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On Dissent Against Public Health Interventions: A Phenomenological Perspective During the COVID-19 Pandemic

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0. Introduction

Amidst the emergence of the COVID-19 pandemic in 2020, governments around the world set in place large-scale non-pharmaceutical interventions. These interventions refer to activities or mobilizations undertaken to reduce the basic reproduction rate, or average number of infections generated by each infected case over the course of their infection, and limit the spread of the virus.[1] Examples include social distancing, large-scale lockdowns and school closures among others. While these measures were implemented based on the best scientific understanding available at the time, protests sprang up in response across different parts of the world. These protests occurred in two waves: the first during April and May of 2020 as the initial COVID-19 control measures were implemented; the second in early August responding to the extension of said restrictions.[2] At the time of writing in mid-March of 2021, a third wave of protests can be seen in certain parts of the world.

There has been a tendency for the media narrative in the Global North to characterize dissent against public health interventions as an expression of those emphasizing individual liberties over public benefits. However, it is crucial to recognize said dissent as a global phenomenon with diverse context specific motivations. In this chapter, we follow Edmund Husserl's phenomenology to argue that under specific conditions public health directives can be alienating and exacerbate the context specific drivers enabling dissent against large-scale non-pharmaceutical interventions.

Before proceeding, it is important to briefly clarify Husserl's reputation as a philosopher concerned with transcendental consciousness. To many it maybe

unclear what resources such a perspective can have for distinctly political issues, especially given that Husserl himself acknowledged that his philosophy is "entirely unpolitical."[3] Indeed, as Karl Schuhmann notes, the term *Politik* appears fewer than ten times in the first twenty Husserliana volumes.[4] Furthermore, any reference to transcendental philosophy immediately evokes a Kantian heritage that is commonly understood to emphasize individual subjectivity at the cost of inter-subjectivity. We begin by clarifying the inter-subjective character of Husserl's transcendental phenomenology before briefly discussing the political potential of his thought.

Husserl is well aware that invoking the term "transcendental" evokes Immanuel Kant. Yet, Husserl is no Kantian, despite having a complicated relationship with Kant's philosophy.[5] One important point of difference is that Husserl uses the term transcendental in the "broadest sense."[6] Much can be said (and indeed has been) of Husserl's "broad" use of the term and it will not be possible to give a detailed account here. It suffices for our current purposes to note that as a part of this broadening Husserl sees his philosophy as focusing on the inter-subjective character of the transcendental. As Husserl notes in his lecture *Kant and the Idea of the Transcendental*,

> Finally, one must pay careful attention to the fact that a possible transcendental subjectivity in general is not merely to be understood as a possible singular but rather also as a possible communicative subjectivity, and primarily as one such that purely according to consciousness, that is to say, through possible intersubjective acts of consciousness, it encloses together into a possible *allness* a multiplicity of individual transcendental subjects.[7]

In line with this insight, Dan Zahavi argues that this "occasions an intersubjective transformation of transcendental philosophy" that results in a "*decisive broadening* of the transcendental field of objects."[8] Consequently, Husserl enables investigations into domains that "a classical (Kantian) transcendental philosophy would relegate to an empirical-mundane province without any transcendental relevance."[9] Therefore, Husserl's transcendental phenomenology is applied to "domains previously reserved for other disciplines such as psychopathology, sociology, anthropology, and ethnology."[10] This broadening of transcendental inquiry has many implications. Zahavi argues that "*one of the most radical consequences* of an inter-subjective transformation of transcendental philosophy consists precisely *in opening up the possibility of dissent*."[11] In other words, the transcendental character of Husserl's phenomenology does not disqualify, but rather enriches the application of Husserlian concepts to the issue of dissent.

At the same time, however, we stress that it is not necessary to employ methodological components of transcendental phenomenology (epoché and the reduction) when applying Husserlian phenomenology. Zahavi notes that applied phenomenology must take a heterodox approach that is selective in its use of phenomenological material or run the risk of misconstruing concepts/operations originally formulated for specific philosophical purposes.[12] Accordingly, our application of Husserlian phenomenology to dissent against large-scale COVID-19 control measures restricts its focus to the implications that follow from Husserl's critical treatment of science in his last major work *The Crisis of the European sciences and Transcendental Phenomenology* (henceforth: *Crisis*).

With respect to the political potential of Husserl's phenomenology, we follow Don Idhe's claim that Husserl holds a "distinctly contemporary" view of science, i.e., that "science presupposes and remains cultural, historical, anthropological all the way down."[13] However, emphasizing the inter-subjective features of science does not imply compromising or downplaying value of scientific inquiry. Indeed, the defense of the latter is central to Husserl's philosophy. At a time when the political and social character of science is no longer restricted to academic discourse, but is an explicit feature of public contestations, we argue that Husserl's philosophy of science has the potential to be sensitive towards both the loss of confidence in scientific expertise and the motivations underlying public contestations of science. This chapter extends the political potential of Husserl's treatment of science in the *Crisis*, where Philip Buckley argues

> . . . that part of the crisis consists in being lost in the social and political world, that is, in accepting what has been given as self-evident . . . thereby formulating solutions to the crisis in the same worn out and sedimented concepts and language that are in fact part of the problem.[14]

To clarify, and following Sean Petranovich, Husserl distinguishes between two kinds of crises.[15] The first, or explicit crises, are immediately evident to us when we live through them. Writing in the 1930s, the explicit crises worrying Husserl's contemporaries included economic, political, cultural, and religious crises. The explicit crisis examined in this paper is the COVID-19 pandemic and dissent against much needed public health recommendations. The second, or implicit crises, are not immediately evident to those living through them. An example of this, following Husserl's discussion, is the crisis of the sciences. Husserl argues that, because the sciences have been undeniably successful, we have come to overlook the fact that the sciences are undergoing a crisis.[16] This overlooking results in our forgetting that we might be extending worn out concepts resulting

from a misguided scientific world-view, that inadvertently contributes to and is part of the explicit crises that confront us. Our working example in this chapter is the implicit crisis concerning the discrepancy between the population level benefits vis-à-vis individual/group level benefits of public health interventions. The discrepancy between these two levels underlies the explicit crisis of the COVID-19 pandemic and dissent against public health recommendations.

