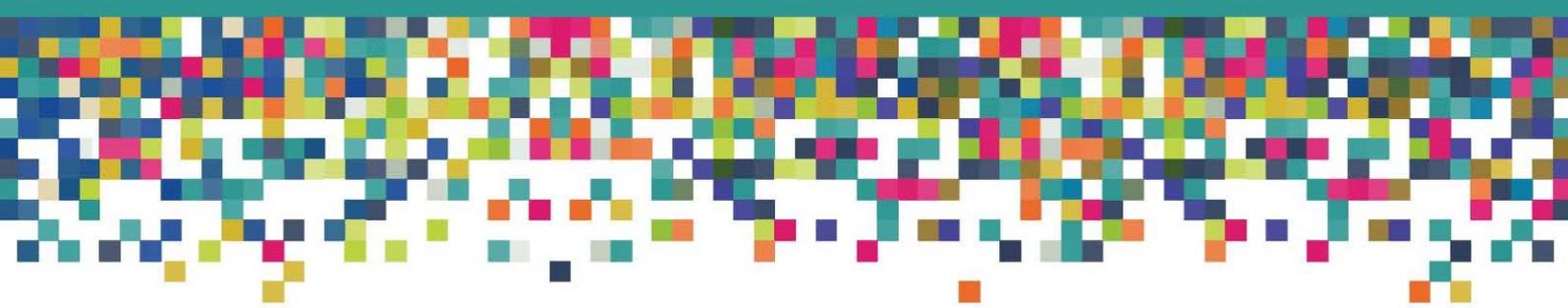




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Big Brother Watch's campaign against COVID Pass and its implications for science communication

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ABSTRACT

Campaigns against public health measures underscore the difficulty in promoting and implementing actions to prevent the spread of infectious diseases. Public health authorities often accept populism or anti-intellectualism as a sufficient explanation for public resistance or disobedience toward pandemic control. In the lens of 'health citizenship' (Jauho & Helén, 2022), this research investigates the specificity of public health measures in defining the scope of citizenship and the values and power structures underpinning this much contested relationship, using the campaign by Big Brother Watch against COVID Pass in the UK as a case study. Using Critical Discourse Analysis, this research first investigates the discursive strategies of image construction and dystopian narratives that Big Brother Watch uses to foreground the tension between public health management and civil rights, and claim legitimacy for its campaigns against COVID Pass. Then, this research uses Social Network Analysis to gauge public engagement by its network properties, which shed light on pre-existing social divides and lend momentum to emergent political publics.

The evaluation of Big Brother Watch's campaign is two-fold. On the one hand, Big Brother Watch reduces the complexity of evaluating public health interventions to an attractive 'Big Brother' abstraction. This idea suggests the illiberal and expansionary character of public health measures, by creatively mixing a wide range of social events with the introduction of COVID Pass in a trajectory towards a future of a totalitarian surveillance state. By discrediting the knowledge production authorities on technology and science, these discursive strategies problematise what count as the evidence-based grounds in communication between public health sectors and the general public. On the other hand, the dystopian trajectories of the future can serve the goal of democratisation by urging public health authorities to reflect on how their policy-making and communication processes interact with questions of citizenship and democracy. This research suggests that more scrutinitised studies are needed to understand how the audience of science communication engages with science-related debates and the various trajectories that make legitimisation of public health measures a challenged task. In addition, the success of Big Brother Watch's engagement with and mobilisation of various socio-political groups implies that the performance measurement of science communication needs to consider its ability to constitute a common ground where divergent publics can be networked by some similar interests and concerns.

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INTRODUCTION

Porter (1999, 2011) introduced the issue of health to the definition of citizenship in the concept of 'the social contract of health'. This concept recognises that the relationship between the state and citizens references how issues of health and illness are defined and treated by the public health sector. However, problems raised in the conceptual context of 'social contract' that assumes the consent of citizens to the authority, and such assumptions are in line with Porter's (1999) framing of health as both a civil right to healthcare and individuals' social responsibility of maintaining public health. Such a theoretical basis dominates the policy discourse on contemporary health issues. However, the notion of citizenship has been contested in reference to how citizens should conceive of and react to public health measures during the pandemic, and resistance has surged to the state's interventions to one's liberties and autonomy (e.g. examples of vaccine resistance). The application of information communication technologies (ICTs) as part of disease control measures further problematises the collection of personal health data, impacting beliefs about individuals' access, privacy and participation in society. While digital tools can help implement public health governance effectively, some strategies and tools pose barriers to social access, acceptability, participation and more profound ethical issues (Fagherazzi *et al.*, 2020).

COVID-19 is considered the first global epidemic in the digital era, given the number of cases of infections, velocity of virus transmission and the severity of clinical symptoms and deaths (Lipsitch *et al.*, 2020). In the UK, the government has responded to this public health emergency with surveillance technologies designed to identify at-risk groups based on their vaccination records and medical test results. This information is stored in COVID Pass, a digital certificate that shows one's coronavirus (COVID-19) status. Before the domestic mandate of COVID Pass was canceled on 1 April, 2022, people had to show this certificate to be admitted to certain social spaces or services. The socio-political context must be taken into account to understand the public's reactions to COVID Pass. UK's vaccination politics was originated in the Victorian era, and the country has witnessed a series of prolonged conflicts between the claimed

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'progressive modernity' represented by the public health system and resistance to the governance over personal body autonomy (Tafari *et al.*, 2014; Hussain *et al.*, 2018; Brown, 2019). In addition, the historical legacy of the idea of Luddism, manufacture workers' fear of being replaced by machines among British workers during the Industrial Revolution, came to stand for an anti-technology thesis (Jones, 2006). The idea of Luddism became a historical and cultural reference that foreshadows the resistance to COVID Pass — with regard to its infringement of the right to work without discrimination against one's immunity status.

In the case study explored here, Big Brother Watch, a British organisation focusing on civil liberty and privacy campaigns, has joined the concept of bodily autonomy with COVID Pass by drawing George Orwell's dystopian novel *1984*. The rationale for studying Big Brother Watch is two-fold. First, the discursive strategy of Big Brother Watch rejuvenates dystopian imaginaries in George Orwell's dystopian fiction *1984* in the context of COVID-19. In the novel *1984*, every citizen is under constant surveillance imposed by the fictional character 'Big Brother', ostensibly the leader of the totalitarian state Oceania. This dystopian trajectory of power asymmetry and manipulation is newly salient and invites a reflection of the measures to control the pandemic. Second, rather than a marginal and disorganised irritant, Big Brother Watch's campaign against COVID Pass establishes its socio-political influence to the extent that 83 MPs have joined this campaign. Such an influence entails a social impact that informs broader debates on aspects of citizenship and challenges the authority and credibility of public health policymakers. With the case of Big Brother Watch, this research explores the problematised discourse of health data and medical privacy in the digital age, and how relevant campaigns engage with many other spheres of socio-political groups, as well as their potential effects.

This research project first examines how Big Brother Watch's discursive practices figure in ideological processes that challenge the establishment of existing power relations embedded in discourses of public health and citizenship. A Critical Discourse Analysis of Big Brother Watch's policy paper and news coverage shows that Big Brother Watch strategically constructs a demonised 'other' by drawing from and mixing other social events in a trajectory of the UK

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society on an inevitable route to a dystopian future. Consequently, 'Big Brother' is a floating signifier that remains open to different interpretations in various settings, which enables its capacity to be used as means of criticising and discrediting political opponents. In doing so, Big Brother Watch establishes the legitimacy for its campaign with its scope of democracy that problematises the assumed value and power structure embedded in and enabled by public health measures. Then, this research explores how such discursive strategies help Big Brother Watch to engage with the publics from various social spheres. This research gauges network properties of Big Brother Watch's followers on Twitter, including their size and connectedness. Through a scrutinisation of network properties that imply the systems of beliefs and identities of its followers, analysis of the controversies of COVID Pass sheds light on pre-existing social divides or tensions that lend momentum to emergent political publics. This research suggests that Big Brother Watch's campaign against COVID Pass elucidates contestations surrounding the authority and credibility of knowledge production in medical science and ICTs. Such contestations pose not only challenges but also opportunities for policymakers and scientific communities to recognise and navigate the various historical and contemporary trajectories that make the legitimisation of public health policy a challenged task.

Studies on COVID Pass and the public's response to related pandemic control measures that use ICTs are considerably diverse in terms of their theoretical, methodological and empirical basis. This research crosses theoretical boundaries and extends an analytical framework drawn from the relevant literature to embrace a deeper understanding of the values and structures that reinforce the tension between discourses for or against public health measures based on different scopes of citizenship. Beginning with a specific problem of COVID Pass, the agenda of Big Brother Watch spreads quickly to other pre-existing socio-political tensions that involve a wide range of socio-political groups. Big Brother Watch's narrative strategies make surveillance an adaptable issue in different socio-political settings. In addition, this research also crosses the methodological boundary between Critical Discourse Analysis and Social Network Analysis to ascribe discursive practices to human agents. In doing so, this research develops a more systematic methodological design to examine 'social identities, social

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relations and systems of knowledge and belief' that are argued by Fairclough (1995: 55) to be constituted by discursive practices. This research suggests that resistance to COVID Pass is more than a temporary phenomenon in response to specific public health measures. Instead, this movement reveals the tensions of values and systems of beliefs of the heterogeneous socio-political groups. Thus, there is a need for policymakers and scientific communities to recognise such tensions and reflect on their principles and practice outside their own situatedness. In addition, more nuanced empirical studies of the situational contexts of various actors involved in science communication may be a promising avenue for better understanding the politics of science communication, engaging with the public and realising the democratic ideal of science communication.

THEORETICAL CHAPTER

Literature Review

A critical review of the theoretical and conceptual background of this research reveals a tension between discourses for or against public health measures based on different scopes of citizenship and connects to the conceptual framework of health citizenship.

This section first provides an overview of the scholarly debates concerning COVID Pass. In doing so, it sheds light on different analytical frameworks of COVID Pass and the pre-established circuits of discourse on digital health technology, which has focused on technical properties useful for mitigating public health crises and ethical dilemmas, respectively.

The second sub-section contrasts the techno-utopian and dystopian trajectories of future constructed by scientific communities and civil rights campaigning organisations, respectively.

In the third sub-section, the emphasis is put on different analytical frameworks adopted in the research of the resistance to public health measures. The literature that takes 'anti-science' and

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'populism' as a sufficient explanation will be contrasted to the ones that contextualise public resistance as a result of pre-existing tensions in defining the scope of citizenship.

The last sub-section discusses literature on how public resistance and disobedience have been recognised in science communication scholarship. This sub-section situates resistance in values and power structures that define and evaluate knowledge production practices underlying policy-making and communications.

Scholarly debates on COVID Pass: Tension between public health and civil rights

This sub-section's overview highlights debates on COVID Pass and reviews analytical frameworks embedded in circuits of discourse on the material (technical) and socio-political dimensions of digital health technologies, respectively.

The leading opinion of COVID Pass is in line with academic literature in medical and public health fields (see Kamel Boulos and Wheeler, 2007; Myer *et al.*, 2008) that the adoption of digital technologies improves the delivery of health care and supports preventive public health monitoring. Focusing on the 'data-driven approach' of the recent development of digital health, Barrett *et al.* (2013: 170) argued that such an approach allows for an accurate identification of 'personalised risk factors', emphasising the ostensible 'precision prevention' approach that large data sets contribute to health promotion. The emphasis on the technical characteristics of digital health technologies represents them as 'revolutionary' solutions to the 'wicked problems' of public health (Lupton, 2014: 707). Correspondingly, recent medical and public health academic literature (He *et al.*, 2021; Sleat *et al.*, 2021) has frequently commented on COVID Pass that through 'effective' data collection, presentation, and inferences, the screening of one's COVID status is vital for preventing virus transmission in public events, especially venues such as hospitals (see Zhang *et al.*, 2021). This line of research considers the COVID Pass ethically justifiable for pandemic control and situates it within the regulatory landscape.

