Shifting Geopolitics: Reimagining Globalization and Spatial Representation in the Post COVID-19 Era

Victoria H. Bergström

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Victoria-H. Bergström
Providence College (Providence, Rhode Island, USA)
vic.h.bergstrom@gmail.com

Abstract: Since the emergence of the COVID-19 pandemic, the utilisation of maps has been at the forefront. Maps have informed policymakers, governments, and citizens of the distribution and spread of the disease. Although these maps have been used for various purposes, from border closures to curfews, there is an inherent danger in this widespread usage. Aside from the intricacy of these spatial representations, these widely distributed representations encourage isolationism and the reconception of borders in an increasingly globalised world. Furthermore, new connectivities through digital means have created a potential solution to international exchanges amidst physical limitations. Nevertheless, elitism prevents the effective distribution of resources from technical services to vaccines. The divide results in changing socio-economic relations and a growing need for international transparency and cooperation.

Additionally, a facet of this elitism is the role of borders, which contributes to growing divides between countries. Therefore, the fracturing of spatial imaginaries translates to a spatial reality. This encourages a perspective of othering - potentially encouraging xenophobia and straining relations from Western, industrialised countries. This paper elucidates these emerging realities from the COVID-19 pandemic. A triangulation of source material critically engages and examines the dynamics of borders, exclusion, and the potential outcomes for reimagining globalisation in a post-COVID world. Ultimately, the contestation of public health has contributed to a new epoch within international relations, leaving societies to reconsider their connectivities.

Introduction

> *"Is dit het nieuw normaal? [Is this the new normal?]"* (Vis 2020)

Diseases are not new as they are an innate aspect of politics resulting in concern. Questions about disease show that it is an innate aspect of politics. Disease threatens stability from the black plague to the swine flu in the late 2010s. When COVID-19 emerged in late 2019 and rapidly spread in early 2020, social and health-based conversations became dominant. Logistical concerns to quarantine times to entry requirements were at the forefront of many discussions. However, these logistics reflected privilege, inequality, and the strengthening of harsh boundaries. As borders serve as spatial boundaries, socio-economic boundaries became starker. The division between the upper and lower classes within one country is not the sole trend; instead, this division occurs between countries is

widespread. Starker divisions included COVID responses, vaccination distribution, and the availability of resources.

The visualisation of COVID's spread reflects these divisions. Maps from health centres such as the CDC in the USA to Rijksoverheid in the Netherlands relied heavily upon boundaries to indicate COVID rates. The efficacy of these visualisations is not coherent because the reach of these visual tools is unknown. Measures from curfews to mask mandates were validated using visual data. Many COVID-19 responses and measurements were political, from biopolitics to visual politics. The boundaries and guidelines used to enforce such societal rules were rooted in data and visualisation. Government responses relied upon data interpretations, alongside opinionated beliefs and values.

However, disease is not contained to borders. As disease spread adapts to the fluidity of changing populations, controlling changes such as disease variants and evolution is not straight forwards. Rather, COVID-19 exposed the realm of control of societies and governments, testing vital infrastructure and capabilities. Although some activities transcended border restrictions, such as virtual meetings, borders still present a significant challenge.

Population divisions, the prevention of travel, and mental health concerns were at the forefront of visible COVID-19 fractures. Also, one of the main questions around COVID-19 includes, "is this the new normal?" (Vis 2020). If a normal existed, its stability should arise; yet power, order, and stability still loom around capacities that led to exclusion. COVID-19 accelerated some of the most extreme trends around inequities and socio-economic order in spatial realms. Therefore, this paper elucidates how the COVID-19 pandemic promoted socio-economic and spatial fracturing around a reconceptualisation of borders, the rise of exclusionary politics and geopolitical shifts.

Methodology

There is a literature review and the triangulation of resources, from scholarly sources to geographic resources and societal material. Triangulation, in this case, refers to theory triangulation which can be referred to as using data analysed through multidisciplinary approaches (Durand and Chantler 2014, p. 167). The limitation of this approach is that it produces different data. However, this may show inconsistencies in data, methods, and results (Durand and Chantler 2014, p. 167 – 169). The need for triangulation in this context shows how reality and theory can be distorted within the lenses of spatial and geopolitical analyses.