This chapter is divided into four sections. The first section explicates Husserl's analysis of the crisis of the European sciences. Section two sets up a parallel between Galilean science and public health to extend the implications of Husserl's critical treatment of the former to the latter. This section examines the discrepancy between the population and individual level benefits of COVID-19 control measures following the prevention paradox as influencially articulated by epidemiologist Geoffrey Rose. The third section situates our analysis within the context of dissent against large-scale public health interventions around the world. The paper concludes with a brief consideration of the scope and implications of our argument.

To avoid possible misunderstandings, we make three preliminary clarifications. First, it is important to stress that there is a significant gap between identifying the conditions that enable dissent against public health recommendations and endorsing the specific forms that such dissent can take. In this chapter we undertake the former task (identifying conditions) and not the latter (endorsing the specific forms such dissent can take, e.g., protests that deny the need or value of COVID-19 restrictions). Second, when extending Husserl's phenomenology to global political concerns we are confronted by Husserl's Eurocentrism. While identifying potential resources in Husserl's thought, it is important to not overlook these limitations. What we hope to undertake is, following Kenneth Knies, a highly *qualified* account that fully acknowledges Husserl's blind-spots.[17] Lastly, the present analysis concerns dissent against COVID-19 control measures in 2020. Further research is required when extending our claims toward more recent examples of dissent against public health directives.

1. Husserl's Historical Treatment of the Crisis of the Sciences

Husserl's investigation of the crisis of the sciences, is primarily undertaken in his long and famous analysis of Galileo Galilei. Husserl's analysis of Galileo may initially seem to take the discussion away from the COVID-19 pandemic. Yet, crises do not take place in a vacuum and the current crisis is the result of a long

historical process. As such, any critical examination of this contemporary crisis, which focuses only on how it manifests itself in the present, would likely be limited. Accordingly, by discussing Husserl's historical analysis of the sciences, we will begin to outline the conditions that set the stage for the emergence of dissent during the COVID-19 pandemic, which we will explicitly discuss in section three.

Before proceeding, a quick methodological clarification on Husserl's analysis of Galileo. Husserl does not put forward a strict historical treatment if this is understood to mean a factual study of the life and times of Galileo Galilei. As Husserl notes,

> All [merely] factual history remains incomprehensible because, always merely drawing its conclusions naively and straightforwardly from facts, it never makes thematic the general ground of meaning upon which all such conclusions rest.[18]

A factual analysis of history would focus on certain events and figures. However, it is never clear why these moments as opposed to others are worthy of our attention. In contrast, Husserl's treatment undertakes the task of "*clarifying* history by inquiring back into the primal establishment of the goals, which bind together the chain of future generations."[19] In other words, Husserl's analysis of history concerns how certain events are meaningful and continue to influence the attitudes of successive generations. In this regard, Husserl does not undertake a factual study of the historical Galileo, but is better understood analyzing Galileo's legacy that continues to influence and be meaningful to those inside and outside of the scientific community. To avoid possible confusion, we will use the term "Galilean science" as opposed to Galileo when referring to the object of Husserl's inquiry.[20]

1.1 Husserl's Critical Analysis of Galilean Science

Although an inherently complicated episode in the history of science, the tension between Galileo and the Catholic Church continues to be meaningfully associated with the rise of scientific authority in the West and its claims to objective truth.[21] Additionally, Galilean science inaugurated an influential "style" of scientific thinking that, as Aron Gurwitsch notes, posits a "cleavage between the world as it presents itself in the perceptual experience of everyday life, and the world as it is in scientific truth."[22] This cleavage was the (indirect) result of scientific investigations that employed specific methods and techniques. In this section, we follow Husserl's attempts to clarify these methods and techniques. Crucial to this

clarification is shedding light on the differences between the ideal objects of geometry and the perceptual objects in everyday experience, or the "life-world."

Ideal geometrical shapes are "'pure' shapes which can be drawn in ideal space—'pure' bodies, 'pure' straight lines."[23] They do not vary or change over time. Moreover, pure geometrical objects are never found in our lived experience. We never perceive an ideal straight line, an ideal triangle, or an ideal sphere. In contrast, perceived objects of the life-world are immediately given to and around us, e.g., trees, coastlines, rocks, cars, and so on. Their properties can vary and change over time. In its search for objective knowledge, Galilean science aims to transition from the varying character of our perceptual experiences to invariant truths. This is achieved by executing the technique of idealization, which repeatedly perfects indeterminate and varying aspects of perceptual objects to attain ideal geometrical figures. For instance, the roughly straight line in perceptual experience is constantly perfected to attain an "invariant and never attainable pole" of the most ideal form of straight-ness.[24]

For Husserl, the technique of idealization reduces the inexact features of a perceptual object, or secondary qualities, to its primary qualities. The former refers to qualities like color, that ostensibly pertain only to the subject's relation to the object. However, the subject's perception of color can fluctuate depending on various contextual factors, for example, visibility conditions. Conversely, primary qualities are purportedly mathematizable and understood to inhere in the object independent of a subject's relation to it. In the case of color, the corresponding primary quality would be wavelength. Given that primary qualities can be calculated in an "exact" manner unlike secondary qualities, color is reduced to wavelength for the purposes of precise measurement. Therefore, via the process of idealization, one can execute an "indirect mathematization" of secondary qualities in terms of primary qualities.[25]

Yet, by subsuming all perceptual features of the sensible world under mathematizable primary qualities, secondary qualities eventually attain a reduced status. As the historical Galileo notes, "tastes, odors, colors, etc., are nothing but *empty names* . . . they inhere only in the sensitive body, such that *if one removes the animal, then all these qualities are taken away and annihilated.*"[26] In other words, secondary qualities become "empty names" and are not taken to be objectively present in the world. Underlying this outlook is the assumption that only that which inheres in the object, irrespective of the subject, is objectively real. This represents the underlying motivation of Galilean science to achieve the renaissance ideal of a "universal knowledge, [that is] absolutely free from prejudice, of world and man."[27]

However, this accomplishment has its limitations. As previously mentioned, only mathematizable primary qualities fulfil the criteria set by Galilean science. This would imply that the mathematizability of a quality is the measure of its reality. What Galilean science sets out to achieve is to extend this insight from the qualities of individual objects to the concrete world as such.[28] This eventually leads to a complete mathematization of reality where the objective aspects of nature are taken to be those that are mathematical. As Husserl notes,

> Mathematics and mathematical science, as a *garb of ideas* … encompasses everything which, for scientists and the educated generally, *represents* the life-world, *dresses it up* as "objectively actual and true" nature. It is through the garb of ideas that we take for *true being* what is actually a *method*.[29]

Consequently, Husserl writes that "through Galileo's *mathematization of nature, nature itself* is idealized [and] under the guidance of the new mathematics nature itself becomes—to express it in a modern way—a mathematical manifold [*Mannigfaltigkeit*]."[30] In other words, nature becomes a mathematical domain, thereby excluding un-mathematizable features of subjective experience.

