hesitant before the production of Comment C.2. Clari_X presents an argument for Covid-19 vaccine acceptance on the basis that those who are pro-vaccination are presented as a group that is more moral, tolerant, and socially desirable when compared to the offensive, intolerant group of anti-vaxxers. The comment categorises people into polarised binaries based on their vaccination status and thus creates and perpetuates stereotypes.

Processing analysis of Comment C.2

Comment C.2 was produced and disseminated on Twitter on the 16th of July 2021 in response to Tweet C which posed the question "Is it okay that people who get vaccinated are so intensely judgy?!". This question by Pearl Thusi, a South African actress and celebrity, initiated an online discussion about the moral attitudes exhibited by people with opposing stances regarding inoculation during South Africa's Covid-19 vaccination rollout (Cooper et al., 2021a). This context resulted in the production and dissemination of Comment C.2.

Social analysis of Comment C.2

Moral discourse is used in Comment C.2 to construct polarised categories of people based on their Covid-19 vaccination status (Dew et al., 2015). Vaccinated people are discursively presented as tolerant rather than judgemental towards those who reject Covid-19 vaccination. This contradicts the argument presented in the stimulus text. In addition, Clari_X constructs

people who reject immunisation as "rude", offensive, and intolerant of people who decide to vaccinate – and thus, disrespectful of people's liberal and democratic right to choose vaccination. Clari_X's use of a moral discourse may be deemed to be a function of liberal ideology – which is concerned with the socially negotiated ideals of justice, equality, and morality (Kleven, 1993). Therefore, the institutional frameworks encompassing moral discourse and liberal ideology would be the cultural ideological state apparatus and the political ideological state apparatus (Althusser, 2006). Being "rude" is culturally negotiated as a negative characteristic and liberalism is bound to democratic political ideals and institutions (Kleven, 1993; Phelan & Dawes, 2018).

The emphasis placed on the negative characteristics of people who are hesitant towards vaccination as well as the positive characteristics of those who support vaccination serves to perpetuate the dominant discourses of morality and medical science (van Dijk, 1995). These discourses are deemed dominant because of their ideological underpinnings and their contribution to maintaining unequal power relations (Fairclough, 2013). Clari_X conflates the acceptance of vaccination with being a good person and therefore, the dominant ideology of evidence-based medicine is perpetuated whilst those who are suspicious of Covid-19 inoculations are unfairly subjected as immoral (Karunatilake, 2021). Legitimacy is given to medical-scientific institutions and practices with the employment of moral discourse, whilst those who challenge the dominant ideology of evidence-based medicine are undermined based on immorality. The construction of polarised groups as possessing distinctly good and bad qualities is a distortion of reality which is characteristic of all ideologies (Kleven, 1993; Nielsen, 1980).

Comment C.3



Textual analysis of Comment C.3

Comment C.3 was constructed on the 16th of July 2021, in response to Tweet C which was authored by Pearl Thusi. The author "Logos" draws on rationality, medical-scientific, and unemployment discourses to produce Comment C.3. The phrases "common sense" and "nonsense" are indicative of a rationality discourse. A medical-scientific discourse is also used to promote vaccine acceptance because the text argues that "Vaccinations saves lives". An unemployment discourse is drawn on to illustrate the rising rate of joblessness and poverty in South Africa "Unemployment has skyrocketed. People are hungry. Desperate". Logos constructs Pearl Thusi as irrational for arguing that vaccinated people are judgemental in Tweet C. This positioning of Pearl Thusi as irrational is evident when Logos writes "use your common sense and don't Tweet nonsense". By extension, the author constructs themselves as rational. In addition, the author collectively identifies with all South Africans whose lives were disrupted by the Covid-19 pandemic by stating "We're all desperate to get back to a semi-normal life". Interestingly, the consequences of the pandemic are constructed as predominantly economic. This may be observed when the author states "Unemployment has skyrocketed. People are hungry. Desperate". This constructs the Covid-19 pandemic as an aggravating factor of poverty and unemployment in South Africa. Health implications and risk of Covid-19 related death are only alluded to in the sentence "Vaccination saves lives".

Logos constructs an argument that supports Covid-19 vaccine acceptance in Comment C.3. Poverty and elevated unemployment are constructed as resulting from or being aggravated by the Covid-19 pandemic, and vaccines are framed as the single measure that will "get us back on course". However, South Africa was a significantly unequal society with high poverty and unemployment rates that predated the pandemic (Fassin, 2003; Wakefield, 2022). Therefore, it is a plausible argument that vaccination could have hindered further exacerbation of these complex social issues, but vaccination could not solve the problems of unemployment and poverty.

Processing analysis of Comment C.3

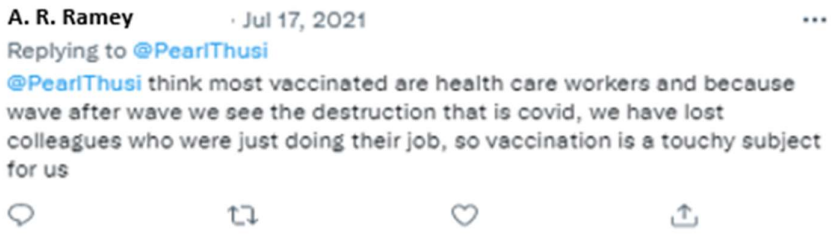
Logos produced and disseminated Comment C.3 on Twitter on the 16th of July 2021 in the context of South Africa's Covid-19 vaccination rollout (Cooper et al., 2021a). The comment was authored in response to Pearl Thusi's Tweet which posed the question "Is it okay that people who get vaccinated are so intensely judgy?!". Logos does not respond to this question but rather critiques Pearl Thusi's positioning of people who get vaccinated as judgmental

through the utilisation of a rationality discourse. Significantly, Twitter was used as the site of dissemination because of its status as a social media platform in the context of the digital age which allows for a democratic exchange of information between influencers and ordinary Twitter users (Durmaz & Hengirmen, 2022; Schwartz, 2012). Therefore, this context enabled the production and dissemination of Comment C.3, which critiques and minimises the importance of Pearl Thusi's argument and rather sheds light on the economic impact of pandemic lockdowns on poverty and unemployment. However, poverty, inequality, and high unemployment rates have been known socio-economic problems in South Africa since before its establishment as a democracy (Fassin, 2003; Wakefield et al., 2022).

Social analysis of Comment C.3

The utilisation of rationality, medical-scientific, and unemployment discourses are functions of a market-driven, liberal ideology at work in Comment C.3. This is because the reception and promotion of Covid-19 vaccination are constructed as the rational solution to the economic problems of poverty and unemployment (Perren & Jennings, 2005). The return of the capitalist South African economy to pre-pandemic conditions is positioned as a favourable outcome that results from immunisation against Covid-19. The Covid-19 pandemic is scapegoated as the cause of high unemployment and poverty in South Africa, and the role of capitalism in the entrenchment of socio-economic inequality before the pandemic is ignored. The notion that the return of the pre-pandemic capitalist market is a solution to the historically unequal socio-economic conditions in South Africa is a liberal ideal that obscures reality (Phelan & Dawes, 2018).