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While its instrumental use is acknowledged in the public health sector, sociology and media studies scholars express a more critical perspective that seeks to draw attention to the compatibility of COVID Pass-type policies with the principle of equality and the prohibition against discrimination. Some studies concern how COVID Pass conditions the development of social practices through its technical characteristics, arguing that COVID Pass has acquired a broader meaning that transcends its technical definition. Such framing of COVID Pass can be traced back to earlier literature on digital health technologies that focused on ethical issues such as access, inclusion and equality and body autonomy (e.g. Fox and Boyles 2012; Choi and DiNitto, 2013; Baum *et al.*, 2014). This line of research suggests that the presumed universal digital access in health monitoring applications ignores existing digital divide and leads to the deterioration of health status of the marginalised social groups (Baum *et al.*, 2014). Similarly, recent literature in bioethics and legal disciplines alerts policymakers of the potential indirect discriminatory effects of COVID Pass with a particular focus on social groups that have less access to and then benefit from COVID Pass. The vaccination hesitancy is another important restrictive factor to the implementation of COVID Pass. The mistrust in the health system due to the experience of long-standing discrimination poses challenges for the government to increase vaccination rate (Irving and Edwards, 2020; Ganty, 2021; Milanovic, 2021).

Another critical perspective of COVID Pass is grounded mainly on the Foucauldian view that takes discursive construction of knowledge as a process saturated by disciplinary power and biopolitics through omnipresent and omnipotent surveillance. This approach considers COVID Pass as the preeminent form of social control in modern societies enacted by commercial and political entities such as 'Big Pharma' (a pejorative term referring to the biotech industry), digital developers and public health authorities. Such scepticism reflects the concept of 'healthism' put forward by Crawford (1980), which theorises how the status of health is prioritised above other dimensions of civil rights. Recent literature on COVID Pass has revisited arguments about legal paternalism in public health policy. This approach prioritises public health over personal body autonomy for 'a public good', and critics argue that the potential of re-identifying, commercialising and politicising such sensitive

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and supposedly confidential health data is largely underestimated (e.g. Mello & Wang, 2020; Sweeney, 2020; Irving & Edwards, 2021). Similarly, biopolitical governmentality is argued to be intertwined with the power of pervasive data technology and digital surveillance, reformulating a hegemonic mode of control by imposing a moral obligation to share one's medical data (Kim, 2021). This strand of research echoes the critical comments by Agamben (2020) on COVID-19 governance that 'a state of exception' is constructed to justify unwarranted emergency measures and expansionary state power in the name of an emergency.

Informed by the contested discourse on the material (technical) and socio-political dimensions of COVID Pass, when concerns about privacy, access and equality encounter legitimization of public health measures focusing on the immune capacities of populations, fundamental tensions emerge in interrogating the boundary between the state's intervention and the private lives of its citizens.

Discourses constructed on surveillance technologies: Techno-utopian and dystopian trajectories

While the above debates on the COVID Pass demonstrate pressure among scholars in public health sectors and legal, bio-ethical and political science disciplines, the role of civil society organisations in translating the opposite views of surveillance technologies into social movements — as important sites of discourse and community organisation — cannot be downplayed. Admittedly, there has not been much literature on campaigns against the application of surveillance technologies in public health measures. However, various examples show how the concept of 'privacy' is facilitated to mobilise either for or against surveillance technology in discourses constructed by scientific communities and civil rights campaigning organisations, respectively.

Berendt (2019), professor in computer science challenged the assumption that takes data science as a threat to privacy. Concerned about the subset meaning of privacy that detaches individuals from the public realm, he called for a more critical perspective of the issue of 'privacy' by re-asserting the importance of one's visibility in the public. Confidentiality and invisibility, in his argument, can sometimes serve to perpetuate oppression and ignore the

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urgent needs of certain population, and therefore negate the intended liberating consequences of a private realm. Similarly, focusing on public health and counterbalancing ethical concerns of privacy, statistician Hand (2018: 176) stressed that 'sometimes it is unethical not to use available data', and 'some trade-offs may be not only ethically justifiable but ethically obligatory'. Data privacy has been framed by 'techno-utopian political understandings of historical transformation' (Barassi, 2016: 423) based on the belief that big datasets of surveillance technologies provide valuable opportunity for getting a more accurate knowledge than what was ever possible (boyd & Crawford, 2012: 663). Such a discourse of privacy corresponds to the concept of 'Legal Paternalism' put forward by legal scholar Feinberg (1971). With this concept Feinberg means a method taken by the state to justify its coercion in the name of protecting individuals from self-inflicted harm, or guiding them towards their own 'good' while concealing the disputes on their 'right'.

Civil society organisations translate the opposite views of surveillance technologies into social movements, as exemplified by two major anti-surveillance campaigns 'Stop Watching Us' and 'The Day We Fight Back' in the wave of international privacy advocacy movements (Wäscher, 2017). Privacy campaigns during that time used the event of Snowden leaks to rally the public and receive media attention by calling government accountability into question. At the same time, sales of George Orwell's dystopian fiction *1984* significantly surged after Edward Snowden exposed information about the National Security Agency's secret collection of internet and phone records (Riley, 2013). Research articles followed this scandal, indicating that *1984* had arrived (See Diglin, 2014; Carlson, 2016). The dystopian trajectories of anti-surveillance campaigns are embedded in Foucault's (1979) panoptic metaphor adapted from Bentham's architectural design, which is a symbol of an invisible form of social control that extends into everyday life. As argued by Bennett (2012: 413) in his scoping review of this research field, Foucault's ideas on surveillance and panoptican underpin many anti-surveillance campaigns. Anti-surveillance campaigns foreground the tension between the individualistic foundations of the 'rights' to privacy and the collective prerequisites of 'public

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good', implying that the preservation of autonomy requires a detachment from social and political life in the public terrain.

The constructs and framing of surveillance technologies embed imaginaries of the regulatory landscape and reveal the contestation in drawing a line between public good and privacy. The conflict in techno-utopian and techno-dystopian trajectories makes legitimising pandemic governance a challenged task.

Different analytical frameworks of resistance: Anti-science or networked to a broader political landscape?

This sub-section reviews how different perspectives on COVID Pass and surveillance technologies, drawn from the above sub-sections, are reflected in the varied strands of research on resistance to public health measures during the pandemic. Some authors accept 'anti-intellectualism' as a sufficient explanation, whereas some identify resistance as indicators of broader socio-political tensions. These two lines of literature are contrasted in order to revisit their respective theoretical assumptions regarding citizenship values that evaluate the responses to public health measures.

Assuming the justifications for and effectiveness of pandemic control measures, some scholars view the non-compliance to COVID-19 public health measures as the conduct of an irrational mass. For example, in terms of rumour, conspiracy theories and misinformation that provoke the public's anxiety and distrust of scientific authorities, some scholars consider such phenomena as 'unthinkable' (Nguyen and Catalan-Matamoros, 2020). Other researchers explain the resistance to public health measures as the consequence of an individual's negative feelings towards scientists ('anti-scientists bias') (Sanchez and Dunning, 2021). However, such explanations fail to connect socio-political factors to individuals' instinctive feelings towards scientists. Another line of research discusses resistance from an ideological perspective by referencing 'anti-intellectualism', which is broadly defined as 'the generalised distrust of experts and intellectuals' (Merkley, 2020: 1). Some root such distrust in populism, arguing that a 'War on Science' goes hand in hand with the global rise of populism, and the portrayal of

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power relations that foregrounds the tension between the virtuous 'people' and evil 'elites' (Szabados, 2019; Mede and Schäfer, 2020). However, using 'populism' as an explanatory framework for any distrust of expert communities fails to explain the historical moments when Progressive Era populists valued experts and civil service professionals as an antidote to corrupt political elites (Merkley and Loewen, 2020). A lesson from these conflicting empirical accounts of resistance to public health measures is that researchers should not assume resistance in a dichotomised 'elite versus the ordinary' paradigm, but rather discuss resistance as a contestation of power in identity constructions and knowledge production.

Inspired by earlier studies on the political, moral and legal implications of technocratic governance, another strand of literature addresses the resistance to COVID-19-mitigation measures by revisiting the assumed objectivity of scientific knowledge production attached to policy-making. Regarding the cultural legitimacy of public health measures as 'scientifically approved', Bauer's (2015: 64) research recasts such an endorsement as a 'hyped' future for seeking material and symbolic support. Resistance to such a 'hyped future' is, in turn, the 'nociceptive system' [pain] that exposes unsolved urgent problems (ibid.: 2). Along these lines, Fahey and Hino (2020) recognise the role of scandals over the unauthorised use of citizens' digital information in public challenges towards data-focused public health responses. Similarly, Dencik *et al.* (2016: 8) stressed the need to connect the preoccupation of data-driven surveillance to 'other (broader) social justice concerns'. Such a 'broader social justice concern' should be addressed to authorities and power holders, whose interests, values and cultural beliefs are embedded in discourses that aim to justify surveillance. Otherwise, anti-surveillance campaigns would remain 'somewhat marginalized in activist perceptions and practices' (ibid.). This body of literature stresses the need to investigate pre-existing socio-political tensions, connecting with the critical scholarship of COVID Pass discussed in the first sub-section. Both highlight the values and preferences of citizens and note deficiencies and shortfalls across various sectors that allow researchers to identify challenges and avenues for improving public health crisis management.

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Echoing the view (e.g. Bennett, 2012) that even a single issue can galvanise an activist network by engaging in a combination of politics, research examines whether a broader political landscape of such resistance would ever be possible. For example, two empirical research (Hornsey *et al.*, 2020; Shepherd *et al.*, 2020) uncovered indications of partisan asymmetry in distrust of expertise and public health measures, exemplified in the correlation between the political support for Trump supporters in the United States and a disproportionately high likelihood to express scepticism towards experts and embrace a conspiracy ideation in response to pandemic control. The partisan asymmetries, however, is only one aspect of the 'combination of politics' underpinning the distrust of and resistance to public health measures during the pandemic. Some studies unpack resistance to public health measures in a genealogical lens and argue that such a phenomenon is not only attributable to the current proliferation of biotechnology and surveillance technologies. Rather, the long-standing socio-political tensions are crystallised in forms such as conspiracy theories that have been circulated for a long time. For example, based on a social network analysis, Ahmed *et al.* (2020: 4) identified a conspiracy theory network touting the long-circulated anti-vaccine and newly salient anti-5G discourse together. This line of research encourages further investigations into both historical and contemporary trajectories that are challenging for legitimation of governance, and their underpinning social divides and tensions.

Therefore, rather than adopting straightforward explanatory frameworks (e.g. 'anti-intellectualism' or 'anti-science bias') of resistance or scepticism towards public health measures, Bennett's (2012) focus on the network properties of resistance has inspired this research project to investigate the pre-existing social divides and tensions that lend momentum to emergent political publics. Based on evidence of the networked properties of resistance actors and discourses, including their size, shape, and connectedness, this research project evaluates the possible impacts of resistance and explores the role of science communication in such circumstances.

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Science communication in an interaction with citizenship and democracy

In an interaction with resistance that disrupts public health measures, science communication shapes the theoretical context of the not only the specific debate over COVID Pass, but also the values and power structure that define the discourses on public health measures and its specificity to citizenship. Through a review of science communication scholarship, this section explores the relationship between resistance recognised in science communication research and learning for expert communities.

Science communication has the historical root in the wave of disseminating scientific knowledge from academia to the general public in the 19th century, following a consensus within academia that 'science' was becoming so sophisticated as to require a 'translation' to be comprehended by the lay public (Weingart and Guenther, 2016: 1). Popularisation of science was conducted by professionals who shared the 'devotion to general enlightenment' and to the production of (an assumed 'true') knowledge justified for the 'common good' (ibid.). In this context, scientific 'illiteracy' was considered the leading cause of dissent and opposition to modernisation paradigm of development characterised by legitimisation of technological and scientific projects. Therefore, reducing scientific illiteracy was deemed the main task of science communication to ensure the 'common good'. To improve the public's scientific literacy, a wave of more recent studies advocated for a dialogic and participative approach (Trench, 2008; Bucchi and Trench, 2014; Nisbet and Scheufele, 2009). These authors argued for facilitating socio-technical imaginaries of 'an open society' by democratising scientific knowledge, often through digital technologies (Irwin, 2001).