1.2 Alienation and the Mathematization of Nature

The above critical treatment of the Galilean mathematization of nature might give the impression that Husserl is against applying mathematics to empirical phenomena. But this is certainly not the case. Husserl has always seen the use of mathematics to understand empirical phenomena as a helpful and indeed, indispensable tool for the success of the sciences. Even in his earliest manuscripts from 1891, Husserl concluded, concerning mathematical symbols in particular,

> Upon the conscious application of symbols, the human intellect raised itself to a new and truly human level. And the progress of intellectual development runs parallel with progress in symbolic technique. The magnificent development of the natural sciences, and that of the technology based upon it, constitute above all else the pride and glory of recent centuries.[31]

Throughout all stages of his oeuvre, Husserl would continue to highlight the value of mathematics and mathematization. Toward the end of his philosophical career, Husserl claims that mathematics was an accomplishment that represented a "triumph of the human spirit" and its development has allowed for "inductions with an efficiency, a degree of probability, a precision, and a computability that were simply unimaginable in earlier times."[32]

What directs Husserl's criticism is the privileging of mathematizable qualities over secondary qualities. In other words, Husserl is critical of granting mathematizable qualities the status of objective reality while reducing the secondary qualities, and by extension common-sense experience in the lifeworld, to the status of an "empty name."[33] To be precise, Husserl has a problem with,

> . . . the *surreptitious substitution* of the mathematically substructed world of idealities for the only real world, the one that is actually given through perception, that is ever experienced and experienceable- our everyday life-world.[34]

The life-world represents the larger whole. As seen above, the mathematical world of idealities is made possible by idealizing objects in the life-world. These idealities are thus dependent upon the life-world. The surreptitious substitution consists in the mathematical world of idealities being detached from the life-world and then being conceived of as an all-encapsulating whole that can act as a substitute for the life-world—and all this, despite only being a dependent part of the life-world.

The problem with the "surreptitious substitution" is that Galilean science instantiates a *fundamental reversal*: what is a dependent part is taken to be the whole, one that relegates the subjective experience of the world to mere opinion, prejudice, or subjective appearance. As Gary Gutting notes: "[a]ny scientific description of the world is essentially incomplete in that it inevitably omits major dimensions of our life-world experiences."[35] A famous instantiation of this is physicist Arthur Eddington's distinction between two tables.[36] The first table, or commonplace table, refers to the substantial perceptual object that is a part of our daily activities in the life-world. The second (scientific) table differs in that it is not given to the senses and consists mostly of emptiness scattered with electric charges. Eddington sees the scientific table as "objectively real" while the common place table gets relegated to the status of mere subjective appearance. This represents the surreptitious substitution where the scientific table claims the status of being objective reality, thus leaving no legitimate place for the common place table of the life-world.

When a subject's concrete ways of engaging with objects, such as tables, are eschewed from scientific reality, it becomes unclear what the subject is dealing with when interacting with the common-place table. This has a double effect. First, the domain of scientific reality can become *enigmatic* when it diverges from everyday experience. Second, as Richard Tiezen notes following Husserl, this could lead to a form of "alienation from reality" for the subject when her everyday experience is not taken as a part of objective reality.[37]

Admittedly, the implications of feeling alienated from the enigmatic character of Eddington's scientific table can seem trivial and may not lead to widespread dissent. But the alienation experienced is far from trivial when science deals with matters of social impact, like control measures during the COVID-19 pandemic. In the next section, we will identify further features of scientific practice that enables dissent against expert recommendations when combined with the alienating and enigmatic character of scientific objectivity.

2. Parallel between Husserl's critique of Galilean science and public health

In this section, we extend the implications of Husserl's treatment of Galilean science towards public health practice. In making this extension, we are not claiming that the specifics of Galilean science applies to public health. To avoid such conflation, we first identify the basis for a parallel between Galilean science and public health. Beginning with a brief description of public health, Dean Rickles notes that:

> Public health concerns the health of *populations* of people, rather than *individual* people . . . [i]t deals with *aggregates* of measurements of properties of individuals and is therefore a statistical science, facing the many (technical, epistemological, and metaphysical) problems that this inevitably involves.[38]

Public health deals with populations rather than individuals and is a mathematical science that is heavily reliant on statistics. In other words, like Galilean science, public health practice is heavily reliant on sophisticated mathematics which is applied to populations in the empirical world. As Rickles notes, this makes public health liable to certain criticisms. Before elaborating on how said criticisms resonate with Husserl's treatment of Galilean science, it is crucial to discuss why public health requires statistics.

Public health is heavily reliant on statistics owing to its focus on populations. This is because the population of a country or region is not immediately given. For instance, strolling along Belgian streets we see individuals or large groups but never the entire population of the Belgium. To constitute the entire population, we start with individuals immediately perceived and extend our horizon to constitute a collective. However, such extensions are not antithetical to perception but are constitutive of its character. As Husserl famously notes: "[e]xternal perception is a constant pretension to accomplish something that, by its

very nature, it is not in a position to accomplish".[39] Similarly, public health practitioners are also constrained by the fact that they are dealing with entities that are not directly perceivable. This limitation is overcome by starting with individual level data, aggregating it, and attaining statistical measures that represent the population level. As Daniel Reidpath notes:

> One does not measure the health of a population; one measures the health of individuals and aggregates the data. It is in the process of "rolling up" the individual level data into a single summary statistic that one delivers a measure of population health.[40]

In other words, public health is reliant on statistics as it is the medium through which populations can be intended and studied.