Comment C.4



Textual analysis of Comment C.4

Comment C.4 was constructed on the 17th of July 2021 by A. R. Ramey, in response to Pearl Thusi's Tweet. Ramey draws on medical-scientific and occupational health and safety discourses in their construction of Comment C. 4. Evidence for the use of a medical-scientific discourse may be observed in the following quote "wave after wave we see the destruction that is covid". The word 'wave' in the context of the Covid-19 pandemic was used to describe the rising number of people infected with the virus at peak periods. In addition, the text's repeated references to "vaccination" provide further substantiation for the use of a medical-scientific discourse. An occupational health and safety discourse is also applied by A. R. Ramey in Comment C.4 because the author states "health care workers… have lost colleagues who were just doing their job". This suggests that people working in the healthcare sector during the pandemic risked death for their occupation. The commentator constructs themselves as a healthcare worker who has witnessed the public health consequences of the Covid-19 pandemic. The author does not specify their occupation but rather collectively identifies with all South African healthcare workers. This is evident with the use of the words "we" and "us". The struggles of healthcare workers operating during the pandemic are illustrated, and this creates a collective identity "we see the destruction that is covid, we have lost colleagues… vaccination is a very touchy subject for us". The author constructs a virtuous identity for themselves and those working in the healthcare sector because their profession requires them to risk their lives. In addition, the author begins their comment with "think most vaccinated are health care workers". This develops the argument that the majority of healthcare workers were vaccinated against Covid-19 by the 2021 July period. It also discursively implies that the public is mostly unvaccinated, and because "vaccination is a touchy subject", people outside the medical/healthcare profession are constructed as contributors to the risk faced by healthcare workers in their professional environments.

A. R. Ramey establishes an argument for vaccine acceptance by illustrating that the Covid-19 virus is lethal and destructive. Vaccines are argued to have been accepted by most healthcare workers to minimise further incidents of death among health practitioners "who were just doing their job". A discord is formulated between those who worked in the medical sector during the pandemic and those who did not. This dissonance is argued to be based on the first-hand experience of the public health consequences of Covid-19 because "health care workers… see the destruction that is covid".

Processing analysis of Comment C.4

A. R. Ramey's Comment C.4 was produced and disseminated on Twitter on the 17th of July 2021 in response to Tweet C, which was authored by Pearl Thusi. The text was authored in the context of the third Covid-19 wave in South Africa - which unfolded during the country's vaccination campaign (Cooper et al., 2021a; National Institute for Communicable Diseases, 2021). Covid-19 waves were characterised by the temporarily rapid and steady increase of people infected with the virus, and these waves put immense pressure on the healthcare system and its workers due to the rise of Covid-19 related hospitalisations (Gray, 2021; National Institute for Communicable Diseases, 2021). Healthcare workers were the first population group to be offered the Covid-19 vaccine during South Africa's Covid-19 vaccination rollout due to their increased risk of exposure to infection (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). Therefore, A. R. Ramey's assertion that it was mostly healthcare workers who were immunized by the July period in 2021 is plausible. However, the author fails to acknowledge the role of South Africa's phase-based vaccination rollout and its delays, but instead implicitly blames the general public for remaining unvaccinated (Gray, 2021). Their response is also a rebuttal explanation to Thusi to justify the "judginess" that the latter attributes to those that promote vaccination.

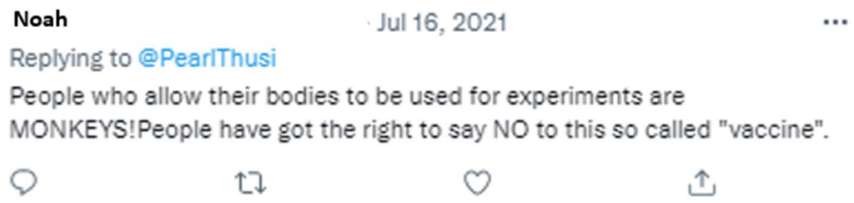
Social analysis of Comment C.4

The comment constructed by A. R. Ramey draws on a medical-scientific discourse, which may be deemed to be an ideological function of evidence-based medicine as well as the educational ideological state apparatus (Althusser, 2006; Karunatilake, 2021). The ideology of evidence-based medicine prioritises the efficacy of treatments and preventative measures such as vaccines over people's cultural and subjective values (Karunatilake, 2021). Ramey perpetuates this ideology by emphasising the consequences of refusing vaccination in the context of the Covid-19 pandemic. According to Althusser (2006), ideologies are always embedded in institutional frameworks and these frameworks are known as ideological state apparatuses. This is because influential institutions, such as educational institutions, dictate the social practices and rituals that subjects of an ideology must enact for that ideology to materialise in the social world. This materialisation of ideology in the social world perpetuates that ideology by reinforcing itself both in people's imaginations and in their social practices to serve the interests of a dominant class (Althusser, 2006). Therefore, the

ongoing material realisation of ideologies in people's social practices and dominant institutions may be regarded as part of ideological state apparatuses (Althusser, 2006). Ramey constructs themselves as a healthcare worker who ultimately advocates for immunisation against Covid-19. This is done through the social practice of commenting on Thusi's Tweet. Therefore, Ramey's perpetuation of the ideology of evidence-based medicine is materialised because of the author's discursively constructed institutional identity as a healthcare worker.

Although there are various professional roles within the healthcare system, many of these roles such as those of medical doctors, nurses, and psychologists, require the completion of a tertiary education. It is for this reason that it may be argued that Ramey's positioning of themselves as a healthcare worker is indicative of the educational ISA at work in the construction of Comment C.4. Ramey's utilisation of an occupational health and safety discourse highlights the riskiness of healthcare work within a pandemic context (Maneze et al., 2022). However, the main ideological function of this discourse was to justify the judgement of vaccinated people, specifically healthcare workers, exhibited towards unvaccinated members of society. Ramey does not use an occupational health and safety discourse to criticise their working environment but rather to emphasise that "vaccination is a touchy subject". Therefore, this discourse is a function of moral ideology because it constructs people working in healthcare as more qualified to pass judgement about vaccination due to their perilous professional experiences (Kleven, 1993). The Foucauldian concept of power-knowledge may be applied to Ramey's representation of healthcare workers as more knowledgeable because they "see the destruction that is covid". The author exercises power by formulating the argument that their experience as healthcare professionals qualifies them to condemn those who are vaccine hesitant. However, Ramey's construction of a collective healthcare worker identity and its resulting unilateral position of vaccine acceptance leaves no room for alternative positions in the immunisation debate. Afterall, Covid-19 vaccine hesitancy has been reported amongst healthcare professionals - which contradicts Ramey's construction of a seemingly uniform stance for vaccine acceptance and demonstrates ideological dissonance among this group (Maneze et al., 2022).