However, challenges to the legitimacy of scientific authorities do not reside solely in the public's lack of comprehension of specific disciplines. The unilateral focus on disseminating scientific knowledge disregards a history of public contestation in which citizens actively negotiate and challenge the authorities' legitimisation and lead of techno-scientific development. In today's context where netizens create 'their own health realities and embodied knowledge' on social media (Keränen, 2015), more recent studies have started to categorise science communication as a political strategy to reclaim the legitimacy of scientific

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authorities and help with the justifications and implementations of governance (See Árnason, 2013: 930). In the mediatised social space, where the legitimacy of expertise representation is largely associated with personae construction that appeals to the perceived empowerment of its audiences, it is difficult to discern between 'alternative facts' proposed against scientific authorities and the social justice implications of 'open science' underpinning such resistance (Koerber, 2021). Considering citizen empowerment and participation, new perspectives are built on science communication, specifically how it produces organisational and community identities, its influence on constructing imaginaries of the future and its interactions with a broader picture of citizenship and democracy (Horst and Davies, 2016; Cribb and Collins, 2021). Along these lines, this research approaches science communication with an analysis of participation from wider social spheres that negotiates the principle, objective and evaluation criteria of public health measures, and reflecting on the role of the state and public health system in forming the power structure that defines the value of such participation.

Conceptual framework: Health Citizenship

The reviewed literature can be divided into two contrasted theoretical strands. On the one hand, there is an extensive focus on assuming the justification for public authorities to monitor one's biological character of illness and assess risk of transmitting the virus and disrupting social order. This body of work also assumes the responsibility of the government to provide citizens with healthcare and the obligations of citizens to accept such provides without questioning or contesting. However, by assuming health as the centre of civil rights to equality, this streamline of scholarship takes a simplistic and partial view of the 'specificity of health issues in reconfiguring citizenship' (Jauho and Helén, 2022: 1, 16). Critical appraisal is needed with regard to how concepts such as 'health, illness, disease and contagion' are defined and used to justify (changes to) one's rights to social access and participation, impacting on one's self-affirmation and belonging. On the other hand, legal and ethical accounts of healthcare technologies generally emphasise principles and interrogate boundary between the state's intervention and the private lives of its citizens. This body of work can be further complemented by more in-depth study of how subjects of the state's public health intervention

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negotiate and engage with public health measures and policy discourse, and the (historical, socio-political, cultural) references that are drawn upon in such interactions as building blocks of claiming legitimacy.

The concept of 'Health Citizenship' by Jauho and Helén (2022) precisely locates the above theoretical debate in the specificity of health in reconfiguring one's relationship with the state, as subjects of rights, instruction, charity or coercion. Biomedical knowledge (e.g. vaccination) and information communication technologies (ICTs) (e.g. digital health records) have played a crucial role in defining criteria and transforming ways to measure and modify the biological characters and their political dimensions. The biological characters are used as criteria to define one's rights in terms of allowing or restricting the access to social activities and services (see Isin, 2002; Foucault, 1980: 141–145). This critical perspective of citizenship, with reference to how health and illness are defined for citizens, evokes a need for scrutinising the values and power structure in which discourses on civil rights (e.g. privacy and equal access to healthcare and social services) encounter 'scientific facts' regarding vaccination safety and claimed affordance of surveillance technologies. Endorsed or advocated by different socio-political groups, these discourses reflect their respective assumptions of values, identity and legitimacy of knowledge production. The pre-existing tensions and conflicts in identities and systems of values and beliefs underpin contestations over the legitimacy of knowledge production of 'health', and how the status of being a citizen (rights to social access and participation) is defined with reference to one's health characters. The specificity of health in configuring citizenship calls for reflections on the epistemology and ontology of knowledge about health and science, as well as investigations into power asymmetries embedded in science communication practices that produce such knowledge.

Statements of research questions

This conceptual framework informs this research to investigate the implications of Big Brother Watch's campaign against COVID Pass for science communication, through which public health policymakers construct their policy discourse by producing knowledge about what

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counts as 'scientific' and 'public good'. The following two sub-questions further streamline this research.

First, what are the discursive strategies that Big Brother Watch uses to foreground the tension in defining the scope of citizenship with reference to public health measures, thus claiming legitimacy for their campaign?

Second, moving to examine the social impact of Big Brother Watch's discursive strategies, this research asks: How does Big Brother Watch engage with a wider range of publics?

METHODOLOGY: A MIXED METHOD

This work employs a mixed-methods approach to address the above research questions. A Critical Discourse Analysis was used to analyse Big Brother Watch's justificatory strategies that foreground and replicate the pre-existing socio-political tensions through the constructed incompatibility between public health measures and civil rights. This analysis section examines how citizenship is defined by Big Brother Watch with reference to power relations in policy discourses on public health. Then, to investigate the impact of Big Brother Watch's campaign, Social Network Analysis was used to gauge a network of Big Brother Watch's followers on Twitter, with a specific focus on the clusters of densely connected nodes on the network. Clustering in Social Network Analysis can help detect communities or emergent political publics by 'revealing the underlying relationship among the nodes that are not easily identifiable' (Lancichinetti *et al.*, 2008, cited in Lee *et al.*, 2020: 1). The multidimensional tensions in defining citizenship between Big Brother Watch's followers and public health sectors are shown in the follower networks, and such tensions are reflected as well as reinforced by Big Brother Watch's discursive strategies that appeal to its audiences' identities, values and systems of beliefs.

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Critical Discourse Analysis

Critical Discourse Analysis is developed based on the theoretical framework that defines the language use as a social practice. Therefore, Critical Discourse Analysis deconstructs discourse in its specific socio-political contexts, as well as investigates how discursive practices constitute social practices and structures (Fairclough, 1992a; 1995). Such a dialectical relation between discourse and non-discourse elements is at the core of Critical Discourse Analysis (Huspek, 1991: 131; Jørgensen and Phillips, 2002: 61). In other words, Critical Discourse Analysis sees language as an action that embeds and reproduces the relationship of power. To operationalise these theoretical considerations, Fairclough attributes three dimensions to Critical Discourse Analysis. First, a description of linguistic characteristics of the texts at the level of text analysis. Second, an interpretation of the discursive practice in terms the relationship between the process of producing and interpreting. The third dimension of the analysis is to explain how discursive practices are constituted by, and constitutive of social practice, power relations and social structure (Fairclough, 1995). Following the systematic method encompassing the relationship between the language use and its socio-political context, this research answers the first research question of how Big Brother Watch foregrounds the tension between public health measures and citizenship by appealing to certain systems of values and beliefs and replicating the pre-existing socio-political tensions.

However, the subjective aspect of the analytical exercise of Critical Discourse Analysis evokes concerns about its rigour, validity and transparency (Greckhamer and Cilesiz, 2014). For example, Jäger (2001: 51) translates the question of 'how complete discourse analyses are' into asking 'how representative, reliable and generally valid they are'. Correspondingly, Jørgensen and Phillips (2002: 21) suggest 'exploring patterns in and across the statements' rather than getting 'behind' the discourse straight away. Therefore, the presentation of the linguistic properties at the textual level of Critical Discourse Analysis could benefit from incorporating techniques to identify and draw generalisations about language use patterns in a corpus of representative texts (Stubbs, 1997; Bloommaert and Bulcaen, 2000; Nguyen, 2014). A Collocation Analysis was thus added to the textual level of Critical Discourse Analysis to help

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identify how concepts about citizenship are re-framed in a co-occurrence with health-related issues. By locating words of health (medical countermeasures such as 'vaccine') or citizenship (those emphasising civil rights of access and equality to healthcare and privacy) in 'different juxtapositions' and with various 'operations of thematic boundaries' (Mello, 2002: 236), this research can systematically explore Big Brother Watch's discursive practices that seek to foreground the tension in citizenship vis-à-vis a public health crisis.

Social Network Analysis

To further investigate the relationship between discursive practice and social practice at the core of Critical Discourse Analysis, this research moves to examine the wider public(s) that Big Brother Watch engages with and implications of their collective identities for forming new social structures and embedded power relations (Giddens, 1984; Cobb, 1994; Ainsworth and Hardy, 2006). The complexity and interrelatedness of Big Brother Watch's campaign against COVID Pass with many other spheres and practices were examined by Social Network Analysis. This research contextualised the process of constructing a discourse in an actor network in response to the criticism by Bilig (2008) that Critical Discourse Analysis should ascribe actions of constructing discourses to human agents. This research also finds Actor-Network Theory (ANT) insightful, which is a theoretical and methodological approach that explains the socio-political phenomena in shifting networks of relationships among actors (Latour, 2005). Combining the thoughts of Bilig (2008) and Latour (2005) together, this research positions Big Brother Watch's discursive practices as a moment in the dynamic shifts in social relationships that constitute the network linkages of Big Brother Watch. Discourses reflect identities, values and systems of beliefs, and Social Network Analysis allows the researcher to understand the broader social structures from which collective interactions emerge between Big Brother Watch and a variety of political publics in heterogeneous and fractious spheres. Based on these findings, this research can assess the expected impacts of Big Brother Watch's campaign. The fact that a wide range of political publics are united in Big Brother Watch's discursive practice has implications for constituting new power relations and social structures.

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Within this research, Critical Discourse Analysis and Social Network Analysis complement each other by revealing the relationship between the discursive strategies of Big Brother Watch's campaign against COVID Pass and their socio-political contexts. Revealing such a relationship is valuable for policymakers to understand the identities and systems of knowledge and beliefs of its audiences, which constitute trajectories in counter-discourses that problemise the legitimisation of public health measures.

Potential limitations and ways to address them

Combining the constructivist and positivist strands together, mixed-method studies are underpinned by a pragmatist paradigm, which 'uses of whatever philosophical and/or methodological approach (that) works for the particular research problem under study' (Tashakkori and Teddlie, 2008: 9, 22). The researcher has addressed the potential incompatibility of different epistemologies of quantitative and qualitative method (Biddle & Schafft, 2015) by highlighting the consistency of their contribution to the theoretical commitment of this research in the above.

The researcher has also been cautious of the assumed strength of content analysis that is argued to provide 'the needed scientific ground' (Krippendorff, 1980: 5). To avoid disconnecting the analysed texts from their wider socio-political dimensions, the operationalisation of this research focused on the socio-political contexts that constitute the clusters generated in Social Network Analysis. Instead of taking public health crisis as 'a merely descriptive backgrounding' in the way that some Critical Discourse Analysis works were criticised by Bloommaert (2001: 14), this research investigates historical, socio-political, cultural references that Big Brother Watch's followers draw upon to escalate the tension between their scopes of citizenship and the COVID-19 public health measures.

In addition, although Critical Discourse Analysis can unpack asymmetric power relations embedded and reproduced in discursive practices, this research did not presume a question of 'heroes and villains' in analysing the discursive interaction (van Dijk, 1993; Wodak, 1999). Indeed, the objective of using Critical Discourse Analysis is to reveal how such images and

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power relations are represented and reinforced in discursive practices (Flowerdew, 2008: 196). Therefore, this research argues that it is essential to see how Big Brother Watch connects discourse of health and illness with concerns about civil rights in reference to privacy and equality in the access to and participation in social activities, thereby reinforcing the existing socio-political tensions and expanding its influence on a wider public.

Research method design

Understanding Data

Big Brother Watch's web page features one evidence paper Access Denied. Big Brother Watch also collects all the news and post on its website. 24 news articles referencing Big Brother Watch criticism of COVID Pass were collected (see Appendix C). Big Brother Watch also operates a Twitter account dedicated to various campaigns against surveillance technologies, of which 109.3 thousand have subscribed as of August 1, 2022. Big Brother Watch's 4097 posts on Twitter, between 7 May, 2021 and 1 April, 2022, during which COVID Pass existed in the UK. Profile information of 23,608 followers' Big Brother Watch's followers was retrieved and a random sampling was done to reduce the sample size to 5,000, given the function of Gephi. The sample size is sufficient for Social Network Analysis to provide robust and generalisable findings about the wider public that Big Brother Watch engages with. The data collection was done by using API (application programming interfaces). APIs are the means by which computer programmes retrieve and send information to each other via 'endpoint', an address corresponding to a specific type of information, exemplified in Big Brother Watch's tweets and followers' account profiles. Regarding the ethical issue, Twitter's API platform can only provide access to Twitter data that are shared publicly. Ethical approval to retrieve the data using Twitter APIs was obtained at the preliminary stage of the research. Full codes that were used to collect Big Brother Watch's Twitter posts and followers are provided in Appendix A and B.

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Analysis

To answer the first research question of what the discursive strategies of Big Brother Watch are, starting from the textual level, this research drew evidence paper Access Denied by Big Brother Watch submitted to the parliament. SketchEngine, a freeware corpus analysis toolkit, was used for identifying the frequency of language usage and doing collocation analysis to see how concepts of citizenship are encountered with public health control measures and the connotations of Big Brother Watch's ways of foregrounding tension in health and citizenship underpinning its discourses. Then, this research coded all the news coverage of Big Brother Watch on the issue of COVID Pass (see Appendix C) and Tweeter posts during the time when COVID Pass was a mandate in the UK (see Appendix A). Big Brother Watch's discursive practices were further analysed by interpreting the process in which Big Brother Watch produces and circulates its messages in an imagination of its opposites and audiences in their respective situational contexts.