A Mirage or Security?: Borders, Disease, and Power

Security and geopolitics rely upon socio-spatial conceptions of political power. Space is a function of power and reflects power dynamics shaped by actors. This space is not a consistent function across interpretations as it is not exactly defined and varies in interpretation. Furthermore, space is not necessarily the same as spatial conceptions of space, where certain features exist within a defined area. Within geopolitics, space is an area where power and actors function together. This union is not peaceful as space indicates a power struggle, resulting in a dominant power (Ashley 1987, p. 425 – 427). The political actor that loses power ultimately loses their space and belonging, leading to further struggles.

Additionally, there is no consistent division between social and political spaces as social changes can shift the idea and role of social space. Conversely, the former is more stable unless a power dilemma is introduced that questions and provokes the defined political space (Ashley 1987, p. 410 – 413). There is unknown power within this dilemma, nor is there a set norm for questioning what provocation entails through physical or diplomatic means. Thus, the question of space and the exact design of its characteristics is a feature of this struggle.

Spaces and the attributes within a defined area have several definitions within their function and place in socio-political spatial relationships. The first relationship within these attributes is territory or the ownership of a specified area. This definition contributes to "bordering" or the "constructive of the 'outside'" which determines what is not within boundaries (Jessop et al. 2008, p. 393). The extent of the creation of territory is limited to creating borders. The following relationship is place, which follows the similarities in constructing a socio-political spatial identity.

Nevertheless, place is more socially oriented. There is the distinction of creating boundaries between what belongs to a specified area and what is close to that area. However, place is "dependent on perception, identity, and values," divided through several ideas of place being a function of time, cost, and social areas that influence how societal characteristics interact (Starr 2013, p. 437 – 438). Then, scale is the construction of hierarchies in a differentiation method between socio-political and spatial identities (Jessop et al. 2008, p. 393). Scale varies in determining what is compared in a realm. The limit of these relationships depends upon the definition of features and relationships; however, not all definitions mentioned are similar.

The last relational attribute, network, is the most different. Unlike a defined feature, it shows many relationships. It is also called "reticulation," further discussed in analysing geopolitical connections (Jessop et al. 2008, p. 393 – 394). It differs from the other definitions of prior relationships because this contributes to the complexities of examining connections of socio-political power.

However, each relationship can fall into different categories when structured and compared to fellow socio-spatial relationships. These comparisons include governance, organisations, and partnerships (Jessop et al. 2008, p. 395). The limits to boundary comparison are by relationship, as place and network can contribute to an intersection. This can create a network of cities or communities. Nevertheless, it might not support the same creation, such as governance, which can exist in other relationships (Jessop et al. 2008, p. 395). The differing relations contribute to understanding features that fluctuate within power structures.

Within these differing power structures, the role of borders is invaluable as borders symbolise spatial divisions while enforcing power structures. However, borders do not only serve as restrictions to the functions outside of borders (Newman 2006, p. 147). There is an empowerment and ability to function within the same constraints for some actors. Then, actors can shape their spatial realms and create socio-spatial realities through maps.

The usage of maps for political purposes extends centuries, from colonisers' claims to the definition of newly independent nation-states. How territoriality in Western cartography changed was marked in 1659, with the first strict border. By introducing a boundary between France and Spain, inhabitants ignored this cartographic agreement because of their socio-spatial realities (Kratochwil 2011, p. 14 – 15). The agreement between elite powers significantly differed from the status of citizens, who did not have political power or control of law. A border introduced by dividing land differed from natural boundaries, such as harsh terrain created two different socio-spatial realities. Although a natural boundary brings forth restrictions, a constructed boundary brings forth socio-legal difficulties in interpretation. Other uses of borders challenge territoriality in claiming land for power and security for more significant purposes to eliminate political competition (Kratochwil 2011, p. 10 – 11). As borders shifted from wars and treaties, Western powers aimed to emulate power by conquering territory perceived as undiscovered. Cartography became a more critical tool for power.

