

# Entangled Political Economy of the Covid-19 Pandemic

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**Abstract:** The Covid-19 pandemic has substantially altered economic, social, and political relationships. The relational consequences of the pandemic will be interrogated using the lens of “entangled political economy” (EPE). The EPE approach explicitly recognises human interactions generating complex economic-socio-political phenomena, yet Covid-19 clarifies the synergies between human, biological, and physical systems in maintaining both productive and healthy relations. The pandemic has induced powerful crisis responses, via governmental regulations and social norms, substantially depressing economic activity. Contrary to perceptions Covid-19 led to a state of economic “hibernation,” EPE theory suggests extensive re-entanglement of relationships that influence the robustness of productive economic exchange. The onset of the coronavirus pandemic has also escalated the significance of health care operations in the modern economy, entrenching health as a site for continuing governmental growth. EPE presents novel perspectives regarding the need to adapt to, and ultimately mitigate, diseases threatening human life, liberty, property, and happiness.

**Keywords:** Covid-19, entangled political economy, networks, pandemic, public health

## 1. INTRODUCTION

Covid-19 is an infectious disease attributable to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and is spread through droplets of mucous and saliva from persons who are infected. The most common symptoms of Covid-19 include fever, cough, fatigue, breathing difficulties, and loss of smell and taste senses, which appear to be experienced mildly in most cases. In more severe cases of infection, symptoms may include pneumonia and respiratory failure, compromised function or failure of other vital organs (e.g. kidneys, liver), blood clots and strokes, septic shocks, and, ultimately, death. The distribution and intensity of this coronavirus has assumed pandemic proportions. At the time of writing (February 2021) there were close to 106 million Covid-19 cases globally, and over two million fatalities attributed to the virus (Dong et al. 2020).

Much of the academic research and popular commentary surrounding Covid-19 has focussed upon the bio-physical effects of the disease upon individuals, as well as the trend profiles of aggregate statistics in regard to caseloads

and fatalities. The onset of Covid-19 has instigated sudden transformations along economic, political, and social dimensions, which have already instigated a significant volume of studies trained upon their implications at micro and macro scales. The coronavirus pandemic, and the public policy responses to it, have also exerted profound relational effects at an intermediate, meso-level scale, some of which are yet to be well understood. The primary motivation of this paper is to assess the manner in which Covid-19, and human responses to this disease, have impacted economic and political relationships.

This paper aims to add to the literature by appraising the economic and political impacts of the pandemic through the prism of “entangled political economy” (EPE) theory. Developed by George Mason University economist Richard E. Wagner, EPE blends insights from complexity, evolutionary, and network theories to explain economic-political activities as being intertwined in overlapping exchange relationships along competitive and collaborative dimensions. In contrast to mainstream political economy conceptualisations of a solitary, unified political actor intervening to alter economic conduct in Paretian-efficient directions, EPE supposes heterogeneous economic and political enterprises all operate, and entangle with one another, within the same societal plane. Ensuing patterns of entanglement are emergent features of human interaction, and, as such, are consistent with political economy traditions that stress the emergent- or spontaneously-ordered development of institutions. This paper considers how EPE insights may be applied to better appreciate the key implications of economic policies instigated during the Covid-19 pandemic.

The structure of this paper is as follows. Section 2 considers the effect of pandemic policy responses upon the structure of economic relationships. This is followed (Sect. 3) by a discussion of the broad features of pandemic-period entanglement for the health sector. Section 4 presents a brief set of concluding observations.

## 2. ENTANGLEMENT AND AGILITY: IMPACTS OF COVID-19 POLICY ON INTERTWINED ECONOMIC RELATIONS

Mainstream economic comprehension of productive activity has been long criticised for its tendency toward reduction and, consequent to this, a lack of realism. As described by Potts (2000) the combinatorial dimensions of economic organisation are swept aside, as the for-profit economic enterprise is implicitly assumed as functionally equivalent to its production function. Furthermore, the advent of representative, and homogenised, accounts of economic agency suggest that the production function (a.k.a. the firm) occupies the field of economic activity. In a similar vein, Wagner (2010, p. 133) suggests: “the multiplicity of goods and services actually produced can be reduced to a single good designated simply as output. An economy surely cannot get any simpler than its representation through an aggregate production function.”

In their effort to present a more realistic economic account, researchers specialising in EPE indicate that *an economy is constituted of complex and evolving networks of relationships between individuals and groups, for the purpose of distilling competencies, insights, skills, and other forms of knowledge for economic gain*. From an EPE standpoint the terminology of “production functions,” “representative agents,” and the like, obscure the complicated patterns of relations that have emerged to sustain economic activity. The for-profit enterprises which give rise to much output generation, and the employment and investment going with that, are clustered ensembles of relationships, wherein participants are incentivised to the mutually beneficial service of others.