To answer the second question of how discursive practices of Big Brother Watch can in fact engage with a wider public, this step of analysis was based on the one year's data of any Twitter posts and news features of Big Brother Watch between 7 May, 2021 and 1 April, 2022, during which COVID Pass was a mandate in the UK (UK Health Security Agency, 2022). The complexity and interrelatedness of Big Brother Watch's campaign against COVID Pass with many other spheres and practices were gauged empirically by contextualising the discursive practices in an actor network. To do so, data from followers of Big Brother Watch's Twitter account were collected using a python web scraper (codes in Appendix B), which were exported into a CSV file that supports attributes to both nodes and edges for doing network analysis in Gephi. A further analysis was done on the broader politics in which the opposition to COVID Pass is situated, supplementing the final step of Critical Discourse Analysis.

Positionality and reflexivity

Admittedly, power asymmetry between the researcher and the researched is a common concern in social science research (Råheim *et al.*, 2016). While endeavouring to keep a critical

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distance to the researched actors and context, during the writing process, the researcher kept reflecting on her subjectivity based on the multidimensionality of her identity and position. As a Chinese student who has lived in both China and the UK, the researcher has been deeply interested in comparing the public responses to pandemic control measures and different power dynamics within them. The researcher recognises the severity of COVID-19 and thus the necessity of public health measures. However, controversies and disputes over public health measures surge not only on media space but also everyday conversations with my family and friends across different nations, which are reminders of me to critically study different identities, values and beliefs underestimated in policy discourses that legitimise pandemic control.

Navigating the disputes over 'scientific facts' and 'truth' has not been easy, which demonstrates to the researcher the importance of understanding how systems of thoughts develop by engaging with political history of the researched context. This research project delving into the context of science communication practices has also helped the researcher to reflect on her previous ignorance of the political dimension of public health policies — the power structure that enables (or disables) and defines the value of participation from various identities, values, beliefs and interests. Hopefully, this dissertation adventure can be the starting point of more fruitful comparative studies.

RESULTS

The most relevant findings to answer the first research question (of Big Brother Watch's discursive strategies) are presented and discussed using Critical Discourse Analysis. First, the linguistic properties of texts are described (see Figure 1.1-1.5), and the collocation of words related to health and citizenship retrieved from Big Brother Watch's evidence paper *Access Denied* is a starting point for Big Brother Watch to delegitimise public health measures by emphasising their tension with one's right to social access and participation. Second, Big

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Brother Watch's discursive practices are analysed by interpreting the process in which Big Brother Watch produces and circulate its messages in an imagination of its opposites and audiences in their respective situational contexts. Big Brother Watch constructs a demonised image of public health sectors by establishing its epistemic authority by inviting MPs in its public talk events (see Figure 2). In addition, Big Brother Watch draws and mixes various social events in a trajectory of the UK society on an inevitable route to a dystopian future of totalitarianism (see Figure 3). Consequently, 'Big Brother' is a floating signifier that remains open to different interpretations in various settings, which enables its capacity to be used as a means of criticising and discrediting political opponents.

As language use in texts and discursive practices are argued to constitute 'social identities, social relations and systems of knowledge and belief' (Fairclough, 1995: 55), this research then moves to the second research question of how Big Brother Watch engages with a wider public. Network properties were generated as the most relevant findings for a further investigation into the pre-existing socio-political tensions that problematise pandemic control measures. Such network properties show distrust and scepticism towards vaccination, family values, religious beliefs, political affiliations and a denial of the modern science establishment (see Figure 4.1-4.6). This complex landscape of interrelated socio-political groups that compose Big Brother Watch's followers denotes that the opposition to COVID Pass is not a temporary phenomenon in response to specific public health measures, but a disclosure of the tensions among heterogeneous (and possibly fluid) socio-political groups. Tensions reside in the heterogeneous and conflicting identifications with certain family values, religious beliefs and political parties. Their existing assumptions and biases about personal autonomy are reinforced by Big Brother Watch's dystopian narratives of COVID Pass, which are adaptable in a broader debate of 'health citizenship' — how the specificity of public health issues reconfigures one's citizenship status regarding rights and responsibilities.

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INTERPRETATION AND DISCUSSIONS

Taking a relational approach to texts, Fairclough (2003: 36) argued that there are both 'internal' relations of texts and the 'external' relations of texts. Analysis of 'internal' relations mainly include studying semantic and lexical relations. The 'external' relations denote how elements of other texts are 'intertextually' incorporated and how other texts, as well as social practices and structures behind them, are 'alluded to, assumed, and dialogued with' (ibid.). The analysis started from identifying the 'internal' relations of texts, and moved to analyse how the texts produced by Big Brother Watch's figure in identifications and potential of social actions.

This research used Collocation Analysis to detect patterns of co-occurrence in Big Brother Watch's research evidence paper *Access Denied* which focuses on the COVID Pass issue and states its principles. From the list of the most frequently used words in the evidence paper (Figure 1.1), the words 'health', 'vaccine', 'risk' and 'right' were selected to see what they are associated with as an entry point to investigate the interplay between the discourse on public health measures and citizenship.

Foregrounded tension between public health measures and citizenship

First, Figure 1.2 shows the co-presence of 'health' with 'moral', 'order', 'authority' and 'segregation'. Such a collocation demonstrates Big Brother Watch's negative evaluations of the public health measures that prioritises the biological fact of health over a broader socio-political dimensions of life (Agamben, 1998). Similarly, the co-occurrence of 'vaccine' (Figure 1.3) shows that medical countermeasure is evaluated for not only its 'effectiveness' but also its 'mandatory' nature in public health policy, which is problematised by Big Brother Watch by drawing upon discourses of public 'hesitancy' and even 'distrust'. 'Risk' of virus transmission is situated in the intersection of technical, biological and socio-political issues. The discourse and perception of risk surrounding COVID Pass, therefore, inevitably draws upon issues of privacy, discrimination, confidence and status, as shown in Figure 1.4. Big Brother Watch's evaluation of COVID Pass can be summarised in how 'rights' is framed, whether 'breached',

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'impaired', 'contravened', 'outbalanced', 'impeded' or 'eroded' by the introduction of COVID Pass. Such a collocation foregrounds tensions in defining the scope of citizenship, referencing a more comprehensive range of discourses of civil rights and underlying ethical problems of privacy and equality.

Figure 1.1 Words of the highest frequency in Access Denied

Vaccine	290	Default	Default	Default	▼
Covid	264	Default	Default	Default	▼
Test	229	Default	Default	Default	▼
Certificate	148	Default	Default	Default	▼
Uk	148	Default	Default	Default	▼
Risk	123	Default	Default	Default	▼
Status	115	Default	Default	Default	▼
Csc	114	Default	Default	Default	▼
Right	105	Default	Default	Default	▼
Individual	102	Default	Default	Default	▼
Health	99	Default	Default	Default	▼
People	95	Default	Default	Default	▼
Access	92	Default	Default	Default	▼
March	88	Default	Default	Default	▼
Governed	83	Default	Default	Default	▼
Protect	78	Default	Default	Default	▼
Public	78	Default	Default	Default	▼
Those	74	Default	Default	Default	▼
Evidence	72	Default	Default	Default	▼
Data	65	Default	Default	Default	▼

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Figure 1.2 'Health' (co-occurrence with 'moral', 'order', 'authority', 'segregation')

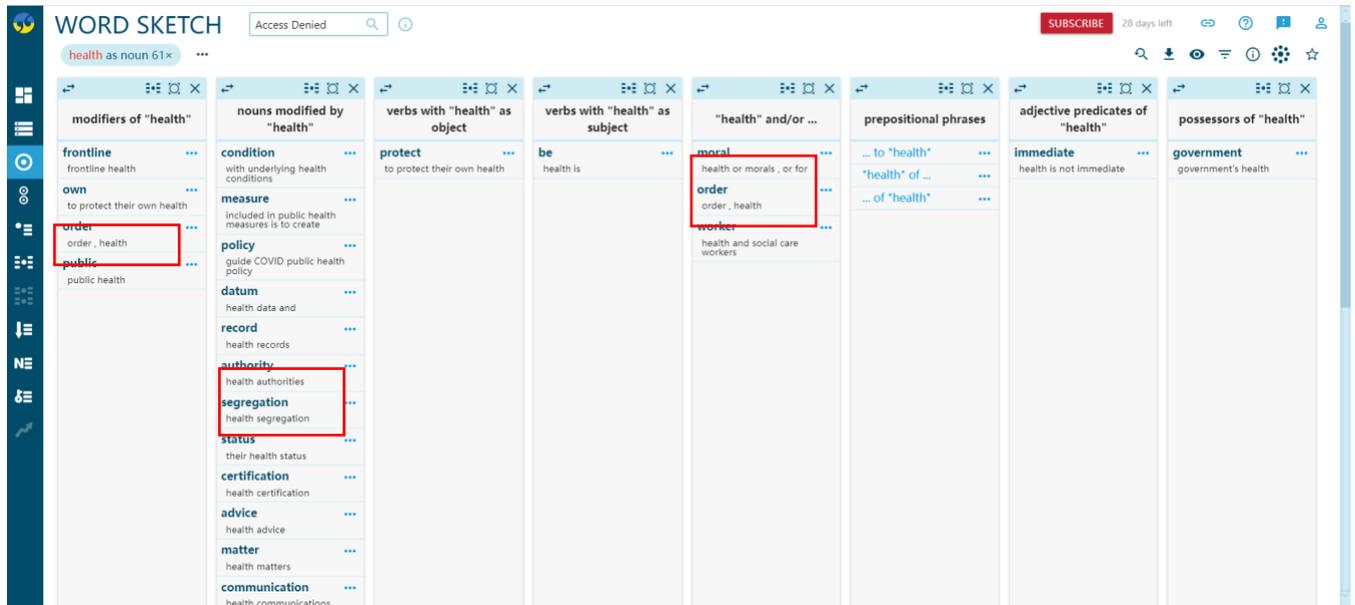
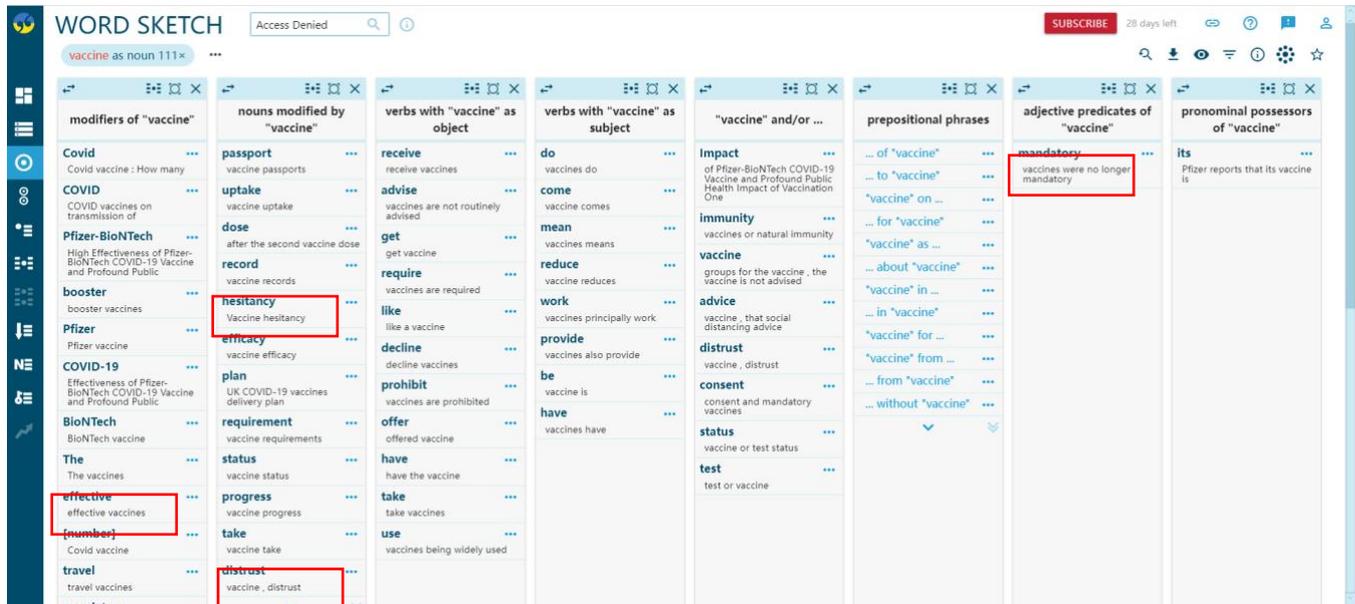