The public health focus on populations rather than individuals is also important in the contexts of pandemics. During a disease outbreak, individuals fall into either the high-risk or low-to-moderate risk categories. Common-sense would see medical interventions being directed at the former, or those at higher risk, rather than the latter. This represents the traditional high-risk strategy. However, epidemiologist Geoffrey Rose influentially proposes a population strategy that operates on the counter-intuitive insight that "*a large number of people at a small risk may give rise to more cases of disease than the small number who are at a high risk*".[41] Consider Rose's example of the occurrence of Down's syndrome births and its relation to maternal age.[42] Mothers under thirty tend to be at minimal risk of such an occurrence at the individual level. But this group sees significantly more births as compared to mothers over forty, who are at higher risk but see lesser number of births. Consequently, mothers under 30 generate half the cases of Down's syndrome births as a group although each individual is at low risk. Similarly during the COVID-19 pandemic, asymptomatic individuals and those who identified themselves as unlikely to contract SARS-CoV-2 constituted the majority of the population and a majority of the cases.[43] For this reason, Rose emphasises the need for a population strategy, that focuses on reducing the risk of individuals in the low-to-moderate risk group, as a necessary supplement to the more intensive interventions for those at higher risk. Another reason in favour of a population strategy includes the fact that medical personnel and institutions have limited capacities when it comes to identifying those at high risk.[44] Moreover, any screening process would identify borderline cases where it is unclear how to proceed.[45] Lastly, a population strategy is radical in the sense that it "attempts to remove the underlying causes that make the disease common".[46] This is unlike strategies narrowly focusing on

high-risk individuals that do not fundamentally engage with the factors that made said individuals highly vulnerable in the first place.[47] For these reasons and more population strategy was preferred in the case of the COVID-19 pandemic as it would entail a variety of non-pharmaceutical interventions like social distancing and large-scale lockdowns to deny SARS-CoV-2 new sites of infection and potential mutation.[48]

Despite these benefits, extending Husserl's critical treatment of Galilean science to public health theorizing is useful when population level reasoning aided by statistical factors like relative risk distribution or the rates of incidence within a population are applied uncritically. As previously noted, population health data is attained by "rolling up" individual health data. Accordingly, although population health is indicative of certain health features at the individual level, the two are not synonymous. Overlooking these differences can have important implications in case of serious discrepancies between the population and individual levels. On this point, and despite his support for population strategies, Rose highlights the *prevention paradox* where "a preventative measure that brings large benefits to the community offers little to each participating individual".[49] In other words, benefit at the population level following a preventive measure does not necessarily correlate with benefit for all individuals/groups within that population.

To fully grasp the implications of the paradox, we follow Stephen John in distinguishing between two senses of benefit implicit in Rose's formulation. In the first sense, the benefit of a population strategy is the avoidance of death for those targeted.[50] However, most individuals in a population fall into the low-to-moderate risk group, as was the case during the COVID-19 pandemic. Consequently, death was not perceived to be a real possibility by members of this group and therefore avoiding it did not constitute a significant benefit. The second sense of benefit, follows what John calls an "ex-ante" understanding, where most individuals in the population attain a negligible reduction of risk.[51] In this case, Rose claims that it is plausible for such negligible benefit to be outweighed by the negative consequences of the preventive intervention.[52] As will be seen in the next section, this was especially the case during the COVID-19 pandemic where large-scale non-pharmaceutical interventions were correlated with drastic economic, social, psychological, and political ramifications for individuals/groups in the population.

Here we see a repetition of the implications of, and a parallel with, Husserl's critique of Galilean science. The devastating impact of SARS-CoV-2 and the urgent need for a population strategy that limits its viral spread becomes

enigmatic amidst a variety of economic, socio-political, and personal crises. In these contexts, Husserl articulates the public perception of science as follows:

> In our vital need—so we are told—this science has nothing to say to us. It excludes in principle precisely the questions which man, given over in our unhappy times to the most portentous upheavals, finds the most burning . . .[53]

During the "unhappy times" of the COVID-19 pandemic and its "most portentous upheavals," well-intentioned and necessary public health recommendations can seem to overlook the stark realities that accompany their application. Put differently, statistically based population level reasoning is surreptitiously substituted for other context specific ways of relating to the pandemic. If this is followed by experts framing public disagreement or opposition as selfish or lacking in concern for the overall benefit of the population, then complying with public interventions can become *alienating* and set the stage for dissent.

There is potential in Husserl's phenomenology to articulate a positive account of how public health could motivate collective action. A potentially fruitful, and sadly, under-examined aspect of the Husserlian corpus is his nuanced treatment of the concept of motivation.[54] Moreover, in the *Vienna Lecture*, Husserl makes clear his intention of using phenomenology to bring about a total *reorientation* of the task of knowledge towards "a *new sort of praxis*" that is capable of transforming humanity from the "*bottom up.*"[55] However, elaborating on this potential for public health interventions is outside the limited ambit of the present chapter, which focuses on the specific conditions under which dissent against public health recommendations emerges.

In the next section, we engage with three types of dissent against public health interventions by considering examples from across the world. The first occurs where the public cannot comply with COVID-19 control measures owing to structural and context specific reasons. When these issues are overlooked and the control measures are imposed, experts and policy makers are perceived to be insensitive to the lived reality of the pandemic. The second concerns how those in power use the threat posed by SARS-CoV-2 to extend and impose their authority in draconian ways, leading to public dissent against the co-opting of public health interventions. The third transpires when political forces use the economic and social distresses brought about by the pandemic to arouse public opposition against scientific institutions and experts.

Before proceeding, it is important to stress the analysis in the next section does not play devil's advocate for those opposing public health recommendations.[56] As just noted, we follow Rose's defense of the numerous benefits of a population

strategy. This cannot be legitimately contested in any of the cases that will be discussed in the next section. But following Rose also implies paying need to the prevention paradox where population level benefits of a preventive intervention does not necessarily lead to benefits for individuals/groups in the population. Our approach is limited to identifying those instances where the implementation of social distancing or large-scale lockdowns, when combined with an overlooking of the stark realities that follow, sets the stage for dissent.[57]

3. Protests and the Crisis of the COVID-19 Pandemic

Thomas Carothers and Benjamin Press argue that despite their "shared anti-lockdown theme," there is significant diversity among protests against large-scale COVID-19 control measures.[58] This includes differences in the local circumstances motivating protests and the varying composition of those protesting, from urban elites to the rural poor.[59] Within this wide range, we follow Carothers and Press in identifying *three* sub-types of protests.