Outside of colonialism and nation-state building, questions of power and order in the post-Cold War era reimagined the space and place for power shifts. However, the emergence of the Internet and increased globalisation questioned the need to consider peace amongst emerging forms of connectivity. The Internet-connected spatially disconnected regions and resulted in non-physical forms of connection. Through this connection formation, possibilities around social connections triumphed over purely spatial dynamics.

Conversely, the connectivity resulted in a new form of disconnectivity and prejudice. Therefore, exclusion beyond Western countries is imperative to note global structural inequalities. "The latter were regions beset by instability: disconnected from globalisation and threatening to the West for that very reason," resulting in actions from Western countries in disconnected regions, and then those regions arriving in the West and presenting security threats through terrorism and other acts (Andersson 2022, p. 94). The development of the connected versus the disconnected encourages inequalities as isolation efforts from the denial of exchanging resources to restricted activities encourage a form of othering.

Further notions show "how histories of connection and distance" are intertwined with "how remoteness may prove a tremendous resource if played right," leading to new power competitions (Andersson 2022, p. 74). The displays of political boundaries claimed by nation-states versus unconquered areas is not a new form of power claiming; instead, it is reinvented from old political-cartographic practices. The remnants of these practices contribute to the continuing divisions. The benefits of disconnectivity are seen within other political discourses.

The political discourse around disease is not solely a COVID-19 phenomenon. "The emerging diseases and global health security narrative runs on the notion that the bacteria or virus is the enemy against which the global surveillance/health security apparatus must operate," leading the political focus of war and power to a battle against human power, to focus on nature and other beings (Voelkner 2019, p. 383). The balance between health narratives and other security threats is unclear because both pose significant threats. Diseases cannot be imagined as clearly as natural disasters, yet the lack of control is similar to the potential to harm communities. For example, densely populated cities, connected to other cities, and had great connectivity were greatly affected by the 2003 SARS outbreak (Voelkner 2019, p. 377). The lack of control cities and governments have in combatting disease is limited to a few tools ranging from border controls to the confinement of the populace. The

questions of control and freedom in the attempt to contain a disease bring considerations of security and data.

The danger of disease limitations is the exposure of personal data to a greater system, which could be exploited. The use of data could help with preventing areas from further disease outbreaks while allowing other areas not to face exposure. Then, the potential to understand the spread of a disease comes from data and exposure to its nature can benefit research and containment methods. This has benefits as "the past two decades have witnessed the creation of several new syndromic surveillance systems harnessing the growing availability of open-source public health news and information that is now widely available and/or exchanged over the internet," leading to the further public awareness of health issues (Roberts and Elbe 2017, p. 48). In this scenario, data is utilised to benefit societies through globalisation as data is exchanged worldwide. However, data usage and systems depart from understanding diseases favouring numeric identifiers (Roberts and Elbe 2017, p. 56 – 57). Non-human errors could distort the understanding of emerging diseases. However, states are given the sovereignty to govern their health concerns (Roberts and Elbe 2017, p. 59). The extent of addressing health concerns could vary. Nevertheless, exclusionary measures could come from this in authoritarian states and lead to further societal divisions. Hence, borders present space and power limitations, while cartography and disease continue to reconsider power dynamics.

Many Faces of COVID-19: Maps of Fear or Fact?