Comment C.5



Textual analysis of Comment C.5

Noah draws on an animal experimentation discourse as well as a political discourse in their construction of Comment C.5. The first sentence of Noah's comment states that "People who allow their bodies to be used for experiments are MONKEYS!" and this provides evidence for an animal experimentation discourse at work. Noah uses the discursive strategy of labelling to directly compare people who choose to vaccinate to "MONKEYS!" (Huckin, 1997). This label has an extremely negative connotation because it is related to a racist trope that materialised with the emergence of scientific racism during the 19th-century colonial rule (Bank, 1996). The now disproved discipline of phrenology constructed black Africans as less human than whites based on differences in cranial measurements. Racism became scientifically justified because of the alleged biological proof that black people were inherently different from white people - and were therefore considered subhuman (Bank, 1996). This negation of black people's humanity justified for white colonialists to oppress and exploit black Africans, and this is why the label "MONKEYS!" is considered as having a politically and historically charged racist connotation. Rather Noah uses this label to construct the argument that those who believe in the efficacy of Covid-19 vaccines relinquish their humanity and bodily integrity to participate in "experiments". The human body is constructed as a matter of political decision-making because "People have got the right to say NO to this so-called "vaccine"" (Dew et al., 2015). This assertion may be argued to be a direct reference to the Bill of Rights which is established in the second chapter of the Constitution of the Republic of South Africa, 1996 (Government of South Africa, 2023). This is because people's right to bodily integrity encompasses the right to "not be subjected to medical or scientific experiments without their informed consent" (Government of South Africa, 2023, p.23). Therefore, if one were to adopt the perspective that the Covid-19 vaccine is experimental rather than a proven preventative measure against virus contraction, then Noah's argument for "the right to say NO" is accurate.

Noah constructs people who voluntarily accept Covid-19 inoculations as less than human because they are directly labelled as “MONKEYS!”. The capitalisation of the word “MONKEYS!”, as well as the inclusion of an exclamation mark, creates the discursive impression of the author as adamant in their stance. These discursive strategies give prominence to the label of “MONKEYS!” and construct a tone of authority that lends legitimacy to Noah’s argument (Huckin, 1997; van Dijk, 1995). Covid-19 vaccines are constructed as “experiments” rather than as a preventative measure against viral contagion. This distrust of Covid-19 vaccine efficacy is further emphasised when the author claims that “People have got the right to say NO to this so-called “vaccine””. The inclusion of the phrase “so-called” and the use of quotation marks for the word “vaccine” serves to convey the author’s scepticism about immunisation and the scientific veracity of the coronavirus vaccine. In addition, Noah’s capitalisation of the word “NO” in their assertion that “People have got the right to say NO" demonstrates a preferential stance towards the possibility of rejecting rather than accepting inoculation. Interestingly people are construed as having rights and bodily autonomy, however, the author negates these rights for those who are receptive to Covid-19 immunisation by reducing them to animals.

The commentator utilises political and animal experimentation discourses to construct a vaccine hesitant stance. Inoculations are construed as untrustworthy because they are argued to be “experiments” rather than clinically proven preventative measures against severe disease symptomatology. Noah uses an animal experimentation discourse to emphasise the untrustworthiness of Covid-19 immunisation and to reduce those who are receptive to vaccination to animals. This highlights the polarising nature of the Covid-19 vaccine debate because those who disagree with the author’s vaccine hesitant stance are constructed as less than human.

Processing analysis of Comment C.5

Noah’s comment was produced and disseminated on Twitter on the 16th of July 2021 in response to Tweet C, which was authored by Pearl Thusi. The text was authored in the context of South Africa’s vaccination campaign, which began merely a year after the World Health Organisation declared the Covid-19 pandemic (Cooper et al., 2021a; Durmaz & Hengirmen, 2022). The scientific community accelerated the development of an effective vaccine against SARS-CoV-2 due to the devastating impact of the virus across the globe (Mellet & Pepper, 2021, Ndwandwe & Wiysonge, 2021). The escalation of the development

of a Covid-19 vaccine caused suspicion regarding its safety and efficacy – and this can clearly be observed in Noah's comment. Although immunisation against any virus typically takes years to produce, all vaccines need to be tried across several clinical phases before gaining approval for public usage. The first stage of vaccination testing occurs in a laboratory by administering the vaccine to living animals or cellular cultures (Mellet & Pepper, 2021). For some SARS-CoV-2 immunisation trials, rhesus macaques were the animals used for experimentation at the initial pre-clinical testing stage (Mellet & Pepper, 2021). The use of animal testing in biomedical experimentation has become a standard practice in the scientific method to ensure that medications are safe for humans (Hajar, 2011). Therefore, Noah's reference to monkeys being used for vaccine experiments is not completely misguided. However, an inoculation for public use may only be approved if it shows safe and effective results throughout an additional four phases of clinical trials – during which increasing groups of people volunteer to receive candidate immunisations (Mellet & Pepper, 2021; Ndwandwe & Wiysonge, 2021). Covid-19 vaccines were also subjected to these various stages of clinical trials before their mass distribution, making Noah's claim that people who are receptive to inoculation as akin to animals in experiments imprecise (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021).

Noah's comment was additionally produced and disseminated in a specific political context – namely in democratic post-apartheid South Africa. Although the nationality and geographic location of the author remain unconfirmed, it may be assumed that the commentator is a South African resident. This is because Pearl Thusi is a South African influencer and engagement with the influencer's content is most relevant to South Africans. In addition, Noah's comment refers to "the right to say NO" – an allusion to the Bill of Rights which is enshrined in the South African Constitution, 1996 (Government of South Africa, 2023). People's right to "not be subjected to medical or scientific experiments without their informed consent" is extremely significant in post-apartheid South Africa (Government of South Africa, 2023, p.23). The county's segregated past was not only riddled with economic inequality, but apartheid polices permeated every sphere of life including that of public health. The HIV/AIDS epidemic remains one of the most prominent examples of the interconnection between viral epidemics and socio-economic inequality in South Africa (Fassin, 2003). Apartheid policies created extremely poor working and living conditions for black South Africans, and this enabled an environment for the increased transmissibility of

HIV/AIDS among poor black South Africans in the late 1990s. Therefore, an account of the HIV/AIDS epidemic in South Africa cannot exclude the role of structural racism as well as overt racism in the country's history. According to testimonies heard by the Truth and Reconciliation Commission in 1998, the apartheid regime planned on using HIV/AIDS as a biochemical weapon to kill the black African population (Fassim, 2003). It is no wonder that people in South Africa distrust public health policies and that "the right to say NO" is guarded so strongly.