(1) The first concerns protests following the devastating socio-economic impact of COVID-19 restrictions. Consider the Indian context, where lockdowns have further marginalized workers in the informal sector, who subsist on daily wage labor, which cannot be undertaken with social distancing.[60] Additionally, those in the informal sector are not always present in official records and thus often overlooked by government initiatives during the pandemic.[61] To emphasize the extent to which this group was overlooked, it is worthwhile to consider the manner in which lockdowns were imposed. India declared a 21-day lockdown at midnight of March 24, 2020. This extended to shutting down public transport, thereby transforming millions of migrant workers into refugees overnight. Unable to survive in the cities, these workers were then forced to walk back to their villages, which were often hundreds of miles away; with many dying on the way.[62] It is impossible to overemphasize a news report noting that "a lockdown to stave off a pandemic is turning into a humanitarian crisis."[63] When the lockdown was extended in May, migrant workers in Mumbai protested by demanding travel back to their homes. This was met with police violence.[64]

In Chile, Magdalena Gil and Eduardo Undurranga note that by "overlooking critical socio-spatial factors such as segregation, sanitation, and overcrowding, decision-makers were blind to the potential consequences of their strategy of localized lockdowns."[65] Around 400,000 households in Chile have more than 2.5 persons per room.[66] In the capital city Santiago, 56 percent of households live

in less than 70 square meters and have only one toilet.[67] In these conditions, it is not possible to follow social distancing measures. These structural features were not immediately evident to policy-makers, however, as evidenced by the Chilean health minister's public acceptance of this fact on May 28, 2020.[68] Public demonstrations in light of these events have been met with police violence, with one protester saying: "You go out to ask for bread or say you are hungry, and in response they shoot teargas."[69]

In South Africa, public health efforts were initially lauded for their swift response. However, control measures were not sensitive to the social context and this resulted in aggravating already existing social and economic disparities. The urban poor were confronted with a food crisis that required swift action through emergency relief measures.[70] In some cases, this led to protests when the promise of food parcels never materialized.[71] For these reasons, Alexander Broadbent[72] and colleagues argue that,

> It is unhelpful to characterise lockdown scepticism as a neoliberal political stance. Lockdown is demonstrably not egalitarian in either its costs or its benefits. We must assess lockdowns and other measures holistically, remembering that the costs will mostly fall, as ever, on the global poor.[73]

While this view attempts to understand the drivers of an anti-lockdown sentiment, it has also been criticized for overlooking the specific ways in which COVID-19 disproportionately impacts racial minorities.[74] This resonates with the African American experience in the United States, where the infection rate in black counties is three times higher than white counties, with the mortality rate being six times higher.[75] As Clyde Yancy notes, "if race per se enters this discussion, it is because in so many communities, race determines home."[76] Yancy continues that, being "able to maintain social distancing while working from home, telecommuting, and accepting a furlough from work but indulging in the plethora of virtual social events are issues of privilege. In certain communities these privileges are simply not accessible."[77] Similarly, public health authorities in the UK have reported that persons from Black, Asian, or Minority Ethnic (BAME) backgrounds were at a higher risk of dying from COVID-19 than white British citizens.[78]

The socio-economic devastation of COVID-19 is not restricted to the global south or to minorities in high income countries. In a study designed to be representative of the adult population in the UK, Atchison and colleagues note that while a majority of the respondents were worried about COVID-19, only less than half of the respondents reported adopting social distancing measures.[79]

Further analysis showed that respondents who were separated, divorced, widowed, or never married were less likely to adopt social distancing measures.[80] Those who constituted the lowest household income bracket were six times less likely to work from home. Respondents without a degree level qualification were less likely to be able to work from home as compared to those with a degree.[81]

The COVID-19 Pandemic and public health control measures have been experienced in different ways by different people. For some, the pandemic and its restrictions have been a harsh reminder of the precariousness of their socio-economic status. For others, their structural inability to follow COVID-19 control measures has made explicit that the ability to comply is itself a privilege. When this is coupled with a mischaracterization of the public's inability to comply as a lack of willingness to follow expert recommendations, COVID-19 restrictions become a sign of insensitivity to the stark realities brought about by the pandemic. Consequently, the continued imposition of control measures further exacerbates feelings of exclusion, thereby setting the conditions for emergence of dissent.

(2) The second sub-type of protests react against the co-option of COVID-19 control measures by those in power. In Kenya, protesters accused the Kenyan police of excessively enforcing COVID-19 restrictions that led to avoidable deaths.[82] In the Philippines, Cambodia, and Thailand, the pandemic has been used as an excuse for governments to extend emergency powers.[83] This power was not just used to impose lockdowns, but also to censor and curb dissent against those in power. In Serbia, thousands of protesters opposed President Aleksandar Vučić for imposing restrictions to curb dissent after a contested election.[84]

In the above-mentioned examples, the mapping of COVID-19 restrictions onto previously existing socio-political fault lines have explicitly politicized the pandemic. This further testifies to the feeling that control measures are motivated by political interests and disproportionate to the threat of SARS-CoV-2. Consequently, the threat posed by the pandemic becomes enigmatic and following COVID-19 restrictions becomes alienating, as it implies willfully complying with draconian political interests.

(3) The third and last sub-type of protests generally takes place in high income countries and opposes the manner in which lockdown measures infringe on individual freedoms. These protests can be characterized as "big tent" demonstrations bringing together varying interests from business advocates to vaccine skeptics.[85] In the United States, these protests have also vocalized grievances like the opposition to abortion, immigration, support for Donald Trump, and issues pertaining to the second amendment in the American constitution.[86] Former President Donald Trump contributed to these protests by downplaying the impact of the pandemic,

politicizing COVID-19 control measures, refusing to wear a mask, and disparaging his own public health officials.[87] Additionally, Trump drew strong associations between the state of the economy and public health interventions claiming "'we cannot let the cure be worse than the problem itself'".[88] This intermingling between politicians in power and dissent against public health interventions is not restricted to the United States. In Brazil, President Jair Bolsonaro distanced himself from COVID-19 control measures and encouraged his supporters to ignore these restrictions.[89] In Germany, far-right groups have been accused of instrumentalizing the pandemic to further their message.[90]

Depending on one's ideological lens, these movements are portrayed very differently. For some, these protests represented spontaneous "grassroot" movements. For others, they represented an "AstroTurf" operation funded by interest groups.[91] In both cases, public health recommendations are forced operate within the framework of already existing socio-political polarization. When this is coupled with prominent figures mischaracterizing the intended benefits of COVID-19 restrictions, the stage is set for dissent against public health recommendations.