The emergence of COVID-19 in early 2020 presented discussions around public health and safety to concerns around security. One of the immediate effects was the utilisation of borders to restrict movement. The closure of international borders showed that borders are a keystone of COVID-19. The early pandemic phase restricted movement to supply and resource limitations. Despite criticism of some closures, a travel ban and other social-restriction policies reduced the spread of COVID-19 and overall mortality (Bou-Karroum et al. 2021, p. 419). The changes in other measures prevented the spread. From social distancing to testing and quarantine for travellers, travel bans could be relaxed to favour widespread societal measures (Bou-Karroum et al. 2021, p. 420 – 421). The socio-economic well-being of society was negatively affected by widespread quarantining, hence limitations presented to preserve the health of a society. The addition of facemasks and recommendations to limit travel could have further implications too. Although these measures control public behaviour, visualisation was the primary method to introduce these behaviours.
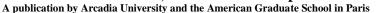
Maps became a public asset and an enemy to enforce border closures and visualise the spread of COVID-19. Maps showed borders as dividing lines intended to split communities and create a socio-spatial imaginary that encouraged isolation. The creation of maps is not a new phenomenon of pandemics, as maps were used to show pandemic spreads in neighbourhoods during the 1795 Yellow Fever Outbreak and 1854 Cholera Outbreak (Mocnik et al. 2020, p. 145 - 146). The visualisation range and its extent vary on the area and the projection used. Through visualisation, the range of visual data narratives ranges and can distort the situation experienced in an area by using borders, map overlays, and other spatial data forms (Mocnik et al. 2020, p. 148 – 150). The risk in this visualisation is the distortion of information. Not only are all geographic projections distorted due to topographic curvature, yet comparison can encourage at-risk areas with rising infections from appearing at-risk. Using many projections from national governments to international organisations contributed to this data perception distortion.

Across different projections of COVID-19, geographic tools from globalised countries exposed socio-economic conditions which changed the perception of the pandemic. One of the most infamous COVID-19 maps is from John Hopkins University (USA) and utilised ESRI's geographic dashboard capabilities to allow users to compare COVID-19 information. It showed total cases and deaths, yet later showed vaccines and a "case-fatality ratio" displayed the worst-hit areas (JHU). The danger in this projection is that COVID-denialists could use it to justify the lack of protections because other areas had higher rates of cases. One of the major criticisms of the map in April 2020 was the lack of reason to support dramatic data increases or the lack of data (Silva 2020). The projection and additional projections on the dashboard resulted in question irregularities and questions around cases that had reluctance in measures such as social isolation. The lack of including population statistics and other socio-economic factors led to inequalities in information through the dashboard, which was being utilised widely (Silva 2020). The unequal treatment of countries and situations resulted in patterns early in the pandemic where interconnected countries had more available information and testing capabilities.

In contrast, countries with less connectivity or less socio-economic privilege had to take safety measures to prevent outbreaks. This inequity extends only to maps and will be further discussed. Other forms of unequal treatment are seen in two national cases yet still vary in less-connected countries.

The United States and the Netherlands have sufficient data to examine comparatively. Although both countries are on the John Hopkins projection, national-based maps show stark national representation and treatment differences. When the spread of COVID-19 reached the United States, the use of smaller spatial features was intended to redefine spatiality on state and local levels. From individual state measures that split areas into counties and towns to the redefinition of state borders, the United States was not the only country with this problem because Australia would later face these considerations. However, the early outbreaks in the US showed the change of territoriality, not solely between Canada and Mexico, yet on a state basis. The change in this dynamic targeted "hot spots" or states with high case rates and presented risks to other states and their COVID-19 rates (Madsen et al. 2020). In this change, the territoriality of states became likened to international travel restrictions. Several states required "self-quarantine" measures for travellers from other states (Madsen et al. 2020). The enforcement of these restrictions mirrored international hubs where non-essential travellers could be prohibited from entering the territory during the examination.

Other limitations around national travel included states with high COVID rates, typically states with higher populations, such as California and New York (Madsen et al. 2020). The change in national treatment was supported by maps that frequently changed. The projection of early transmission soon changed into a range of different signifiers, from colours to patterns and changes in administrative boundaries. Changing boundary displays encouraged socio-spatial fracturing and confusion.

John Hopkins included state infection rates; however, the CDC and state governments had more detailed projections that showed the limits of spreading across borders on different administrative levels. When Google Maps released its COVID-19 view, view changes would, in turn, change boundaries, which changed the scope of data (Google Maps). A user could manipulate their perspective of the COVID-19 pandemic from changes in this form, benefitting understanding of local interpretations while possibly subtracting from other perspectives. However, the projections did influence viewers' perspectives of the pandemic. Participants who viewed "bubble maps" similar to the John Hopkins maps were less knowledgeable of per capita COVID-19 cases than heat map viewers (Thorpe et al. 2021, p. 2 -3). Projections such as Google Maps utilised the heat map style and showed per capita representations of COVID-19 cases. The visualisation of total COVID-19 cases was deemed less effective; hence, a heat map using per capita COVID-19 totals (Thorpe et al. 2021, p. 3 – 4). Even

though this examines the US and American visualisations, the Netherlands used similar methods yet changed their data.