Social analysis of Comment C.5

Noah's utilisation of political and animal experimentation discourses in their production of a vaccine hesitant stance are functions of both political and legal ideological state apparatuses (Althusser, 2006). This is because Noah refers to the right to bodily integrity which is written in the South African Constitution, 1996 (Government of South Africa, 2023). The creation of a democratic Constitution may be deemed as both a political and legal feat in South Africa's recent history. The formulation of this document in the mid-1990s marked a new era for South Africans in which the values of humanity and equality displaced the racist policies of the former apartheid regime (Langa, 2006). Former Chief Justice Pius Langa (2006, p.4) described the Constitution as "the supreme law of the land" and it functions to protect the country's democratic values and the rights of all people in South Africa. Therefore, legal and political ideologies are closely intertwined especially when knowledge about rights is constructed. By extension, the importance placed on bodily integrity and autonomy in Noah's comment is indicative of a liberal ideology at work (Phelan & Dawes, 2018). However, Noah neglects the fact that bodily autonomy is inherently about personal choice and that people also have the right to accept a Covid-19 vaccine just as the author has the right to reject immunisation. Ultimately, Noah reproduces the South African Constitution as a powerful ideological structure whilst simultaneously undermining the dominant ideology of evidence-based medicine (Karunatilake, 2021).

Persuading Sceptics

The prior section explored Pearl Thusi's ambiguous stance towards vaccination as well as the positions of five comments that responded to her. This exploration revealed that Covid-19 vaccination is not discursively represented as a purely medical-scientific intervention. Rather, Covid-19 immunisations were constructed by Twitter users as inextricably bound to issues

related to morality, liberty, and socio-economic disparity. In the following and final section of this chapter, we explore a stimulus Tweet by the South African journalist and social media influencer, Redi Tlhabi, as well as two comments by Twitter users that responded to her. These are by users who go by the names Mohale Moletsane and Andy. Fairclough's critical discourse analysis is used beginning with a textual analysis, followed by a processing analysis, and concluding with a social analysis.

Stimulus Text: Tweet D



Textual analysis of Tweet D

Tweet D was authored on the 26th of May 2021 by Redi Tlhabi – a South African journalist, author, and media personality with over 600 000 followers on Twitter. Redi Tlhabi draws on several discourses in their construction of Tweet D. The author's repeated reference to "vaccination" provides evidence for the utilisation of a medical-scientific discourse. Discourses may be defined as forms of speech or written text that are closely linked to social practices and/or social institutions (Alvesson & Karreman, 2000; Fairclough, 2013). A medical scientific discourse may therefore be defined as the discursive representation of medical-scientific practices, such as the textual representation of the social practice of receiving an inoculation against Covid-19. Redi Tlhabi additionally uses a familial discourse in their construction of the text, and this is evident when the author mentions their "Mom" at two points in Tweet D. A familial discourse may be defined as the textual representations relating to the social institution of the family and its associated practices (Fairclough, 2013).

An administrative discourse is used in conjunction with a geographical discourse to describe the procedural steps of getting elderly people vaccinated against Covid-19 in South Africa. Evidence for an administrative discourse may be derived from the phrases: “I proudly registered” and “people… vaccinated without appointments”. This highlights how vaccination is constructed as an administrative procedure because it reportedly requires registration as well as obtaining “appointments”. Vaccination is also constructed as a navigational practice. Redi Tlhabi uses a geographical discourse to describe how they navigated between areas in Johannesburg to “get 8 [people] vaccinated”. The author states that they “crisscrossed between Alex, Sandton & Soweto… & managed to get 8 [people] vaccinated”.

Redi Tlhabi constructs themselves as supportive of Covid-19 immunisation. This is because Tlhabi states “I proudly registered 11 people between 70 & 88 yrs for vaccination in April. Mom on very first day”. Although Covid-19 is not explicitly mentioned, Tweet D was published during South Africa’s Covid-19 vaccination campaign (Cooper et al., 2021a). The word “proudly” illustrates Redi Tlhabi as a person who endorses the country’s vaccination rollout. The Covid-19 vaccine is discursively constructed as trustworthy. This may be observed with the author’s implication of their “Mom” as someone who was directly involved in the vaccination process facilitated by Tlhabi. It may be argued that most people would not willingly put their mothers in harm’s way. Rather, vaccination is constructed as a priority and practice of care because Tlhabi had her mom “registered… on [the] very first day”. In addition, Redi Tlhabi constructs themselves as a wilful problem-solver. The author reportedly “registered” several people for vaccination, however, Tlhabi alludes to the problem of not managing to obtain immunisation appointments. This is because Tlhabi “registered 11 people… for vaccination in April” and “Upon learning about number of people…vaccinated without appointments, [they] crisscrossed between Alex, Sandton & Soweto… & managed to get 8 vaccinated” by the 26th of May. Therefore, the author constructs themselves as a resourceful and dependable problem-solver who had overcome the obstacle of waiting for immunisation appointments. By extension, elderly people are constructed as reliant on the author and, more generally, reliant on younger generations to successfully receive an inoculation against Covid-19 in South Africa.

Redi Tlhabi constructs an argument that supports Covid-19 immunisation in Tweet D. The author uses a familial discourse to frame vaccines as trustworthy because Tlhabi “managed to get 8 [people] vaccinated. Mom included”. This impartation of anecdotal experience

legitimises Tlhabi's promotion of Covid-19 vaccines (van Dijk, 1995). The use of an administrative discourse demonstrates that South Africa's vaccination rollout required people to follow a series of procedural steps prior to receiving an inoculation against Covid-19. Redi Tlhabi uses a geographical discourse to illustrate their own resourcefulness and to highlight a further complication of the country's vaccination rollout – arguing that multiple locations in the Johannesburg area had to be visited to get eight people immunized.

Processing analysis of Tweet D

Tweet D was produced and disseminated on Twitter on the 26th of May 2021 during South Africa's Covid-19 vaccination rollout (Cooper et al., 2021a). The Tweet was authored by Redi Tlhabi – a South African journalist, author, and media personality with over 600 000 followers on Twitter. The magnitude of author's Twitter following additionally categorises them as a social media influencer. Therefore, Redi Tlhabi's construction of a supportive stance of Covid-19 vaccination may be regarded as a powerful social action due to its potential span of influence. It should be noted that the author's promotion of Covid-19 immunisation in Tweet D is largely directed towards elderly people as the recipients of vaccination. This may be due to the nature of South Africa's phase-based vaccination rollout which consisted of three stages (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021; Gray, 2021). The second phase of the rollout made Covid-19 vaccines available to essential workers and people over 60 years old (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). Therefore, elderly people were constructed as the primary recipients of inoculations in Tweet D because they qualified for Covid-19 immunisation before younger and middle-aged adults. This explains why Redi Tlhabi constructed a supportive stance of Covid-19 vaccination for their mother (aged "between 70 & 88 yrs') whilst failing to mention that they personally received a vaccine.