An objection could be raised that the examples mentioned above concern dissent against government policy rather than science or public health. In response, we argue that a strong distinction between science and government policy is a curious one to draw during a pandemic where scientists have been rightly asked to play an important role in policy-making. For this reason, although it is important to distinguish between science and government policy, we argue that a strong separation between the two is untenable during the COVID-19 pandemic. Furthermore, we note that it has been increasingly hard for the public to differentiate between science and government policy. Especially given that governments have been consistently emphasizing that they are "following the science" or drawing a direct association between scientific policy and the many inequalities exacerbated by the pandemic when it suits their political interests. Given that this chapter focuses on the public perception of COVID-19 control measures, we question the validity of a strong distinction between science and government policy in this regard as well.

4. Conclusion

This chapter represents a preliminary step in extending the potential of Husserl's phenomenology to engage with public contestation of science in general, and public health in particular. Phenomenologically speaking, COVID-19 control

measures mean very different things in different contexts. For some, large-scale public health interventions are about limiting the spread of a deadly virus with an extremely high rate of transmission. For others, these control measures highlight their economic and social precarity, becoming an instance where already existing inequalities are exacerbated. In certain cases, public health interventions have been co-opted for draconian political purposes in a manner that was perhaps disproportionate to the threat posed by COVID-19. But not all protests necessarily reflect local concerns manifesting spontaneously, with some examples pointing to instigation and support from interest groups for political purposes. Despite these differences, dissent against public health interventions highlight the implications of Husserl's critical treatment of Galilean science. The surreptitious substitution of population level reasoning for the various context specific ways of relating to the stark realities that follow large-scale public health interventions, set the stage for dissent. Making this claim does not deny our immense gratitude to public health experts, health-care professionals, policy makers, and volunteers who have worked tirelessly to keep us safe from this threatening virus. Instead, we hope to have identified those conditions and instances that limit compliance with COVID-19 control measures and undermine the valiant efforts public health practitioners.

Notes

1 Seth Flaxman et al., "Estimating the Effects of Non-Pharmaceutical Interventions on COVID-19 in Europe." *Nature* vol. 584, no. 7820 (2020): 257

2 Thomas Carothers and Benjamin Press, "The Global Rise of Anti-Lockdown Protests—and What to Do About It." *World Politics News*, October 15, 2020. Available online: https://www.worldpoliticsreview.com/articles/29137/amid-the-covid-19-pandemic-protest-movements-challenge-lockdowns-worldwide (accessed December 14, 2020).

3 Husserl, *Husserliana: Dokumente 3*. Bd. 9. Familienbriefe, ed. Karl Schumann. (Dordrecht; Kluwer, 1999), 9, 244.

4 Karl Schuhmann, *Husserls Staatsphilosophie* (Freiburg: Verlag Karl Alber, 1988), 18; The Husserliana volumes are the main series in which Husserl's works are edited. Volumes contain both previously published books and articles in a critical edition as well as selections from unpublished manuscripts conserved at The Husserl Archives in Leuven.

5 Husserl's engagement with Kantian thought evolved significantly during his lifetime. His early engagements with Kant under the influence of Brentano could be

interpreted as being dismissive. However, there is a greater appreciation, while at the same time, an acknowledgment of crucial differences in works such as *The Idea of Phenomenology*, *Thing and Space*, *First Philosophy* lectures of 1923/24, the *Crisis* and the lecture *Kant and the Idea of the Transcendental*.

6 Edmund Husserl, *Husserliana VI*, 100/1970, *Husserliana VI. Die Krisis der europäischen Wissenschaften und die transzendentale Phänomenologie*, ed. Walter Biemel (The Hague: Martinus Nijhoff, 1976), 97.

7 Husserl, "Kant and the Idea of Transcendental Philosophy," trans. Ted Kein and William Pohl. *The Southwestern Journal of Philosophy* vol. 5, no. 3 (1974): 31.

8 Dan Zahavi, *Husserl and Transcendental Intersubjectivity: A Response to the Linguistic-Pragmatic Critique. Athens* (OH: Ohio University Press, 2001), 86; emphasis added.

9 Zahavi, *Transcendental Intersubjectivity*, 86.

10 Ibid, 86.

11 Ibid, 37; emphasis added. See also Thomas Byrne, "The Meaning of Being: Husserl on Existential Propositions as Predicative Propositions." *Axiomathes* vol. 32 (2020): 123–39.

12 Zahavi, *Transcendental Intersubjectivity*, 37; emphasis added. See also Thomas Byrne, "The Meaning of Being: Husserl on Existential Propositions as Predicative Propositions." *Axiomathes* vol. 32 (2020): 123–39.

12 Zahavi, "Applied Phenomenology: Why It Is Safe to Ignore the Epoché." *Continental Philosophy Review* vol. 54, no. 2 (2021), 270–2.

13 Idhe, "Husserl's Galileo Needed a Telescope!" *Philosophy & Technology* 24 (2011): 75. It is important to stress that Idhe is not a proponent of Husserl's philosophy of science. Furthermore, the essay cited is very critical of Husserl's treatment of Galilean science, which is discussed in the second section of this chapter. Despite this fact, we agree with Idhe that Husserl's treatment of science is similar to contemporary authors like Steve Shapin, Bruno Latour, or Donna Haraway. Moreover, we believe that by capitalizing on the similarity between those works, there is great potential to further extend Husserlian phenomenology to public contestations of science.

14 Phillip Buckley, "Political Aspects of Husserl's Call for Renewal," in *Transitions in Continental Thought*, ed. Arleen B. Dallery, Stephen H. Watson, and E. Marya Bower (New York: SUNY Press, 1994), 8.

15 Sean Petranovich, "Trust and Betrayal from a Husserlian Standpoint," *International Journal of Philosophical Studies* vol. 26, no. 2 (2018): 131.