Heat-based maps from Rijksoverheid divided the Netherlands into similar methods by regions, municipalities, and localities. The divisions of communities were starker by introducing a variety of administrative classifications (Rijksoverheid 2022). Plus, maps from Rijksoverheid in the Netherlands showed several projections, first from infections to tests, then later on including inoculation rates. Unlike the John Hopkins map, the range of data used was localised and included other statistics.

The usage of other graphics, such as charts, aimed to diversify the view of data from solely geographic-based in the US example to a more nuanced perspective of the pandemic. Wastewater calculations and statistics on vulnerable populations such as nursing homes allowed citizens to examine multiple outbreaks and disease spread indicators (Rijksoverheid 2022). This additionality allowed citizens to choose the socio-spatial perspective they wanted to focus on, from the well-being of vulnerable citizens to the health of the total population.

Despite these differences, there were errors in reported figures. In January 2021, Dutch Public Health Minister Hugo de Jonge reported more vaccinations than previously reported (Huisman 2021). This error was later clarified during the Dutch government's criticised slow vaccination efforts. Asides from errors in reported figures, press conferences, including Dutch Prime Minister Mark Rutte with Minister de Jonge, served as public and media representatives yet received criticism in times of vague claims. From this reporting, questions about the actual efficacy of the Dutch government and municipal health services vaccine rollout arose. Due to previous vaccine estimation errors, the vaccine campaign's confidence was dampened, alongside figures being questioned (Huisman 2021). However, maps allowed citizens to see data, and the validity of government data added to existing scepticism in preventative efforts.

A risk within this scepticism was the lack of precise data in the case of the Dutch government releasing data to the public. Clarifying the mistake in the figure that vaccinations went out to vulnerable populations did not prevent further scepticism as the Netherlands, at the time of the report, had one of the lowest vaccination rates in Europe (Huisman 2021). The Dutch government did show vaccination efforts through Rijksoverheid graphs. Nevertheless, the reliability and validity of the

Dutch government's efforts were scrutinised through unreported data. Underreported data was not a solely Dutch issue and plagued international projections.

Mapping the Spread: Divisions Over Technology and Connectivity

International maps split more globalised countries from others. There are several reasons why there is a clear split between the connected and disconnected. Cartographic methods were controlled by individuals in highly connected countries, such as the US and the European Union, which led to more shared knowledge. Although grassroots methods were developed, the technology required to produce projections and store data was controlled by wealthier countries. Several trends within connectivity explain why disconnections occurred.

First, COVID-19 spread more easily among connected countries because of conditions that enabled the movement of people in close proximity. The evolution of urban areas attracting internal and international migration contributed to higher densely populated cities. The infrastructure to respond to changing ecologies contributes to the spread of disease in "peri-urban and suburban areas" due to changing socio-ecological states (Connolly et al. 2020, p. 214). The changes in deforested and rapidly urbanised areas face this risk of disease spreading the most. Therefore, this socio-unsustainability led to the rapid acceleration and spread of COVID-19. Second, the scope of scientific data depends upon data collection. However, networks and the movement of people are imperative to examine. Transportation networks serve a unique role in preventing or allowing people to move between interconnected areas, posing the risk of spreading diseases (Connolly et al. 2020, p. 214 – 215). Public transportation such as trains and aeroplanes is typical of a disease quickly spreading between people in close contact travelling to other connected areas.

However, transportation networks such as the US Highway System or China's Belt and Road Initiative connect large areas alongside supplies and populations. The detriment in examining these networks is unknown behaviour, where contact tracing is difficult due to autonomy. Networks such as cruise ships were easy to detect the spread of COVID-19 and further containment due to the lack of autonomy from attendees. Therefore, network tracing becomes difficult in transportation networks with great autonomy and undetermined behaviour.