Redi Tlhabi's construction of themselves as having helped 11 elderly people register for immunisation speaks to the context of the online registration system that was used during South Africa's Covid-19 vaccine rollout. It may be argued that younger generations are more proficient in using digital technology when compared to older people. This discrepancy in digital skills may be attributed to the novelty of the internet as well as to a lack of access to digital devices - amongst other factors (Bornman, 2015). People who qualified for vaccination had to register themselves on the online electronic vaccination data system

(EVDS) which was created by the Department of Health. Registered individuals would then have to wait to be notified of the time and place of their immunisation appointment (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). Therefore, Tlhabi's assistance may potentially speak to the context of an intergenerational divide in digital skills, pointing to the inaccessibility of South Africa's online vaccination portal for older generations. In addition, Tlhabi constructs the argument that obtaining appointments following registration was difficult. This is unsurprising because South Africa's Covid-19 vaccination rollout has previously been described as flawed and drawn-out (Gray, 2021).

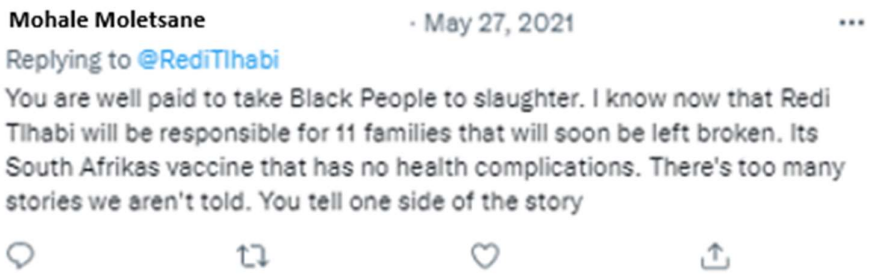
Social analysis of Tweet D

Redi Tlhabi's draws on familial and medical-scientific discourses to produce a supportive stance towards Covid-19 vaccination. These discourses may be argued to be functions of the familial ideological state apparatus as well as ideology of evidence-based medicine (Althusser, 2006; Karunatilake, 2021). Elderly people are portrayed as reliant on younger generations for assistance. This is particularly pronounced within a familial dynamic where adult children like Redi Tlhabi are expected to care for their aging parents. In their construction of Tweet D, Tlhabi further perpetuates these familial and social roles which are ideological functions of the familial ISA. The assistance and care for elderly people constructed by Tlhabi is reliant on the ideology of evidence-based medicine due to the author's supportive stance towards inoculation. It be noted that the author emphasises their own supportive stance regarding vaccination but neglects to mention the values or positions of the people who were immunised.

The analysis of Tweets D reveals that Redi Tlhabi exercises power-knowledge on multiple occasions. The adoption a Foucauldian interpretation of power entails the acknowledgement that knowledge and power are interdependent phenomena (Roberts, 2005). Tweet D demonstrates that Tlhabi possess knowledge of the online registration process as well as knowledge about the possibility of getting people vaccinated without appointments. The possession of this knowledge enables the author to act and exercise power. Registering people for immunisation and managing to skip the waiting period for appointments are acts of power-knowledge because unequal power dynamics in South Africa's Covid-19 vaccination process are revealed. One notable aspect of such inequality is the digital divide in South Africa, which includes a discrepancy in skills as well as a lack of access to digital devices.

This divide contextualises Redi Tlhabi in a position of power because the influencer possesses access to technology as well as the digital skills to assist people with the vaccination process (Bornman, 2015). The author further exercises power-knowledge with the construction and publication of Tweet D. Redi Tlhabi's status as an influencer broadcasts Tweet D to a large audience, which stands to further perpetrate the dominant ideology of evidence-based medicine as well as the familial ideological state apparatus. If one subscribes to the belief that vaccines have the potential to save lives, then Tlhabi uses their power-knowledge for an admirable and humanitarian goal. However, it is unclear how many people were unable to get assistance with navigating South Africa's Covid-19 immunisation process. It may be argued that some groups such as the elderly as well as impoverished people with limited access to digital technology faced a significant barrier to vaccination.

Comment D.1



Textual analysis of Comment D.1

Mohale Moletsane constructed Comment D.1 on the 27th of May 2021, in response to Tweet D which was authored by Redi Tlhabi. Mohale Moletsane draws on a variety of discourses in their production of their comment. A monetary discourse is utilised in conjunction with a racial discourse in the text's first sentence: "You are well paid to take Black People to slaughter". Mohale Moletsane directly addresses Redi Tlhabi with the pronoun "You" and alludes to their influencer status by alleging that Tlhabi is "well paid" for the publication of Tweet D (Janks, 1997). The use of a racial discourse is evidenced by the phrase "Black People". The deliberate capitalisation of "Black People" is a discursive act of empowerment which denotes that "Black People" should be regarded as important (Huckin, 1997). Moletsane's reference to "11 families" is indicative of a familial discourse at work. The author also draws on a nationalist discourse which may be observed when they write "Its South Afrikas vaccine that has no health complications". This substantiates the relevance of

Comment D.1 to the South African context, and it confirms that members of Redi Tlhabi's Twitter following are South African.

Mohale Moletsane discursively implies that Covid-19 vaccines are fatal. Redi Tlhabi's assistance of 11 elderly people with South Africa's immunisation process is constructed as murder. Moletsane states that Redi Tlhabi is "well paid to take Black People to slaughter" and "that Redi Tlhabi will be responsible for 11 families that will soon be left broken". The construction of these unwavering statements portrays the commentator as certain in their suspicions. This authoritative tone, evidenced by the phrase "will be" is also known as the modality of the text in critical discourse analysis (Huckin, 1997). By extension, Moletsane's tone of authority constructs their comment as more legitimate and believable (van Dijk, 1995). Moletsane constructs Redi Tlhabi as a calculated murderer of "Black People" who willingly accepts money for getting people vaccinated rather than as a caring daughter and helpful member of society. It is interesting that the author assumes that all the people assisted by Tlhabi were black. This may be because Redi Tlhabi is a well-known black South African journalist. Nonetheless, Moletsane implies that Tlhabi possesses knowledge of the vaccine being dangerous because the influencer is allegedly "well paid" to get people inoculated. The author constructs themselves as extremely suspicious of the vaccination rollout and of Tlhabi's support of Covid-19 immunisation because "There's too many stories we aren't told". Interestingly, Moletsane does not deem all vaccines as dangerous because "Its South Afrikas vaccine that has no health complications". It is unclear which vaccine the author is referring to specifically, but a clear distrust of international pharmaceutical companies is constructed.