16 Husserl, *Husserliana VI*, 1/1970, 3.

17 Kenneth Knies, "*A Qualified Defense of Husserl's Crisis Concepts.*" *Metodo. International Studies in Phenomenology and Philosophy* vol. 4, no. 1 (2016): 27–47. See also Byrne, "Husserl's Early Semiotics and Number Signs: Philosophy of Arithmetic through the Lens of 'On the Logic of Signs (Semiotic)." *The Journal of the British Society for Phenomenology* vol. 48, no. 4 (2017): 287–303.

18 Husserl, *Husserliana VI*, 383/1970, 371.
19 Husserl, *Husserliana VI*, 72/1970, 71; emphasis added.
20 Husserl, *Husserliana VI*, 19–20/1970, 22–23.
21 Galileo's confrontation with the Catholic Church led to his condemnation in 1616 and 1633. While the predominant view finds the church was dogmatic in its inability to recognize the Copernican world-view, some historians and philosophers of science see the confrontation differently, arguing that church authorities were bringing to light blindspots in Galileo's understanding of the limits of his experimental method. See Juha Himanka, "Husserl's Argumentation for the Pre-Copernican View of the Earth," *The Review of Metaphysics* vol. 58 (2005): 628.
22 Aron Gurwitsch, *Phenomenology and Theory of Science*, trans. Lester Embree (Evanston: Northwestern University Press, 1974), 34. See Byrne, *Husserl's Early Genealogy*.
23 Husserl, *Husserliana VI*, 21/1970, 25.
24 Ibid, 22/26.
25 Ibid, 34/35.
26 Galilei Galileo, *Essential Galileo*, trans. Maurice Finocchiaro (New York: Hackett, 2008), 185; emphasis added.
27 Husserl, *Husserliana VI*, 6/1970, 8.
28 Ibid, 30/33.
29 Ibid, 50/51; emphasis added.
30 Ibid, 25/23.
31 Husserl, *Husserliana XXII*, 350/1994: 29.
32 Husserl, *Vienna Lecture*, 295.
33 Galileo, *Essential Galileo*, 185.
34 Husserl, *Husserliana VI*, 48–9 (1970): 48–9.
35 Gary Gutting, "Husserl and Scientific Realism." *Philosophy and Phenomenological Research* vol. 39, no. 1 (1978): 43–4.
36 Arthur Eddington, *The Nature of the Physical World*. (London: Kessinger, 2010), ix–x.
37 Richard Tiezen, "Science as a Triumph of the Human Spirit and Science in Crisis: Husserl and the Fortunes of Reason," in *Continental Philosophy of Science*, ed. Gary Guttin (Cambridge: Cambridge University Press, 2005), 109.
38 Dean Rickles, "Public Health," in *Handbook of the Philosophy of Science*, ed. Fred Gifford (Dordrecht: Springer, 2011), 523.
39 Husserl, *Analyses Concerning Passive and Active Synthesis: Lectures on Transcendental Logic*, trans. Antony J. (Steinbock. Springer Netherlands, 2001), 39.
40 Reidpath, "Population Health. More than the Sum of the Parts?" *Journal of Epidemiology & Community Health* vol. 59, no. 10 (2005), 877
41 Rose, "Sick Individuals and Sick Populations." *International Journal of Epidemiology* vol. 30 (2001), 431; emphasis original.
42 Ibid.

43 Gandhi et al., "Asymptomatic transmission, the Achilles' heel of current strategies to control Covid-19." *The New England Journal of Medicine* vol. 382 (2020): 2158–60; Bruckner et al., "SARS-CoV-2: An Empirical Investigation of Rose's Population-Based Logic," in *Epidemiology* vol. 32, no. 6 (2021): 809.
44 Rose, "Sick individuals and sick Populations" 430
45 Ibid.
46 Ibid, 431.
47 Ibid, 430.
48 Halperin, Ibrahim, and Connell, "Geoffrey Rose's Strategy of Prevention Applied to COVID-19." *Health Security* vol. 18, no. 6 (2020): 504.
49 Rose, *Rose's Strategy of Preventive Medicine: The Complete Original Text*, ed. Kay-Tee Khaw and M. G. Marmot, New ed. (Oxford: Oxford University Press, 2008), 47; Rose, "Sick Individuals and Sick Populations" 432.
50 Stephen John, "Why the Prevention Paradox Is a Paradox, and Why We Should Solve It: A Philosophical View." *Preventive Medicine* vol. 53, no. 4–5 (2011): 250.
51 Ibid, 251.
52 Rose, "Sick Individuals and Sick Populations" 432.
53 Husserl, *Husserliana VI* vol. 4 (1970): 6.
54 See Husserl, *Ideas for a Pure Phenomenology and Phenomenological Philosophy. Second Book: Studies in the Phenomenology of Constitution*, trans. Richard Rojcewicz and André Schuwer (Kluwer Academic, 1989), § 54 &56
55 Husserl, *Vienna Lecture*, 299; emphasis added.
56 We see a similar tendency in Husserl's discussion of relativism. In the *Crisis*, Husserl acknowledges the presence of relativism in the life-world. However, the acknowledgement is a limited one that never proceeds to undertake a defense or legitimation of relativism. Additionally, in the sections where the acknowledgment of relativism occurs, Husserl makes it explicitly clear that relativism remains an "embarrassment." This represents a continuity in Husserl's thought from his early refutations of relativism in the *Prolegomena* to *Logical Investigations* to his critical treatment of the same in *Philosophy as a Rigorous Science*. Another instance where Husserl acknowledges the reality of relativism is in his letter to the anthropologist Lucien Lévy-Bruhl. See, Husserl, *Edmund Husserl's letter to Lucien Lévy-Bruhl*. Similarly, Husserl is read more correctly as arguing that there are perpetuated by science that set the stage for dissent. But this dissent is not celebrated or valorized. Rather too much of Husserl's work in the *Crisis* is geared towards helping science improve its engagement with the public and phenomena in the life-world.
57 A similar perspective has been raised when it concerns opposition to COVID-19 vaccines. See Tarun Kattumana, "Understanding the Fear of Vaccines: How to talk about public health in the age of COVID". *Public Seminar*, July 21, 2020. Available online: https://publicseminar.org/essays/understanding-the-fear-of-vaccines/.

58 Thomas Carothers and Benjamin Press, "The Global Rise of Anti-Lockdown Protests—and What to Do About It".

59 Ibid.

60 Howell & Mobarak, "The Benefits and Costs of Social Distancing in High and Low Income Countries," *Transactions of the Royal Society of Tropical Medicine and Hygiene* vol. 0 (2021): 6–7.