Figure 1.3 'Vaccine' (co-occurrence with 'effective', 'distrust', 'consent', 'mandatory')



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Figure 1.4 'Risk' (co-occurrence with 'privacy', 'discrimination', 'confidence')

modifiers of "risk"	nouns modified by "risk"	verbs with "risk" as object	verbs with "risk" as subject	"risk" and/or ...	prepositional phrases	adjective predicates of "risk"	possessors of "risk"
low Individuals have a lower risk of getting sick	framework and publicly accessible risk framework to help guide	reduce reduce risk	shut positive tests and risk shutting down businesses and	incentivisation in reducing community risk, the incentivisation to develop immunity	"risk" of of "risk"	due risk due	UK The UK's current risk
high they are at high risk of	reduction risk reduction	increase at increased risk of serious illness	outweigh risk far outweigh	outcome risk and outcomes	... at "risk"		individual Individuals' risk
community role in reducing community risk, the incentivisation	profile of the current risk profile, coerced mass	be as there is a risk of giving misleading	be risk is	category risk or priority categories	"risk" to to "risk"		
coronavirus reliable indicator of coronavirus risk in public settings	category high risk categories who	outline outlining their risk		confidence risk, low confidence	... about "risk"		
current The UK's current risk	factor risk factors	remain the remaining risk of		anxiety risk and anxiety	... in "risk"		
privacy privacy risk	account risk account	assess Assessing risk		test excess false positive tests and risk shutting down businesses	... with "risk"		
serious could create a serious risk of increased transmission	threshold risk thresholds	indicate status indicates risk of transmission		use risk, and its potential uses	"risk" at for "risk"		
additional additional risks	analysis risk analysis	create to COVID could create a serious risk of increased transmission		opportunity opportunities and risks	"risk" from ...		
real real risk	question risk question	shrink shrinking risk		infection infection and the risk			
transmission transmission risk	discrimination risk discrimination	measure measure the risks		immunity immunity, the overall risks			
overall overall risks	confidence risk, low confidence	mitigate mitigate the risks					
heightened heightened risk	status risk status	manage manage risks					

Figure 1.5 'Right' (co-occurrence with 'privacy', 'breach', 'impair', 'contravene', 'outbalance', 'impede', 'erode')

modifiers of "right"	nouns modified by "right"	verbs with "right" as object	verbs with "right" as subject	"right" and/or ...	prepositional phrases	adjective predicates of "right"	possessors of "right"
fundamental fundamental rights	breach controversy, workers' rights breaches and discrimination claims	engage rights engaged	raise travel or leisure rights raises	freedom the rights and freedoms of	"right" to of "right"	natural right strictly natural	citizen citizens' rights
absolute Absolute rights	instrument International human rights instruments	deny also be wrongly denied rights, falsely denied	include right includes	liberty liberties and fundamental rights	"right" of with "right"		people people's fundamental rights
privacy privacy rights	A RIGHTS A	protect rights protected	be right is	travel work, travel or leisure rights raises	... to "right"		individual Individuals' rights
convention another Convention right	reunion rights, family reunions	infringe infringe the rights		ill-treatment right, and ill-treatment	... to "right"		
individual Individual rights	GDPR rights, GDPR	have that 'Everyone has the right to		GDPR rights, GDPR	"right" under on "right"		
leisure travel or leisure rights raises	record rights record	impair impair the right		reunion rights, family reunions	... for "right"		
substantive substantive right	issue rights issues	contravene contravene those rights		individual rights and individuals	"right" in on "right"		
dear dearest rights		curtail curtail individual rights			... between "right"		
DPA DPA rights		outbalance outbalances the right			... as "right"		
concern concerns rights		impede impede the rights			... into "right"		
ECHR ECHR concerns rights		erode eroding privacy rights					
property property rights		enjoy enjoying their rights					

Discursive practices

Moving to another dimension of Fairclough's (2003: 36) relational approach to textual analysis, this research analyses how elements of other ('external') texts, which denote social practices

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and events, are 'intertextually' incorporated, 'alluded to, assumed and dialogued with' (ibid.: 36) in Big Brother Watch's campaign. Bakhtin (1986: 89) suggested that 'texts are shaped by prior texts that they are "responding" to and subsequent texts that they "anticipate" from their imagined audiences'. Bakhtin's insights inspire this research to focus on the 'situational context of language use' of the imagined audiences (Halliday, 1978; Fairclough, 1992b: 3-4). Big Brother Watch's discursive strategy imprints a scope of citizenship incompatible with the existing public health measures, and speaks to the situational context of its audiences by appealing to and evoking their fear of a demonised 'other' (elites, the government and foreign tech companies). With representations that construct a dystopian trajectory of the world, Big Brother Watch implicitly defines itself as a swashbuckling defender of 'the people' to endorse its credibility in knowledge production of public health measures against COVID Pass.

Image construction

Image construction is an important aspect of Big Brother Watch's discursive practices. Instead of explaining the reasoning behind the regulation, Big Brother Watch uses brief catchphrases to imply moral condemnation and doubts of public health measures and deepen the audiences' commitments. For example, one slogan of that appears below the headline of the campaign states that COVID Pass is 'Divisive; Discriminatory; Wrong'. This statement appears above the hyperlink of the report *Access Denied* and throughout the news coverage in which Big Brother Watch appears. Big Brother Watch constructs an immoral character for the public health system, which is evidenced by its claims about the status quo, where many are excluded from the assumed universality and inclusion of public health service by COVID Pass. By foregrounding the tension between pandemic measures and civil rights, Big Brother Watch constructs a personae, 'the image one presents to the world to appear more socially desirable' (Jung, 1953: 190), as a victorious advocate of social justice that speaks for and empowers 'the people'. This image is reinforced by constructing an alignment between Big Brother Watch and the MPs who have signed Big Brother Watch's petition against COVID Pass, described by Big Brother Watch as defenders of justice who 'recapture sovereignty from their own authoritarian leader' (Stone, 2020). In contrast, by questioning the moral character of

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telecommunication company Entrust based on controversies surrounding its working conditions, Big Brother Watch delegitimises the whole project of building UK National Health Service (NHS) apps as morally dubious for its contract with Entrust (Davies, 2021).

Big Brother Watch's image construction process takes its meaning from the imagined completion of the actions it exhorts — whether or not they ever take place. This campaign then appeals to pathos by passionately asserting the irreconcilable nature of the asymmetric power relations between citizens and 'authoritarian leaders' who make COVID Pass a route to a dystopian future. The combative style both adds malicious characteristics to the policymakers and demonstrates the irreconcilable rage that aims to evoke an affective mode of evaluation of COVID Pass. In a news article from *The Telegraph*, Big Brother Watch exhorts 'a wake-up call to us all' to a scheme of 'Big Brother state under the cover of Covid' made possible via 'looming Covid passports and vaccine phone surveillance' (Hope, 2021a). Another news article retrieved from *The Independent* criticises Met Police officers for charges brought against citizens to aid public health measures (Dearden, 2021). This news piece features Madeleine Stone, the legal and policy officer at Big Brother Watch, who accused the pandemic legislation and fines as 'a wave of injustice' in her statement that 'It is unacceptable that unlawful fines and prosecutions have become the norm'. Therefore, research communities and police are represented as accomplices to a totalitarian Big Brother state (ibid.).

Big Brother Watch references the literature legacy of a fictional 'Big Brother' state and its pessimistic trajectory of politics with the aim to facilitate the audiences to 'experience moments of recognition and revelation alongside the hero' (Clemons, 2010: v). The image construction of 'hero' is done by incorporating a nationalist agenda. The nationalist agenda is exemplified in another piece of news retrieved from *The Telegraph*, where Big Brother Watch condemns COVID Pass as 'draconian plans for a checkpoint nation are unnecessary, unworkable and un-British' (Hope, 2021b). The emphasis on 'Britishness' constructs the present public health measure to be a threat to a shared value undergirding national identity. Here, the framework of 'Britishness' unites narratives and value systems to construct an 'identitarian version' of values pertaining individual autonomy. However, such an emphasis on 'Britishness' remains

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problematic in drawing boundaries around who is truly 'British', building solidarity of who 'we' are as a nation over the identified 'they' depicted as conspirator who lead the UK to an imagined totalitarian state.

To further strengthen its image construction, on its website, Big Brother Watch presents news coverage of it in a way that excludes the voices of other actors in the debate on COVID Pass. For example, in the news section on the campaigning web page, Big Brother Watch cites its expressed opposition to fines imposed on breaching pandemic restrictions. This site references a news article from *The Independent* (See Dearden, 2021) that discusses COVID Pass as 'an embarrassment and a gross injustice', while excluding the concerns expressed by Martin Hewitt, chair of the National Police Chiefs' Council, about 'people deliberately breaching the coronavirus restrictions' in the same news coverage. Similarly, Big Brother Watch describes cloud computing software storing COVID-19 vaccination records as 'openly plotting an infrastructure for the new normal' in news articles retrieved from *iNews* (Wood, 2021) and *Mail Online* (Cole and Wright, 2021). However, other actors in the debate are excluded from Big Brother Watch's news website, such as pandemic research institutions and digital developers who have been equally presented in the news coverage and stress the value of NHS apps in medical research and the mitigation of virus transmission. Big Brother Watch's strategy to conceal concerns expressed by other actors reinforces its image construction of the ethical and moral characters of pandemic control practices that ignore the need to scrutinise public response. This prima facie lack of a bi-lateral dialogue between public health authorities and campaigners against COVID Pass paves the way for Big Brother Watch to further delegitimise the values and power structures that define policy-making for public health measures.

Big Brother Watch's appropriation of generic resources is another important dimension of its image/personae construction. As Bhatia (2004) and Wu (2011) suggest, the discursive practice of appropriating features of a genre reflects the concept of interdiscursivity. Interdiscursivity is grounded on Bakhtin's (1981: 291; 1986) notion of heteroglossia, where any text is a combination of one's voice and the voices of others, producing social heterogeneity. For Bakhtin, every attempt to understand the ideology underlying a speech act should be

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contextualised in a given dialogue. Elaborating on this idea, Fairclough (1992b) recontextualises such heterogeneity in discourse analysis as interdiscursivity, highlighting its ideological implications in that ideological significances are associated with specific conventions in discursive practices. Concerning this project, the paper *Access Denied* is classified as a highly formal text to justify its equal position in a dialogue with the government. In addition, by attaching the evidence paper as a hyperlink on the campaign website, Big Brother Watch emphasises its professional quality and expertise to support its arguments and appeal to wider audiences. Similarly, Big Brother Watch actively organises public events that invite MPs from both the Labour and Conservative parties to back its agenda (see examples in Figure 2). Thus, Big Brother Watch is actively building networks with established politicians to accumulate its social capital, constructing an image of professionalism and attributing authority to its epistemic production of the dialectic of public health measures and citizenship.

Figure 2 Public talks against COVID Pass organised by Big Brother Watch (also see Appendix D)



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Contextualising COVID Pass in a dystopian world

Representations of the world through dystopian narratives constitute another important aspect of Big Brother Watch's discursive strategies against COVID Pass. Big Brother Watch problematises the image of public health sector in policy discourse by recontextualising it in a wide range of social events, redefining the scope of what is acceptable and what is not in making public health measures. Big Brother Watch's Twitter posts, during the time when COVID Pass was being enacted in the UK, show how Big Brother Watch perpetuates its agenda of constructing a negative image of the illiberal and expansionary character of public health measures — by selectively and causally connecting a more comprehensive range of social events framed as infringing upon personal autonomy and liberty in a trajectory of a dystopian future (see Figure 3). Analysis is in line with statement of Fairclough (1995, as cited in Guo, 2013) that ideology embeds in the representation of the world in accordance to particular group interests.