Moletsane clearly constructs a vaccine hesitant position in Comment D.1 that is riddled with paranoia and suspicion. The author argues that Redi Tlhabi is essentially a financially motivated murderer of black people due to the influencer's endorsement of Covid-19 immunisation. It should be noted that Moletsane merely assumes that the people Tlhabi assisted with vaccination will die, whilst providing no evidence for this assumption. Rather, Moletsane's argument against Tlhabi is full of emotionally charged allegations that ultimately construct a tone of unwavering certainty in Comment D.1. In addition, Moletsane argues that "South Afrikas vaccine… has no health complications" whilst implying that the vaccines procured by the South African government for the country's vaccination campaign are deadly and akin to "slaughter". The commentator does not specify which South African vaccine they

deem safe – however, they imply that internationally produced inoculations (procured by the government) result in "health complications".

Processing analysis of Comment D.1

Moletsane's comment was authored in the early months of South Africa's vaccination campaign (Cooper et al., 2021a; Durmaz & Hengirmen, 2022). Covid-19 inoculations manufactured by the multinational pharmaceutical corporations Pfizer and Johnson & Johnson were procured by the South African government for the rollout (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). However, several other Covid-19 vaccines were developed but these were not acquired (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). For instance, the Sputnik V vaccine developed in Russia has proven to be over 90% effective against the SARS-CoV-2 virus, but it was not approved by the United States Food and Drug Administration (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021; Mellet & Pepper, 2021). The South African government allegedly considered a number of factors alongside efficacy prior to their selection of vaccine developers (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021).

Communication to the public about the chosen inoculations and well as the vaccination process itself occurred online alongside other media platforms. This context of digital communication facilitated social media exchanges about the pandemic and immunisation. One example is the construction of Mohale Moletsane's comment in response to Redi Tlhabi's Tweet. Moletsane's suspicion of "Black People" being targeted for "slaughter" should not simply be dismissed as a product of delusion. Rather, this pervasive distrust of vaccines endorsed by the West should be read with an acknowledgement of South Africa's history of colonialism and apartheid (Fassin, 2003). Prior to the establishment of South Africa as a democracy in 1994, apartheid policies implemented by the government systematically oppressed black people both through direct and indirect violence (Fassin, 2003). Apartheid policies enabled South Africa's white minority to become a privileged group at the expense of black people's displacement, oppression and suffering. Therefore, Moletsane's distrust of vaccines endorsed by Western powers is not illogical, rather it reflects the injustices of South Africa's past.

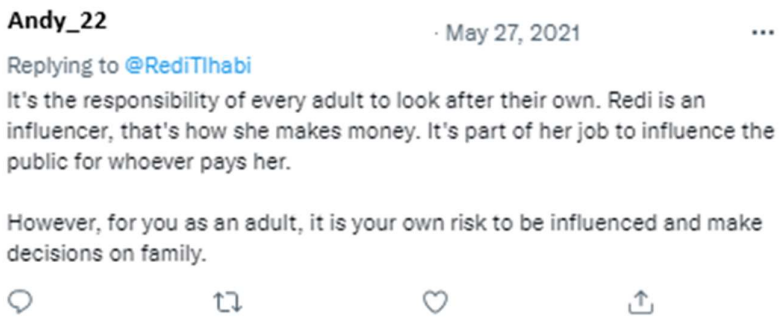
Social analysis of Comment D.1

Moletsane conveys their hesitancy of Covid-19 vaccinations to an online audience and by doing so the author exercises power-knowledge. Knowledge is socially constructed in an interactive online environment - irrespective of facts or objective truths (Durmaz & Hengurmen; Rosselli et al., 2016; Schwartz, 2012). Moletsane's constructs Redi Tlhabi as a murderer, and the internationally manufactured vaccines used in South Africa's immunisation campaign as vectors of death. Moletsane possesses knowledge about how to use social media and digital technology and this enables the commentator to exercise power over Redi Tlhabi by labelling the influencer as a murderer (Roberts, 2005). Although Moletsane's exercise of power-knowledge over Redi Tlhabi appears to be a personal attack on the influencer, the pervasive role of ideology needs to be considered.

Mohale Moletsane draws on several discourses to produce a suspicious stance towards Covid-19 vaccination. The author's utilisation of nationalist and racial discourses are functions of the political ideological state apparatus (Althusser, 2006). According to Althusser (2006), ideologies are always embedded in institutional frameworks and these frameworks are known as ideological state apparatuses. This is because influential institutions, such as post-apartheid democratic system of governance in South Africa, dictate the social practices and rituals that subjects of its political ideology must enact for that ideology to materialise in the social world. Resisting racial oppression by discursively protesting injustice on Twitter is an example of how democratic political ideology is materialised and maintained by Moletsane. The argument that "South Afrikas vaccine… has no health complications" conveys the author's sense of nationalism which is a function of political ideology. The distrust of immunisations endorsed by the West, alongside Moletsane's suspicion of people being targeted for "slaughter" based on race provides further evidence for a political ideological state apparatus at work. This is because South Africa's history of apartheid policies and its ultimate democratic liberation from racial inequality fostered a unique context for simultaneous trust in the South African government and scepticism of foreign powers. Moletsane hails South Africa's supposed independence from international political powers regarding the procurement and production of safe vaccines. However, this nationalist ideology negates the possibility that South Africa did not have the manufacturing capacity to develop the number of necessary inoculations. Furthermore, South Africa is part of an interdependent globalised economy, and it does not function as an isolated state. It may be argued that South Africa's procurement of vaccines was one benefit of

globalisation (Sebeelo, 2023). However, the very concept of globalisation is contested due to the unequal distribution of power between regions – such as the socio-economic disparities between the West and the Global South (Sebeelo, 2023).

Comment D.2



Textual analysis of Comment D.2

Andy constructed Comment D.2 on the 27th of May 2021, in response to Redi Tlhabi's Tweet. The author draws on familial, monetary, adulthood responsibility and occupational discourses in Comment D.2. Evidence for a familial discourse may be observed when Andy writes: "It's the responsibility of every adult to look after their own". This reference to one's "own" may be regarded as a person's family members. Further evidence for this conclusion is provided in Comment D.2 where Andy_22 addresses Tlhabi's followers and states "you as an adult… make decisions on family". Andy's use of the pronoun "you" implicates Tlhabi's followers as the intended addressees of Comment D.2 rather than Tlhabi herself (Janks, 1997). This is because Tlhabi is written about in the text rather than addressed directly. The author uses an occupational and monetary discourse to illustrate that "Redi is an influencer, that's how she makes money". Andy draws attention to social media influencing as a recognised occupation that results in an income. Andy argues that Tlhabi's endorsement of Covid-19 vaccination should be regarded as "part of her job". However, the commentator constructs Tlhabi as a person who is purely motivated by money because "It's… her job to influence the public for whoever pays her". This portrays Redi Tlhabi and other influencers as people who only value financial gain. This portrayal, however, relies on the author's assumption that Tlhabi received money to publish Tweet D. This is a known as presupposition, and it is a discursive strategy used to undermine Tlhabi's promotion of vaccination based the assumption that the influencer received financial compensation in

exchange for her support of immunisation (Huckin, 1997). In addition, Andy constructs adults as having responsibilities with regards to making "decisions on family". This construction of adulthood and responsibility may be regarded as a direct response to Tlhabi's construction of familial responsibility towards the elderly in Tweet D. Redi Tlhabi portrayed her fulfilment of familial responsibility by claiming that she assisted her mother and other elderly people with getting immunised against Covid-19. However, for Andy, familial responsibility entails assessing the risks associated with vaccination because "for you as an adult, it is your own risk to be influenced and make decisions on family". This construction of adulthood and familial duty portrays the author as someone who is cautious and conscious of the curated nature of social media content produced by influencers.