61 Ibid, 6–7.

62 Soutik Biswas. "Coronavirus: India's pandemic lockdown turns into a human tragedy," *BBC News,* March 30, 2020.

63 Ibid.

64 Sanjeev Miglani and Rupam Jain, "India extends world's biggest lockdown, ignites protest by migrant workers."

65 Gil and Unduranga, "Covid-19 has exposed how 'The Other Half' (Still) Lives." *Bulletin of Latin American Research* vol. 39 (2020): 30.

66 Ibid, 29.

67 Ibid, 29.

68 Ibid, 29.

69 "Chile police using Covid-19 quarantine as pretext to crush protest, activists say." *The Guardian*, August 26, 2020. Available Online: https://www.theguardian.com/global-development/2020/aug/26/chile-police-covid-19-quarantine-protest.

70 Melissa Leach, et al., "COVID-19: Key Considerations for a Public Health Response." in Briefing, Brighton: Institute of Development Studies (2020), 4.

71 Fiona Anciano, et al., "Beyond trafficking and slavery: 'We are still waiting'—protesting under lockdown in South Africa." *Open Democracy*, April 24, 2020. Available online: https://www.opendemocracy.net/en/beyond-trafficking-and-slavery/we-are-still-waiting-protesting-under-lockdown-in-south-africa/.

72 In the case of Africa, with specific reference to South Africa, Alexander Broadbent has also argued that lockdowns are grossly disproportionate to the threat posed by the pandemic. He claims that COVID-19 is fatal to the elderly who constitute only 3 percent of the South African population, while the rest are forced to confront a recession that could be a matter of life and death given pre-existing social inequalities. See Alex Broadbent, "Lockdown is wrong for Africa." *Mail & Guardian*, April 8, 2020. Available Online: https://mg.co.za/article/2020-04-08-is-lockdown-wrong-for-africa/ (accessed October 3, 2020). Broadbent is not alone in making this point. "The Great Barrington Declaration" sees a group of epidemiologists and public health scientists express "grave concerns about the damaging physical and mental health impacts of the prevailing COVID-19 policies." They argue for "Focused Protection" or a "compassionate approach" that allows "those who are at minimal risk of death to live their lives normally to build up immunity to the virus through natural infection, while better protecting those who are at highest risk." See Martin

Kulldorff, et al., "The Great Barrington Declaration." October 4. Available online: https://gbdeclaration.org/ (accessed October 30, 2020). It is outside the scope of this chapter, and our limited expertise, to ascertain if forced protection is feasible. We limit our attention to many protests around the world that have been vocalizing frustration with the harsh realities that coincide with COVID-19 control measures.

73 Broadbent, Walker, Chalkidou, Sullivan & Glassman, "Lockdown Is Not Egalitarian: The Costs Fall on the Global Poor." *Lancet* vol. 396, no. 10243 (2020), 22.

74 Lucy Allais and Francois Venter, "Lockdown or no lockdown: we face hard choices for complex times."

75 Elissa M, Abrams and Szefler, "COVID-19 and the Impact of Social Determinants of Health." *The Lancet: Respiratory Medicine* vol. 8, no. 7 (2020): 660.

76 Clyde Yancy, "COVID-19 and African Americans," *JAMA* vol. 323 (2020): 1891.

77 Ibid, 1891–2.

78 Public Health England. *Disparities in the risk and outcomes of COVID-19* (London: Wellington House, 2020). The comment could be raised that once co-morbidities have been factored in that there was no difference between the COVID-19 mortality rates between ethnic groups. This could lead to the conclusion that more focus needs to be directed towards co-morbidities rather than how COVID-19 affects different ethnic groups differently. However, research shows that patients from ethnic minority groups were much more likely to have co-morbidities that were associated with a higher risk of dying from COVID-19 in the UK. As Krithi Ravi notes, research into ethnic disparities in COVID-19 mortality needs to consider social as well as biological factors. See Krithi Ravi, "Ethnic Disparities in COVID-19 Mortality: Are Comorbidities to Blame?" *The Lancet* vol. 396, no. 10243 (2020): 22.

79 Christina Atchison, et al., "Early Perceptions and Behavioral Response of the General Public during the COVID-19 Pandemic: A cross-sectional Survey of UK Adults." *BMJ Open* (2021), 7.

80 Ibid, 7.

81 Ibid, 12.

82 "Coronavirus in Kenya: Police kill three in motorcycle taxi protest." *BBC News*, June 20, 2020. Available Online: https://www.bbc.com/news/world-africa-53191358.

83 Leach, Meeker, MacGregor, Schmidt-Sane & Wilkinson, "Public Health Response," 6.

84 Carothers, Thomas, and Benjamin Press, "The Global Rise of Anti-Lockdown Protests—and What to Do About It."

85 Ibid.

86 Cas Mudde, "The 'anti-lockdown' protests are about more than just quarantines." *The Guardian*, April 21, 2020. Available online: https://www.theguardian.com/us-news/commentisfree/2020/apr/21/anti-lockdown-protests-trump-right-wing (accessed November 22, 2020).

87 Gideon Lasco, "Medical Populism and the COVID-19 Pandemic." *Global Public Health* vol. 15, no. 10 (2020): 1422–3.

88 Ibid, 1423.

89 Alexi Gugushvili et al., "Votes, Populism, and Pandemics." *International Journal of Public Health* vol. 65, no. 6 (2020): 721.

90 Alex Ward. "Anti-lockdown protests aren't just an American thing. They're a global phenomenon. From Germany to Brazil, from the UK to Chile, coronavirus-related demonstrations keep popping up." *Vox*, May 20, 2020. Available online: https://www.vox.com/2020/5/20/21263919/anti-lockdown-protests-coronavirus-germany-brazil-uk-chile (accessed May 21, 2020).

91 Cas Mudde, "The 'anti-lockdown' protests are about more than just quarantines." In the American example, reporting claims that the above-mentioned protests were funded by conservative interest groups like the DeVos family (Betsy DeVos being President Trump's Education Secretary). See Owen Dyer, "Covid-19: Trump Stokes Protests against Social Distancing Measures." *BMJ* vol. 369 (2020): 1596.

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