Economic interaction is by no means monopolised by for-profit entities. It is well known that alternative, non-profit organisations often interact with for-profit enterprises, influencing the terms and conditions of economic coordination and governance (Aligica and Wagner 2020; Eusepi and Wagner 2011). Economic activity is further conditioned by policy and law, culture and social norms, as well as factors such as personal tastes. The relations formed in entangled political economies, and the incentive structures for people considering engagement in such relations, are highly sensitive to shifts in expectations, appearance of social tensions, and other conditions bearing upon interactional possibilities. The novelty of EPE is that it reinforces the idea that economies are the by-product of highly-contextualised relationships forged by indi-

viduals, and collectives, across intersectional domains of human activity. Insights raised by EPE scholarship can be put to the service of understanding crisis situations, such as the Covid-19 pandemic.

Individuals are not passive in the face of epidemiological and other risks, provided they receive good information and are empowered to respond in ways reflecting their subjective perceptions of the relative benefits and costs of adjusting conduct. A hallmark of market economies and open societies is that a relatively widespread measure of latitude is afforded to individuals, in order to apply their entrepreneurial insight and innovative capabilities to responding to changing conditions. Networked patterns of relations are subjected to entanglement, re-entanglement, and in some cases, disentanglement over time. It is clear that political enterprises play a role in this dynamic process, and that political concerns can become embroiled in ventures otherwise ostensibly trained upon material betterment.

Much of the entanglement arising within an economy is practically facilitated by biological and physical dimensions. Whilst intangible digital and services economies are becoming more prevalent, many combinatorial aspects of production and exchange involve human bodily senses of hearing, sight, smell, touch, and taste. As McCloskey and Klamer (1995) have noted, economic performance is undergirded by communicative processes (such as speech acts) between human beings in close proximity. Intersubjective interpretations of body language and other physical cues may also prove indispensable in the conduct of market exchanges (Manzini et al. 2009). Economic entanglements which involve facial expression, bodily movement, and physical contact or observations between people in shared spaces are also seen as instrumental in building rapport and trust between transactors.

Given the contagious nature of coronavirus, numerous legal edicts and regulatory policies were introduced to impede or reduce human physical interactions conducive to viral spread. Although there was policy variability (Economist 2020; Hale et al. 2020a; OECD 2020c), our basic point is that policy generically attended to the restriction of mobility and proximity. Furthermore, these measures have been unprecedented. For the many, whose livelihoods depend upon the encounters of handshakes, winks, and smiles—not to mention the entanglements of contract and exchange—policy responses to Covid-19 have proven highly disruptive. Policymakers described their responses to coronavirus as efforts to invoke a temporary “freezing” or “hibernation” of economic activity. The implication is that, post-pandemic, productive activities undertaken by individuals and enterprises should ideally proceed as they were prior to the spread of the disease.

From an EPE perspective an economy cannot be realistically perceived as being amenable to toggling between states of activation, deactivation, and reactivation. Indeed, it is a conceited political position to believe that regulatory (or other) policies can revive the order of a complex, evolutionary, and entangled economy, precisely as it once was prior to the Covid-19 contagion. The networked pattern of interactions, observable at any given point in time, reflect divergent interpretations, meanings, practices, and understandings concerning the dedication of productive activity to the realisation of economic value. Whilst the effect of government pandemic policies is to re-entangle some relationships, and disentangle others entirely, many of these measures induce certain structural realignments which cannot be easily reversed.

Economic, political, and social systems are forever in a state of flux, so it is nonsensical to consider Covid-19 responses having the literal effect of freezing or hibernating productive relations. But it is conceivable that political delegitimation of certain economic activities, on public health grounds, may contribute to durable shifts in preferences after regulatory restrictions have relaxed. For example, sizeable numbers of individuals may refrain from indoor gatherings in bars, restaurants, cinemas, theatres, and similar venues for some time. However, it is impossible to predict with any great certainty the extent and severity of initial disentanglements, and any eventual re-entanglements, with respect to economic activities considered more conducive to disease spread. Indeed, “there is a significant ‘knowledge problem’ for policymakers in understanding how expectations will be changed by the pattern of events or by policy interventions—and this problem is especially severe in a context of heterogenous individuals with divergent ideas whose actions cannot be reduced to those of a ‘representative agent’” (Pennington 2020, p. 6).