Andy constructs a vaccine hesitant argument in Comment D.2. The author critiques Redi Tlhabi's endorsement of Covid-19 immunisation by arguing that the influencer's stance is curated purely in exchange for money. Although it may be the case that influencers earn money by producing digital content, the author neglects the possibility that influencers have autonomy and choose which content they create. For instance, influencers like Redi Tlhabi may choose to create digital content that aligns with their personal brand and values. In addition, influencers might not receive financial compensation for every post they publish. Andy further alludes to Covid-19 immunisations being risky because the commentator warns that "it is your own risk to be influenced" by Tlhabi's promotion of vaccination. This cautioning against passive social media consumption is insightful and Andy's suspicion of the Covid-19 vaccine may be regarded understandable due to its novelty.

Processing analysis of Comment D.2

Andy's construction of Comment D.2 is an example of the public debate initiated by Tlhabi's endorsement of Covid-19 vaccination. South Africa's vaccination campaign began in 2021 - a year following the declaration of the Covid-19 pandemic (Cooper et al., 2021a; Durmaz & Hengirmen, 2022). The scientific community accelerated the development of an effective vaccine against SARS-CoV-2 due to the devastating impact of the virus across the globe (Mellet & Pepper, 2021, Ndwandwe & Wiysonge, 2021). The connotation of risk associated with Covid-19 immunisation is constructed in Andy's comment. Inoculations typically take years to produce, however, Covid-19 vaccines were tried across several clinical phases prior to gaining approval for public usage (Communication Work Stream of the Technical

Committee of the Inter-Ministerial Committee on Vaccinations, 2021; Mellet & Pepper, 2021).

Social analysis of Comment D.2

Andy draws on familial, monetary, and occupational discourses to produce a suspicious stance towards Covid-19 vaccination as well as distrust of influencer-generated content. The familial discourse used in Comment D.2 is a function of the familial ideological state apparatus (Althusser, 2006). According to Althusser (2006), ideologies are always embedded in institutional frameworks and these frameworks are known as ideological state apparatuses. Significant social institutions, such as the institution of the family, dictate the social practices and rituals that subjects of familial ideology must enact for that ideology to materialise in the social world. Like Redi Tlhabi, Andy perpetuates familial and social roles characterised by the notion of responsibility - which are ideological functions of the familial ISA. However, Andy emphasises exercising caution when making familial immunisation choices. Andy's comment warns of a controlled narrative perpetuated by influencers like Redi Tlhabi for the purpose of financial gain. Interestingly, the Department of Health advocates for the involvement of social media influencers in promoting Covid-19 vaccination, however, financial compensation is not mentioned (Communication Work Stream of the Technical Committee of the Inter-Ministerial Committee on Vaccinations, 2021). Although any person can exercise power-knowledge on a social media platform like Twitter, Andy's cautioning against passive social media consumption may be regarded as insightful. Afterall, influencers have massive online audiences, and this increases the chances of influencer-generated content being perpetuated on a much broader scale when compared to ordinary social media users (Droz-dit-Busset, 2022). Their verified status and some of their partnerships with capitalist brands makes their posted content ambiguous and suspect. For example, it might be difficult to differentiate between socially conscious messaging and corporate marketing. The familial discourse utilised by Andy functions to critique unequal power dynamics between influencers and ordinary social media users. Andy challenges the dominant ideology of evidence-based medicine perpetuated in Redi Tlhabi's Tweet and the familial ideological state apparatus serves as an alternative ideological framework for social knowledge construction about Covid-19 vaccination.

Summary

In this section, I have attempted to explore the Covid-19 vaccine Twitter discourses of people residing in South Africa. This study explored discourses that shed light on the ideologies that underpin Covid-19 vaccine acceptance and hesitancy. It may be concluded that a variety of discourses were communicated about Covid-19 vaccines on Twitter by people residing in South Africa. The primary discourses that shed light on the ideologies underpinning Covid-19 vaccine acceptance included medical-scientific and biological discourses. These discourses were deemed to be functions of the ideology of evidence-based medicine and the educational institutional state apparatus (Althusser, 2006; Karunatilake, 2021). The functioning of these ideologies constructed a reality in which scientific institutions and knowledge were deemed as trustworthy and the Covid-19 vaccine was constructed as a life-saving invention. Other discourses of vaccine acceptance included nationalist, moral, occupational health and safety, rationality, unemployment, and familial discourses. An appeal to familial, community, and social responsibility was constructed with these discourses. The use of nationalist, rationality, and unemployment discourses to support vaccination were functions of the political ISA and liberal ideology (Althusser, 2006; Kleven, 1993; Phelan & Dawes, 2018). These ideological leanings constructed a reality in which immunisation against Covid-19 was the social responsibility of South African residents (Althusser, 2006). The moral and occupational health and safety discourses used to support vaccination were functions of moral ideology. This ideology constructed a reality that framed vaccine hesitant people as immoral due to the life-threatening risks that healthcare workers faced during their pandemic response (Kleven, 1993). The findings of this report also demonstrated that several discourses were used to construct vaccine suspicion. Discourses that shed light on the ideologies that underpinned Covid-19 vaccine hesitancy included religious, biological, nationalist, racial, and familial discourses. These discourses functioned as the foundations of cultural, religious, familial, and political ideologies – which broadly constructed a reality in which the Covid-19 vaccine was deemed risky and potentially lethal. Discourses of choice, employability, and animal experimentation were used to protest the potential infringement of Covid-19 vaccination on democratic rights, such as the right to bodily integrity (Government of South Africa, 2023). The extent of vaccine suspicion communicated by Twitter users varied according to the specific socio-historical influences as well as the ideologies they adopted by commentators.