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Figure 3 Most frequent words in Big Brother Watch's 4097 tweets (7 May 2021-1 April 2022)

Covid	1639	Default	Default	Default	▼
Right	228	Default	Default	Default	▼
Uk	218	Default	Default	Default	▼
Use	217	Default	Default	Default	▼
Pass	202	Default	Default	Default	▼
Id	189	Default	Default	Default	▼
Speech	184	Default	Default	Default	▼
Vaccine	160	Default	Default	Default	▼
Surveilled	149	Default	Default	Default	▼
Against	136	Default	Default	Default	▼
Free	135	Default	Default	Default	▼
Now	132	Default	Default	Default	▼
Online	125	Default	Default	Default	▼
People	123	Default	Default	Default	▼
Police	117	Default	Default	Default	▼
Join	117	Default	Default	Default	▼
Campaign	114	Default	Default	Default	▼
Out	113	Default	Default	Default	▼
Public	77	Default	Default	Default	▼
Health	76	Default	Default	Default	▼
Human	76	Default	Default	Default	▼
Plan	76	Default	Default	Default	▼
Mandatory	73	Default	Default	Default	▼
Onlinesafetybill	72	Default	Default	Default	▼
Find	72	Default	Default	Default	▼
Freedom	70	Default	Default	Default	▼
Data	69	Default	Default	Default	▼
Share	69	Default	Default	Default	▼

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Discriminatory	66	Default	Default	Default	▼
Legal	65	Default	Default	Default	▼
Need	64	Default	Default	Default	▼
Silkiecarlo	64	Default	Default	Default	▼
Tech	64	Default	Default	Default	▼
Censorship	63	Default	Default	Default	▼
Banhikvision	46	Default	Default	Default	▼
Cctv	45	Default	Default	Default	▼
Threat	45	Default	Default	Default	▼
Parliament	45	Default	Default	Default	▼
Risk	45	Default	Default	Default	▼
Force	45	Default	Default	Default	▼
Expression	45	Default	Default	Default	▼
Day	44	Default	Default	Default	▼
Evident	44	Default	Default	Default	▼
Alqorithm	43	Default	Default	Default	▼

Echoing Big Brother Watch's construction of flawed moral character for actors who support or implement COVID Pass in the retrieved news, it is no surprise that 'police' (appeared 117 times) and 'authoritarian(ism)' (appeared 35 times) were frequently mentioned and framed as the major threat to UK citizens' rights during the pandemic. However, the fact that 'Online Safety Bill' (72 times), 'censorship' (63 times) and 'expression' (45 times) were also frequently mentioned in Big Brother Watch's Tweets seems perplexing but enriches the analysis. Online Safety Bill was a proposed Act of the UK's Parliament that aimed to address the potentially harmful impact of certain social media content. Nonetheless, the Bill has been criticised for its provisions to blur the boundary between 'unlawful' and 'harmful speech' (Hern, 2021). Big Brother Watch's discursive strategy to draw controversies surrounding 'Online Safety Bill' implies an arbitrary expansion of state power under the shield of pastoral discourse of 'public good'. An interesting but disturbing parallel might be the reaction to Twitter's act to block Donald Trump's account after his call for discrediting the 2020 US election results and the consequent Capitol Hill riot. His son Donald Trump Jr. condemned Twitter's decision by

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drawing on dystopian imaginaries of Orwell's *1984* in his tweet that 'Free-speech no longer exists in America. It died with big tech and what's left is only there for a chosen few' (Vandenburgh, 2021).

Big Brother Watch also frequently attributes an evil character to China in its urgent calls for banning China's video surveillance equipment company Hikvision from the UK (mentioned 60 times in the retrieved Big Brother Watch's Tweets). Big Brother Watch contextualises the issue of civil rights in the surging surveillance technologies, and China, as a prominent actor in surveillance technology industry, is frequently called upon in Big Brother Watch's Twitter posts as a conspirator that threatens the civil rights of 'us'. Such fear might have reached to a climax when it was claimed that a 'genocide' (appeared 10 times) took place in China, aided by China's surveillance technology companies like Hikvision (appeared 60 times). The dystopian imaginaries that 'China's tech companies maliciously monitor and control UK citizens' mirror the conspiracy theory of Asian as a 'yellow peril', which constructs an 'evil and totalitarian China' conspiring to subjugate and enslave 'the civilised West' (McLain, 1994). The implied equivalence of China to a 'Big Brother' totalitarian state echoes the condemnation of COVID Pass as 'un-British' in the news article (Hope, 2021b) that has been analysed in this research. The framework of Britishness is designed to elevate an identitarian version of individual autonomy by building solidarity through narratives of who 'we' are as a nation over the identified 'they' (exemplified here as 'China') who embrace 'authoritarianism' and presumed to lead the UK to an imagined totalitarian state.

Discursive practices as social practices

Following Fairclough (1995: 55), discursive practices are 'simultaneously constitutive of social identities, social relations and systems of knowledge and belief'. Big Brother Watch's campaign against COVID Pass provides rich data resources for understanding and examining the social identities and value systems of this campaign's followers in their respective situational contexts. Based on this empirical investigation, this research drew implications for

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the production of knowledge, power relations and social structure in the practice of making policy discourse and science communication.

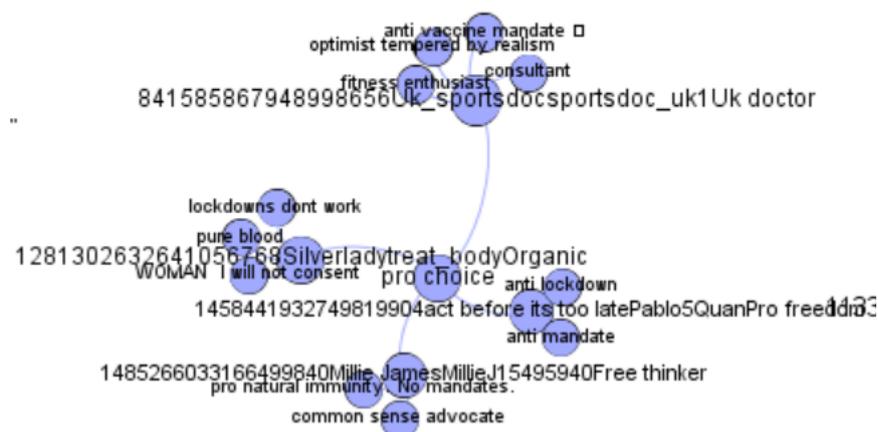
Social fields and institutions are defined by Bourdieu and Wacquant (1992) to be constituted by networks of social practices, as exemplified in Big Brother Watch's Twitter feed that comprises social fields with the networks made of its followers (Vergeer, 2015). The generated network graph shows a multiplicity of group identities among 5,000 Big Brother Watch's Twitter followers, which is based on their Twitter biographies of short public summary about oneself. The network was generated by Gephi based on similarities and thematic overlaps identified in the followers' Twitter biographies. A networked structure of various clusters were found, indicating the links (relationships) that connect individual actors who follow Big Brother Watch's Twitter account. The clusters demonstrate thematic overlaps in Big Brother Watch's followers' attitudes towards issues of public health measures and citizenship.

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to vaccine mandates and those who insist in preserving 'pure blood', a buzzword in the Harry Potter series that indicates nobleness of a wizard family with no humans in its genetic genealogy (Monaghan, 2021). Searching 'pure blood' in the retrieved profile information of Big Brother Watch's followers, it can be seen that users who use this term in their profile description frequently label themselves proudly as 'awake' and 'chosen one'. In addition, religious affiliations provide important insight into the ideological origins of vaccination scepticism and rejection, as can be seen in Figure 4.3. The distrust of science and scientists reflects that science and the 'establishment' threaten 'a traditional epistemic and moral order' (Baker *et al.*, 2020: 587). This view is exemplified in the opposition to any dependence on institutionalised (e.g. governmental) intervention to address public health emergencies (Whitehead *et al.*, 2018). Such an opposition might be traced to the Anti-Vaccination League in London following the mid-19th century enactment of legislation in Britain requiring parents to vaccinate their children (Hussain *et al.*, 2018).

Figure 4.2 Anti-vaccine mandate attitudes shared by Big Brother Watch's followers



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Figure 4.3 Religious affiliations and devotion of Big Brother Watch's followers



In Figure 4.4, emphasis on one's family identity is frequently attached to one's disclosure of religious beliefs. Family values hold significant ideological value and have sparked acrimonious conflicts in political issues on the private life. This emphasis instills virtue of self-sufficiency into one's relationship with the state, which parallels limited-government federalism that demarcates the boundary of government 'to leave the family alone, not intrude into it, and not provide for it' (Tyler May, 2003). Searching 'family' in the file of retrieved followers' information shows cohesiveness in 'God, Family and Country' that frequently appears in Big Brother Watch's followers' profiles and demonstrates a complex landscape of political self-identification. Some patriot movement groups share such family ideals and are united by an interpretation of the rule of law that derides government power (especially regarding pandemic control and restrictions), advocating a radical form of decentralisation (Berlet and Sunshine, 2019).

In the same way, an overlap can be identified in the discourse of sovereignty from bodily autonomy to the national level, which manifests in the intersection between followers of Big Brother Watch and Brexit supporters (see Figure 4.5). The eroded trust in expertise and fear of the expansive power of a 'Big government' are explained as part of the legacy of Brexit and embedded in reactions to COVID-19 countermeasures and the antipathy towards scientific and technical expertise. Interestingly, in the pandemic, the anti-technocratic ideal of the leftists is united with the old far-right populist narrative in mutual scorn for expert-informed governance (Foster and Feldman, 2021). Description of oneself as 'liberal' and 'leftist' in the file of retrieved followers' information shows that opposition to COVID Pass also reflects Left-

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populists' appeal to sentiments against technocratic ideology that assumes the public participation in policy-making as trivial and irrational. The mutual scorn for expert-informed governance echoes Big Brother Watch's strategy of holding public talks by inviting opponents of COVID Pass from both Labour and the Conservative Party.

Figure 4.4 Family values of Big Brother Watch's followers

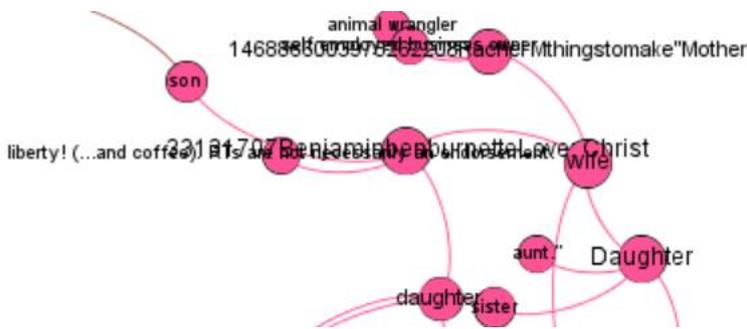
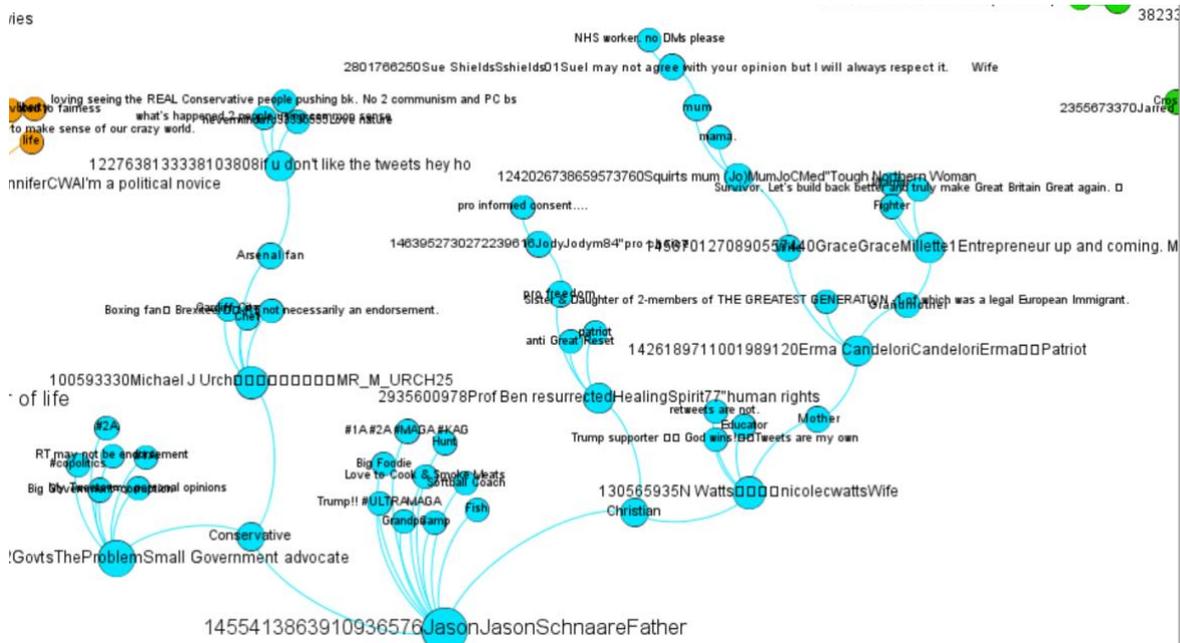
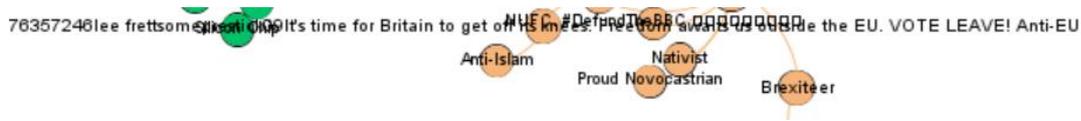