Third, the focus of many projections targeted highly technologically-connected areas that were visibly affected by the pandemic. Social media had a unique role in sharing spatial knowledge

between groups, such as avoiding areas and behaviours to adopt (Connolly et al. 2020, p. 215). The dangers in technologically-connected areas are the spread of disinformation and lack of security and privacy. Disinformation about COVID-19 cures spread, and the existence of the pandemic was easily spread before public officials had sufficient time to respond. The speed of spreading information on social media in urban areas presented risks to public health and safety, alongside the validity of public health statements. The risk for conspiracy theories to spread was significantly increased in this situation.

In some domestic responses, maps were manipulated to change responses and the perception of disease spread. In the USA, the CDC received criticism for portraying a sixth COVID-19 wave. One map showed three "COVID-19 Community Levels" classifications in three distinct colours by county (Prater 2022). Compared to other maps, the CDC showed a dispropriate amount of the USA that was not dealing with high numbers of infections. The other map from the CDC showed "Community Transmission" and appeared vastly different, which resulted in criticism of the CDC by a professor on social media (Prater 2022). The latter showed four distinct classifications, and most of the US was in high community transmission areas by county. This discrepancy follows changes in CDC advice, alongside messages given to US residents. Through changing classification and guidance, citizens look towards more reliable sources of information, even if that source is not from the government.

Hence, consistency and data matter to citizens in the communication of information and the usage of maps. One individual claimed that a public pharmacy's US COVID-19 maps were more reliable than the CDC (Prater 2022). The danger in this example is that non-government resources are encouraged as more trustworthy sources. Other sources could spread disinformation and incorrect health data if this scenario becomes increasingly common. Moreover, a government and its respective public health department or ministries become invalidated in their information display. Although borders changed between the public pharmacy and CDC's maps, the two cases told different situations. The CDC's most spread map that received criticism displayed data in a method that treated the sixth wave of COVID-19 as a minor spread. Their second map was closer to the public pharmacy's data projection despite different boundaries, using states over the CDC's county display. The second and pharmacy maps showed a sixth wave that affected most of the US. Although social media was the platform where these maps spread and were compared, there are additional risks.

Plus, information from citizens from their area to personal behaviours was amplified due to citizens looking for information on social media. The risk for this behaviour to result in the misusage of information is not solely a social media and globalisation issue. Further activities such as vaccine hesitancy arose, and the risk of personal information leaking are other considerations between connected countries. Moreover, maps show the divide between more and less globalised countries as the focus on vaccines exposes more inequities in COVID response.

An Accelerator or a Root Cause: Global Inequities During COVID-19

COVID-19 vaccine distribution became highly contentious due to the exposure of stark socio-economic considerations. Globalised countries such as Russia, the UK, the US, and the Netherlands were some areas where COVID-19 vaccinations were produced and received the first vaccines. Previous research enabled a vaccine to be released, yet wealthier countries stockpiled vaccines to the detriment of lower-income countries (Su et al. 2021, p. 2). The threat of COVID-19 spread was not only increased in lower-income countries. Nevertheless, it changed the efficacy of responding to and containment of the pandemic. Countries such as the UK, US, and Canada, considered methods of vaccine distribution whilst hoarding vaccines (Su et al. 2021, p. 7). The diplomatic implications of this are unclear, nor are the long-term consequences of these decisions. However, "vaccine inequality undermines the speed, solidarity, and significance of society's collective fight against COVID-19," which translates to hostile behaviour by refusing to distribute needed medical supplies in vulnerable areas (Su et al. 2021, p. 5). The risks of future outbreaks in vulnerable, typically disconnected areas are increased due to the reluctance to use health-based diplomacy to increase connections.

Other methods, such as "vaccine empathy and vaccine diplomacy," could increase relations and power between hostile regimes and afflicted areas needing supplies (Su et al. 2021, p. 7 - 8). The danger in these relations is not solely unequal treatment yet the promotion of un-democratic values to fulfil basic needs. There is a larger disparity within vaccine hoarding countries as communities display socio-economic hierarchies and divisions. The greater treatment of inequality was accelerated and heightened.