Conclusion

This research provides a greater comprehension of the existing discourses and ideologies of Covid-19 vaccine acceptance and reluctance in South Africa as revealed by Twitter commentaries constructed in the period from February 2021 to February 2022. It focused on four stimulus Tweets and engagements with these by Twitter users. The stimulus Tweets were authored by the National Department of Health and three social media influencers, namely, Steve Hofmeyr, Pearl Thusi, and Redi Tlhabi. The aim of engaging with discourses of vaccine acceptance and hesitance was addressed through an illumination of the multiplicity of discourses communicated about Covid-19 vaccines on Twitter by people residing in South Africa. Discourses that shed light on the ideologies that underpinned Covid-19 vaccine hesitancy included religious, biological, nationalist, racial, and familial discourses. These discourses functioned as the foundations of cultural, religious, familial, and political ideologies – which broadly constructed a reality in which the Covid-19 vaccine was deemed risky and potentially lethal. Discourses of choice, employability, and animal experimentation were used to protest the potential infringement of Covid-19 vaccination on democratic rights, such as the right to bodily integrity (Government of South Africa, 2023). The primary discourses that shed light on the ideologies underpinning Covid-19 vaccine acceptance included medical-scientific and biological discourses. These discourses were deemed to be functions of the ideology of evidence-based medicine and the educational institutional state apparatus (Althusser, 2006; Karunatilake; 2021). The functioning of these ideologies constructed a reality in which scientific institutions and knowledge were deemed as trustworthy and the Covid-19 vaccine was constructed as a life-saving intervention. Interestingly, many of the discourses utilised by Twitter commentators, such as religious, national, and familial among others were recruited for the construction of both vaccine hesitant and pro-vaccination stances. This finding suggests that dominant discourses were used by those reproducing as well as challenging particular ideologies, and associated forms of conduct.

This report's findings were guided by Fairclough's model of critical discourse analysis which consists of three phases that begin with a textual analysis, followed by a processing analysis, and concluding with a social analysis (Fairclough, 1989, 1995, as cited in Janks, 1997). This analytic methodology proved useful for providing an in-depth understanding of vaccine support and suspicion. Although largely informed by the researcher's subjectivity, the

sequential and systematic nature of this report's analysis ensured that the findings were rigorous. A potential limitation of using Fairclough's model of critical discourse analysis is that it is time-consuming thereby limiting the sample size. An advantage of this methodology is that it acknowledges the importance of contextual factors and socio-historical influences (Fairclough, 2013; Wodak, 2011). Therefore, the influential role of South Africa's current political and socio-economic context; as well as its history of apartheid, colonialism, neoliberalism, and the HIV/AIDS pandemic concerning the discourses surrounding Covid-19 vaccines was appropriately acknowledged and drawn upon (Fassim, 2003; Jarstad, 2021; Phelan & Dawes, 2018; Wakefield, 2022). A further advantage of using Fairclough's model of critical discourse analysis for exploring the phenomena of Covid-19 vaccine acceptance and suspicion is that it enables the exploration of complexity of these phenomena. People's decisions and beliefs regarding vaccination were revealed as multifaceted and fundamentally influenced by ideologies and socio-historical influences. Ideologies serve as abstract frameworks for people to imagine, interpret, and participate in their social worlds (Althusser, 2006; Fairclough, 2013). Therefore, people construct contending social realities with the adoption of different ideological frameworks, and this ultimately influences people's decisions to use vaccines or to refuse them. This research theoretically contributes to the literature on vaccine discourses in the era of social media and Covid-19. The report additionally contributes to the limited research on contending discourses of Covid-19 vaccine reluctance as well as acceptance in the South African context (Cooper et al., 2021a; Cooper et al., 2021b; Machingaidze & Wiysonge, 2021). The world's steady return to pre-pandemic normalcy may warrant future investigations of online discourses and ideologies that pertain to other kinds of vaccines and medications.

In a world where biomedical discourses have come to be taken for granted, this research suggested that people's decision-making processes are complex and more complicated than scientific and state institutions would have us believe. As we face catastrophes related to climate change and encounter recurrent and novel epidemics and pandemics, centering this complexity and surfacing the multiple realities and contexts of people is a crucial scholarly enterprise that helps us to interrogate taken-for-granted public health approaches to complex social phenomena. Ultimately, this study suggests that critical theory should always be considered alongside public health responses to catastrophes and global emergencies such as COVID-19. The study contributes to ongoing research on Covid-19, a pandemic that disrupted modern life and has caused us to rethink much of how we "do" life. The importance

of research that delves into the discursive and ideological aspects of Covid, the vaccine program, the boundaries around individual liberty vs. the common good, the reification of positivist science, and many other associated issues that are fundamentally at stake in modern society, cannot be overstated. This project contributes significantly toward a deeper understanding of how humans govern themselves and one another in the digital age and innovatively utilises technologically generated interactive data in critical discourse analysis.

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Appendix A

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT
PSYCHOLOGY

This is to certify that

Ivana Jokanovic
Student number: 1845905

Participated in Research and Ethics Training as part of the Masters research module PSYC7022A for the Masters in Social and Psychological Research

Held between the 21st and the 25th of February 2022 at the Department of Psychology, University of the Witwatersrand

Areas of training included:

- Writing a Research Proposal
- Writing a Literature Review
- Data Collection and Instrument Design
- Qualitative Methods of Data Collection
- Quantitative Methods of Data Collection
- Research Ethics
- Plagiarism
- Library and Zotero Training
- Research Presentation



Departmental Research Ethics Chair
Prof Zaytoon



Head of the Psychology Department
Prof Carol Long

Appendix B

MA (Psychology) Research Report Plagiarism Declaration

Surname: Jokanovic

First name/s: Ivana

Student no.: 1845905

Supervisor: Prof Hugo Canham

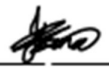
Title: A critical discourse analysis of the operation of power and ideology in Covid-19 vaccine Twitter commentary

Total Word Count: 30 954 (excl. Reference List, appendices etc)

Declaration

I, Ivana Jokanovic, know and accept that plagiarism (i.e., to use another's work and to pretend that it is one's own) is wrong. Consequently, I declare that

- The research report is my own work.
- I understand what plagiarism is, and the importance of clearly and appropriately acknowledging my sources.
- I understand that questions about plagiarism can arise in any piece of work I submit, regardless of whether that work is to be formally assessed or not.
- I understand that a proper paraphrase or summary of ideas/ content from a particular source should be written in my own words with my own sentence structure, and be accompanied by an appropriate reference.
- I have correctly acknowledged all direct quotations and paraphrased ideas/ content by way of appropriate, APA-style in-text references.
- I have provided a complete, alphabetized reference list, as required by the APA method of referencing.
- I understand that anti-plagiarism software (e.g. Turnitin) is a useful resource, but that such software does not provide definitive proof that a document is free of plagiarism.
- I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.
- I am aware of and familiar with the University of the Witwatersrand's policy on plagiarism.
- I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my own unaided work, or that I failed to acknowledge the source of the ideas or words in my writing.
- The word count (excluding the Reference List,etc) given above is correct.

Signed: 

Date: 13 March 2023