Figure 4.5 Political affiliations of Big Brother Watch's followers



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As seen in Figure 4.6, another group of Big Brother Watch's followers labels themselves as members of an 'IDGAF+ community'¹ to express their disapproval of the claimed urgency of mitigating the public health crisis. This group's appropriation of 'LGBTQ+' deprecates progressive discourse that advocates for social justice. Rather, tags such as 'loafer' and 'lucid dreamer' connote a preference of this group to reject any forms of social disciplines and only spend one's time idly disconnected to the public realm. Some label themselves as members of Mufon, an organisation that reports UFO sightings. Interestingly, UFO beliefs are frequently associated with conspiracy theory that governments and politicians globally are suppressing evidence that they are conspiring with non-human intelligence to build a 'New World Order' of 'an impending global dictatorship' (Barkun, 2003: 99). Supporters consider established epistemic authorities to be corrupt members of a conspiratorial regime who are hiding the truth. This sub-group of Big Brother Watch's followers seeks alternative epistemic sources to explain existing sociopolitical tensions and embraces an apocalyptic view, expressing hopelessness and meaninglessness in dominant paradigms of scientific pursuit. Rather, they use the appropriation of scientific writing conventions to further parody and ridicule the established epistemic structure and its 'regime of truth' (Harambam and Aupers, 2015: 467). Manjikian (2012: 24) commented on such apocalyptic views as a challenge to the 'eschatological narrative' that presumes the state power to be eternally stable and the route of a linear progression where the whole enlightenment project has been situated (ibid.: 291).

¹ 'IDGAF' is an abbreviation for 'I don't give a fuck'. 'LGBTQ+' is an abbreviation for 'Lesbian, Gay, Bisexual, Transgender and Queer'

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Implications for science communication

Through patterns of interconnectedness and social interaction, the social networks of Big Brother Watch's followers have turned into 'institutions' of knowledge production of values and systems of beliefs. The results of Social Network Analysis suggest that the above networks generate social capital of knowledge production and facilitates political engagement (Due Lake and Huckfeldt, 2002). Big Brother Watch consistently disavows commitment to objectivity in justifications for public health measures with the allegedly suppressed 'truth' of power asymmetry and abuse in policy discourses and implementations. In Big Brother Watch's view, the ability to truly 'connect the dots' does not lie with the government and digital developers but with the charismatic pioneer spirit in pursuit of freedom. However, the panopticon-alike surveillance is on the surface of *1984*, the novel from which Big Brother Watch finds the expressions of their agenda. Instead, Big Brother Watch's fear-mongering strategy replicates the practices that the Big Brother state sways public opinion and translates anxieties about the precarity and uncertainty of life into a focused fear of 'others' as an empty signifier (Douglas *et al.*, 2017: 540). In this process, conspiracy theories formulated in the past are repurposed to reshape public discussions concerning the COVID-19 pandemic. Snyder's (2021) finds a parallel between totalitarianism and 'post-truth' in that they both create a spectacle to invite a regime of myth where people indulge in attractive abstractions. Big Brother Watch mobilises the fear of its audiences by highlighting the authoritarian and expansionary character of public health measures. Such a fear-as-mobilisation strategy is criticised by Rythoven (2018: 41) for it 'risks a totalising vision of the future'. In the case of Big Brother Watch's campaign, this strategy freezes future socio-political interaction between policymakers and the wider public.

However, despite the above criticisms, Big Brother Watch's discourses on privacy and social inclusion can be seen as attempts to critically negotiate knowledge production underpinning assumptions of citizenship and highlight the specificity of health as a centre of political struggles for civil rights. Investigation of the dystopian narratives in Big Brother Watch's campaigns highlight the urgent need for debates on more stringent privacy protections, social

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responsibility and access. Big Brother Watch's storytelling of a dystopia and monstrosity can fulfil a democratisation purpose by handing over a mirror to scientific expert communities, urging them to meditate on their own ways of operating, the 'top-down' nature of policy-making and communications, and the exclusion by COVID Pass. Policy-making and its effort to communicate with the public needs epistemological openness to acknowledge and understand the tension between citizenship and the assumed objectivity of scientific knowledge production about public health measures. Consequently, to avoid the reductionist approach that categorises civil rights in a self-evident aspect of the 'public good', policymakers and communication actors should scrutinise aspects of identities, values and systems of beliefs of the heterogeneous publics, as done by Social Network Analysis in this research.

Theoretically, this research has emphasised the need to recognise the tension that science communication encounters between discourse for or against public health with different scopes of defining citizenship. The theoretical commitment and empirical investigation done by this research helped lay a solid foundation for science communication to make a practical move, starting from redefining the objective and performance measurement of science communication as a participatory project for social development. Mohan (2002: 149-150) raised concern that participatory development projects — with science and health communication included — 'risk being seen as the result of grassroots incapacity when they fail'. This is an important insight that calls for reflection on what counts as 'successful' science communication and the role of democratic process in science-related policy debates and contestations. Along these lines, this research has unpacked a complex terrain of concerns that Big Brother Watch successfully navigates, from biopolitics to antagonism in social class and belief systems. The case study has provided a lesson for science communication that it needs more scrutinised empirical studies of how its audiences engage with science-related debates and various historical and contemporary socio-political trajectories that make legitimisation of public health measures a challenged task for the government. Science communication needs to broaden its scope of more than 'common sense' building, but how such assumed 'common sense' has been resonated, recognised and participated by groups of different identities, values,

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beliefs and interests — which is a vital, yet underestimated part of performance measurement of science communication.

CONCLUSION

The contributions of this research are both theoretical and methodological. First, by unpacking the justificatory logics of Big Brother Watch's campaign against COVID Pass, it was found that beginning with the issue of COVID Pass, the agenda of Big Brother Watch encompasses other pre-existing socio-political tensions to engage with a wide range of socio-political groups. This view of the Big Brother Watch's campaign is an extension to the existing analytical frameworks either focusing on the technical effectiveness or ethical dimensions of public health measures. Second, in order to investigate how Big Brother Watch's discursive practices engage with a wider range of political publics, this research crosses the methodological boundary between Critical Discourse Analysis and Social Network Analysis to contextualise Big Brother Watch's discursive practices in an interaction with a wider socio-political groups. A systematic methodological perspective was developed to examine 'social identities, social relations and systems of knowledge and belief' that are argued by Fairclough (1995: 55) to be constituted by discursive practices. For the benefit of both theoretical and methodological innovation, this research paves the way for a new explanatory basis for studying the opposition to COVID Pass. Big Brother Watch's campaign against COVID Pass is not only a temporary phenomenon in response to specific public health measures. Rather, Big Brother Watch campaign against COVID Pass crystallises the heterogeneous (and possibly historically contingent) identities and value systems that shape the assumptions about the role of COVID Pass in reconfiguring the scope of civil rights.

Future research of science communication should recognise and encompass more in-depth case studies of the challenges it encounters, as done by this research that has studied how and why Big Brother Watch can mobilise the heterogeneous publics to share mutual scorn for

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public health measures. This research offers new perspectives on science communication studies by reflecting on the possible clash between the policy discourse and the needs, rights and values of the citizens, and the role of science communication in recognising and dealing with such possible clashes. The democratic ideals of science communication can only be realised if policymakers and scientific communities can reflect on their problems and even failure in resonating with, recognising the needs of and encouraging active participation from groups of different identities, values, beliefs and interests. The complex, dynamic yet understudied relationships among the publics possess potential to translate into actions that challenge the power structure sustained in policy discourse and science communication practices, and thus deserve to receive more academic attention.

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```
headers = {  
  
    "X-RapidAPI-Key": "1ad0fdade3msh31092f5ac8f8361p1710a5jsn4b43b52dc921",  
  
    "X-RapidAPI-Host": "twitter32.p.rapidapi.com"  
  
}  
  
querystring = {"username": "BigBrotherWatch",  
  
               "cursor": "scroll:thGAVUV0VFVBAewKLhwe-  
QrygWjoCwrcn3jv8qEnEVoKt5FYCJehgHREVGQVVMVDUBFToVAAA="}  
  
while True:  
  
    print(querystring)  
  
    response = requests.request("GET", url, headers=headers, params=querystring)  
  
    with open('data/' + str(uuid.uuid4()).hex) + '.json', 'w') as f:  
  
        data = response.json()  
  
        print('cursor: ' + data['data']['cursor'])  
  
        querystring['cursor'] = data['data']['cursor']  
  
        if len(data['data']['tweets']) == 0:  
  
            break  
  
        json.dump(data, f)  
  
    time.sleep(3)
```

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Step 2: handle

```
import json
```

```
import pathlib
```

```
import csv
```

```
path = 'data/tweets'
```

```
path = pathlib.Path(path)
```

```
tweets = []
```

```
files = path.rglob("*.json")
```

```
for file in files:
```

```
    with open(file, 'r') as f:
```

```
        data = json.load(f)
```

```
    data = data['data']['tweets']
```

```
    for (id, v) in data.items():
```

```
        item = {}
```

```
        item['id'] = id
```

```
        item['created_at'] = v['created_at']
```

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```
item['full_text'] = v['full_text']  
  
item['favorite_count'] = v['favorite_count']  
  
item['reply_count'] = v['reply_count']  
  
item['retweet_count'] = v['retweet_count']
```

```
ats = []  
  
for at in v['entities']['user_mentions']:  
  
    ats.append(at)
```

```
item['ats'] = ats
```

```
tweets.append(item)
```

```
print(id + " done")
```

```
with open('result/result.json', 'w') as f:
```

```
    json.dump(tweets, f)
```

Step 3: import to csv file

```
import pandas as pd
```

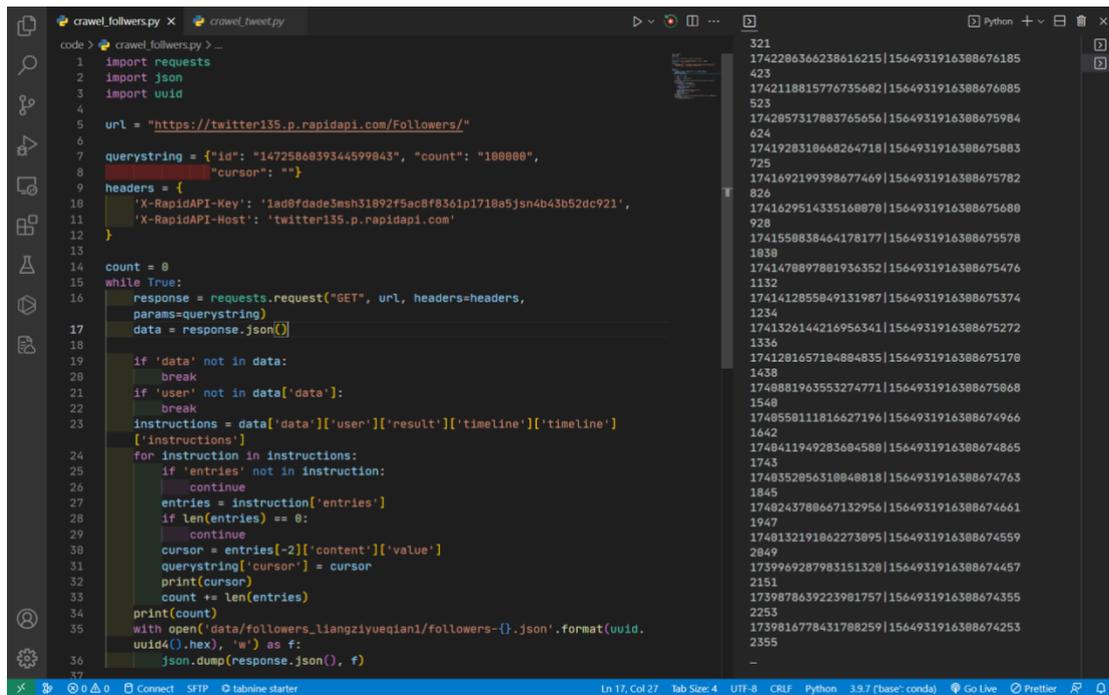
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```
data = pd.read_json(r'data_handle\tweets\tweets.json')
```