Less-connected and poorer countries faced restrictions on COVID vaccines and were left between choosing Western or non-Western vaccines. However, various media reports showed grassroots initiatives to develop COVID-19 vaccines or create connections. These grassroots

organisations are relatively understudied. Some funding is cited from rich, interconnected, Western countries willing to send money rather than supplies. Countries such as India face widespread inequalities, yet donated vaccines. The danger is through "taking substantially greater risks than hoarder nations, such as becoming more vulnerable to potential future COVID-19 outbreaks and more prone to facing domestic backlash," leaving risks for policymakers and societies (Su et al., 2021, p. 8). Vaccine hoarding not being publicly condemned and taken accountable measures allowed poorer countries to take larger risks to address their populations and support countries in similar scenarios.
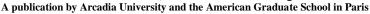
The failure of widespread vaccine diplomacy mirrors the failures of technology to address less-globalised and connected countries that struggle in combatting COVID-19 and other disease outbreaks. The potential for further diseases to originate from outside a globalised, connected sphere of countries increases, alongside the encouragement of disconnectivity. The danger in divisionary geopolitics is the threat of no connection. Through diminished connectivity, disconnected populations bring imaginaries resulting in threats and the emergence of disease, violence, and the threat of the unknown.

Conclusion

The COVID-19 pandemic has shown the difficulties in connectivity and globalisation through networks and connections. Emerging research on global order and power has shown the hierarchy of countries and communities, from vaccine hoarding to increased technologies. Whether COVID-19 exposed the inequities of global order and areas such as international political economy is disputed, further research on maps and their role in the behaviour of citizens in different countries would be required to see if these projections affected their attitude towards vaccines or the decisions of their governments.

The display of information from maps contributes to citizens' perceptions of disease spread. Social media plays a pivotal aspect in informing citizens alongside spreading information about the spread in socio-spatial realms. Without reliable information, disinformation can emerge from the roots of changing spatial representations. Through consistent projections and data representation, a sense of trust emerges in a source, regardless of its data origin or spread. Therefore, the role of governments remains contentious, as non-governmental actors such as pharmacies showed data that contradicted government sources.

Additionally, whether the next pandemic will overlap with COVID-19 or if it was mitigated by changing social behaviour such as encouraging face masks and social distancing. Long term vaccination efforts could change with the emergence of variants and changes in public health. A long-term danger is a rise in populist rhetoric and vaccine denial, fuelling misinformation. The spread of conspiracy theories surrounding technology, privacy, and public health is a consequence of multiple behaviours during the COVID-19 pandemic, which will be further researched. Suppose a pandemic emerges from a less connected country. In that case, the inequalities in response will be shown as blocking a disconnected country from global order is easier than placing any restrictions on a country with socio-economic influence.

Treatment against the Ebola outbreak exposed the divisions from connected countries blocking travel networks from West Africa. Due to the disconnectivity between West African countries and globalised, richer countries, it was easier to impose restrictions. Between connected countries during the COVID-19 pandemics, the number of transportation networks and connections increased the outbreak, and when limitations were imposed, it brought public backlash. The response from countries during the early stages of the pandemic showed reluctance and uncertainty, yet further developments showed the inability in response and data collection efforts from governments.

Most visual narratives depict a COVID-19 ridden Europe, North America, and other connected spaces, while most of the African continent had few reported infections according to data sets such as the John Hopkins Dashboard. Despite these visual narratives, there are fears against vaccination from richer countries, although these countries participated in vaccine hoarding. The risks that poorer, less connected countries face will be heightened through the continuation of this behaviour, encouraging geopolitical disconnectivity. Although disconnection cannot be predicted, the contentious nature of public health and connectivity signifies a new epoch in international relations.

The emergence of further variants continues predatory behaviour around disconnection encouragement and increases differences between the connected and the disconnected. This can lead to further cleavages. The long-term effects of these behaviours are unknown and will require further research. Ultimately, assumptions from COVID-19 maps alongside failures in mass-vaccinate efforts could leave less connected and socio-economic vulnerable countries in a precarious situation that could lead to the mutation of COVID-19 into further variants.

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