```
data.to_csv('data_csv/tweets/tweets-2.csv', sep='\t', index=False)
```

Appendix B: Codes for retrieving Big Brother Watch's followers' information



```
code > crawl_followers.py > ...
1 import requests
2 import json
3 import uuid
4
5 url = "https://twitter135.p.rapidapi.com/Followers/"
6
7 querystring = {"id": "1472586839344599843", "count": "100000",
8               "cursor": ""}
9
10 headers = {
11     'X-RapidAPI-Key': '1ad8fdade3msh31092f5ac8f8361p1710a5jsn4b43b52dc921',
12     'X-RapidAPI-Host': 'twitter135.p.rapidapi.com'
13 }
14
15 count = 0
16 while True:
17     response = requests.request("GET", url, headers=headers,
18                               params=querystring)
19     data = response.json()
20
21     if 'data' not in data:
22         break
23     if 'user' not in data['data']:
24         break
25     instructions = data['data']['user']['result']['timeline']['timeline']
26     ['instructions']
27     for instruction in instructions:
28         if 'entries' not in instruction:
29             continue
30         entries = instruction['entries']
31         if len(entries) == 0:
32             continue
33         cursor = entries[-2]['content']['value']
34         querystring['cursor'] = cursor
35         print(cursor)
36         count += len(entries)
37     print(count)
38     with open('data/followers_liangziyueqian1/followers-{}.json'.format(uuid.
39                               uuid4().hex), 'w') as f:
40         json.dump(response.json(), f)
41
42 321
43 1742286366238616215|1564931916388676185
44 423
45 1742118815776735602|1564931916388676005
46 523
47 1742057317803765656|1564931916388675984
48 624
49 1741928318668264718|1564931916388675883
50 725
51 1741692199398677469|1564931916388675782
52 826
53 1741629514335160070|1564931916388675600
54 928
55 1741558838464178177|1564931916388675578
56 1039
57 1741478897881936352|1564931916388675476
58 1132
59 1741412855849131987|1564931916388675374
60 1234
61 1741326144216956341|1564931916388675272
62 1336
63 1741281657184884835|1564931916388675178
64 1438
65 1748881963553274771|1564931916388675068
66 1540
67 1748558111816627196|1564931916388674966
68 1642
69 1748411949283684580|1564931916388674865
70 1743
71 1748352856318048818|1564931916388674763
72 1845
73 1748243788667132956|1564931916388674661
74 1947
75 1748132191862273095|1564931916388674559
76 2049
77 1739969287983151320|1564931916388674457
78 2151
79 1739878639223981757|1564931916388674355
80 2253
81 1739816778431788259|1564931916388674253
82 2355
83 -
```

Step 1: web crawl

```
import requests
```

```
import json
```

```
import uuid
```

```
url = "https://twitter135.p.rapidapi.com/Followers/"
```

```
querystring = {"id": "76004287", "count": "108898", "cursor": "1710728583886709669|1549719651036930065"}
```

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```
headers = {  
  
    "X-RapidAPI-Key": "7ea220bf32msh075c31718c267fdp170d8cjsn94eba6170086",  
  
    "X-RapidAPI-Host": "twitter135.p.rapidapi.com"  
  
}  
  
count = 0  
  
while True:  
  
    response = requests.request("GET", url, headers=headers, params=querystring)  
  
    data = response.json()  
  
    if 'data' not in data:  
  
        break  
  
    if 'user' not in data['data']:  
  
        break  
  
    instructions = data['data']['user']['result']['timeline']['timeline']['instructions']  
  
    for instruction in instructions:  
  
        if 'entries' not in instruction:
```

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```
        continue

    entries = instruction['entries']

    if len(entries) == 0:

        continue

    cursor = entries[-2]['content']['value']

    querystring['cursor'] = cursor

    print(cursor)

    count += len(entries)

print(count)

with open('data/followers/followers-{}.json'.format(uuid.uuid4().hex), 'w') as f:

    json.dump(response.json(), f)
```

Step 2: Handle

```
import json

import pathlib

all_users = []

files = pathlib.Path(r'data \ followers').rglob("*.json")

for file in files:

    data = json.load(open('data/followers/followers.json', 'r'))
```

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```
users = data['data']['user']['result']['timeline']['instructions']

for user in users:

    if 'entries' not in user:

        continue

    entry = user['entries']

    for entry in user['entries']:

        if 'itemContent' not in entry['content']:

            continue

        if 'legacy' not in entry['content']['itemContent']['user_results']['result']:

            continue

        user_info = entry['content']['itemContent']['user_results']['result']['legacy']

        user_id = entry['content']['itemContent']['user_results']['result']['rest_id']

        user_name = user_info['name']

        user_screen_name = user_info['screen_name']

        user_description = user_info['description']

    all_users.append({

        'user_id': user_id,

        'user_name': user_name,
```

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```
'user_screen_name': user_screen_name,  
  
'user_description': user_description  
  
})
```

with open('data/followers_extract/followers-2.json', 'w') as f:

```
    json.dump(all_users, f)
```

Step 3: import to csv files

```
import pandas as pd
```

```
data = pd.read_json(r'data \ followers_extract \ followers-2.json')
```

```
data.to_csv('data_csv/followers/followers.csv', sep='\t', index=False)
```

Appendix C: Codebook of Big Brother Watch's news coverage (from 7 May 2021 and 1 April 2022)

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	News Title	New organisation	Event	Big Brother Watch's evaluations
1	Unherd – uk government takes a leaf out of trudea's book when it comes to policing protests	UnHerd	Protests against pandemic restrictions in Canada (a mandate that requires Canadian cross-border truckers to be vaccinated against COVID-19)	a vast expansion of police powers and will empower the state at the expense of the citizenry; suppress dissent in the future; authoritarian levers; assault on democracy
2	The Independent – MPs sign cross-party pledge demanding review of Covid fines	The Independent, PA, Evening Standard, The Justice Gap, Herald	Covid fines and prosecutions	Throwing the country into a rule of law crisis
3	Sky News – Covid pass Legal challenge launched against Welsh Government	Sky News, ITV News	Covid Pass	exceptionally weak evidence supporting the role of Covid passes; Disproportionate intrusion of medical privacy, an erosion of freedom and a threat to equality.

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4	HR World – IKEA's no vaccine, no sick pay policy could prove to be divisive	HR World	Ikea's decision to curb sick pay for unvaccinated staff	right to medical privacy, divisive
5	The Independent – A third of of Covid prosecutions were unlawful, official review finds	The Independent	359 of 1,252 charges last year under laws brought in to aid public health measures were later withdrawn or quashed in court	embarrassment and a gross injustice
6	The Independent – Civil Liberties campaign group threatens Government with legal action over Covid passes	The Independent	introduction of mandatory COVID Pass	“draconian, discriminatory and pointless” scheme breaches privacy rights; harm, intrusion and division
7	The Scottish Sun – Scottish Government accused of becoming “factory for authoritarian Covid rules”	The Scottish Sun	COVID Pass	Authoritarian, non-sense, George Orwell novel 1984

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8	Guardian – NHS app using undisclosed companies to inspect facial data	Guardian	NHS apps	French company Teleperformance, which has attracted criticism in the UK over working conditions, uses an opaque chain of subcontractors to perform similar work under two contracts worth £35m; pressing need for transparency
9	The Scottish Sun – Big Brother Watch writes to the SNP urging them to stop “discriminatory and unethical” vaccine passports	The Scottish Sun	Covid passes	two-tier checkpoint society, adversely impact marginalised groups, sacrifice equality, privacy and liberty, with no public health benefit
10	PoliticsHome – Labour and Conservatives face backlash over Covid pass plans	PoliticsHome	Covid pass	a lack of evidence, treacherous limbo, discriminatory and invasive, a two-tier, checkpoint society
11	The Guardian – NHS app storing facial verification data with private firm iProov	The Guardian	NHS app storing facial verification data	sensitive facial verification data; tech company linked to Conservative Party donors

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12	Morning Star –Government increasingly using sensitive data to ‘nudge’ behaviour (study)	Morning Star	Sensitive data are claimed to alter public behaviour to achieve health and social policy outcomes	manipulating the public’s behaviour; unholy alliance between nudge theory policymaking and targeted online advertising is the practice of profiling people; creepy and invasive
13	i News – Gov’t accused of introducing national ID cards via ‘backdoor’ after Covid Pass contract	i News	Cloud computing software stores the Covid-status certification scheme	openly plotting a route from vaccine passports to digital identity cards; infrastructure for the new normal
14	Morning Star – Met Police ‘misrepresented Covid rules’ against protesters	Morning Star	The Met has been criticised for posting a message on social media warning demonstrators in Parliament Square on Monday that gatherings of over 30 people are illegal under current guidelines.	policing untethered from the law, and it poses a grave threat to our rights and our democracy

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15	Mail Online – NHS data grab plans scrapped after widespread backlash over privacy concerns	Mail Online	NHS copies the entire GP medical history from every patient in England to an NHS Digital database	This secretive data grab shows appalling disrespect to the public and a disregard for medical confidentiality.
16	iNews – Government accused of introducing ID Card via vaccine passport trojan horse			lies, secretive contracts and unaccountable decision making are underpinning this Government's disastrous pandemic response; segregated, checkpoint nation
17	The Telegraph – Millions of phones tracked to analyse behavioural change after vaccination	The Telegraph	One in ten peoples' phones were used for the research without the users' knowledge.	unwittingly tracked & subjected to behavioural analysis; Big Brother state under the cover of Covid; a wake-up call to us all; Who needs Bill Gates' microchips when we've got the Tory government

Big Brother Watch's campaign against COVID Pass and its implications for science communication

Zichen (Jess) Hu

18	The Guardian – Lifting of ‘hug’ ban underlines confusion over Covid restrictions	The Guardian	The UK press has been filled with stories that people will finally be able to hug each other as Covid restrictions begin to relax.	The government has often blurred the lines, sometimes deliberately, between the law and merely its wishes, causing real damage to democracy and the rule of law.
20	The Telegraph – Covid pass could be used by grandparents to screen birthday party guests	The Telegraph	Application of Covid pass in granting access to public events	segregated events and biosurveillance; ministers misled Parliament and the public; These draconian plans for a checkpoint nation are unnecessary, unworkable and un-British
21	BBC News – More than 70 MPs oppose “divisive” Covid passports	BBC News; Sky News; The Guardian; The Independent	COVID Pass	Dangerous, discriminatory and counterproductive. We won’t arrive at freedom through exclusion. The first policy for decades that could see segregation imposed throughout the population

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22	Reuters – Vaccine passports: Are they worth the discrimination and privacy concerns?	Reuters	Covid pass	Dystopian measures will discriminate against the most vulnerable in society and erode medical privacy.
23	The Guardian – Vaccine certifications currently being considered by UK Parliament	The Guardian	COVID Pass	discriminate against unvaccinated workers
24	iNews – Vaccine passports raising privacy and discrimination concerns	iNews	COVID Pass	cybersecurity threats to confidential information; This dangerous plan would normalise identity checks, increase state control over law-abiding citizens and create a honeypot for cybercriminals

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Appendix D: Public events host by Big Brother Watch

1. Civil Liberties in a Crisis: the left case against Covid IDs

Web Link:

<https://www.eventbrite.co.uk/e/civil-liberties-in-a-crisis-the-left-case-against-covid-ids-tickets-175512621977>

2. Civil Liberties in a Crisis: Conservatives against Covid IDs

Web Link:

<https://www.eventbrite.co.uk/e/civil-liberties-in-a-crisis-conservatives-against-covid-ids-tickets-181106984867>

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