An understudied research topic for EPE is the relationship between entanglement and agility.<sup>1</sup> The term “agility” is used to convey the ability of agents to respond swiftly to change, in preferably an efficient and effective manner. It appears that the agility of economic actors will have significant implications with respect to the establishment of vibrant and robust post-pandemic networks. In a political context there is little question that legislators and bureaucrats, particularly in middle- and high-income countries, have displayed a certain agility in responding to Covid-19. Hale et al. (2020b) showed that several countries transitioned toward “highly stringent” pandemic policy responses within roughly 50 days of the first confirmed Covid-19 fatality within their jurisdiction. Information from another policy index—the CoronaNet COVID-19 Government Response Event Dataset—similarly illustrates rapidity in pandemic responses during the first three months of 2020 (Cheng et al. 2020). The epidemiological efficacy of stringent pandemic responses—such as border closures, closure of high personal-interactivity businesses, and residential curfews—will be debated for years to come.

Our primary concern here with agility focuses upon the likely impact of the policy-induced economic downturn for economic enterprises to gainfully re-entangle. To be sure, certain economic enterprises have demonstrated remarkable agility in response to the disruption of their supply chain relationships, and repressed economic conditions more generally. Allen et al. (2020, p. 41) refer to the examples of “[r]etailers have reduced their reliance on touch screens, provided hand sanitizer upon entering stores, directed customers to use contactless rather than PIN security for card payments, introduced screens to protect retail workers, and done much rapid innovation in home delivery and interaction minimising ‘click and collect’ services.” There are case examples of beverage manufacturers converting from alcohol to hand sanitiser production, restaurateurs adjusting their operations from in-house dining to takeaway food services, and so on. Certain economic networks, such as agricultural supply chains, appear to have remained resilient in the face of supply and consumption shocks (e.g. Hobbs 2020). Each of these cases, and more besides, involved a complex process of re-entanglement by economic enterprises, with different producers or consumers, in order to remain viable.

What of the long-term impacts of coronavirus policy responses for productive entanglement possibilities within the private sector? One might rhetorically ask about how much economic damage could have been averted, and to what extent pre-pandemic entanglement would have been preserved, if economic institutions and policies embraced the ideas of open (or “permissionless”) innovation and commercial experimentation (Thierer 2016). The agility of economic actors to discover new and improved sources of economic value and, in so doing, formalising networks with others to formalise such projects of betterment, is critically dependent upon the entrepreneurial function. Wagner (2010, p. 73) emphasises that “entrepreneurial action...occurs within a networked ecology of enterprises of various forms, and with those particular forms also being established through entrepreneurial action.”

One of the major concerns with governmental policy transcends the adverse, yet, arguably, the more immediate, economic consequences of forcibly induced disentanglements, and in some cases re-entanglements, in response to a serious public health problem. The instigation of stringent regulatory policies—and the so-called “yo-yo” effect of alternating periods of lockdown and reopening, as cases and/or fatalities fluctuate, in regions such as Europe—introduces significant instability for agents in the short term, as well as significant uncertainties in the broader economic outlook. Periods of crisis inject new sources of turbulence, comprising the abilities of individuals and firms to confidently engage in economic calculation, entrepreneurship, and innovation, as well as establishing those relationships necessary for growth and development.

Compounding this is the possibility that pandemic policies may not be completely wound back, even with a potential coronavirus vaccine. Such a development has the potential to foreground a new feature of discretionary political authority in the societal landscape, together with a relatively greater scope of political entanglement within the interaction order. The effect of ratcheting government seems also apparent at micro and meso scales of economic engagement. How can someone trust the integrity of contracts, or have confidence that property control and usage will confer a reasonable rate of return, when governments can

enact policies obligating the private sector to massively disentangle, or re-entangle in ways that confer reduced economic value, in an instant? This phenomenon is referred to in the political economy literature as “regime uncertainty” (Higgs 1987), and has been identified as a contributor to the severity and duration of crisis episodes.

It is difficult to firmly establish the degree of regime uncertainty resulting from Covid-19 policy responses. However, there are some indications that stringent policies have been fuelling uncertainties about the present shape and future direction of the economic environment. A study of expectations by U.S. small businesses during the early pandemic period suggested that business closure risks were associated with the expected length of the Covid-19 crisis but, then again, there were wildly varying beliefs about the likely duration of pandemic-related disruption (Bartik et al. 2020). Several proxy measures for uncertainty have escalated, as the economic shocks presented by the coronavirus pandemic had become increasingly apparent (Altig et al. 2020). Whilst these studies provide indirect, and selective, representations of uncertainty, they surely hint at our suggestion that the agility of certain economic enterprises to forge productive, mutually beneficial entanglements have been compromised.

Recessionary conditions are construed here as representing a rebalancing within the interaction order from relatively high to relatively low degrees of networked entanglement. Of course, it is apparent that there remain clusters of high entanglement within certain parts of the economy. These clusters reflect an even tighter web of connections between economic and political actors, and emerge as the result of public policies directing fiscal or regulatory privileges toward certain concerns. Later in this paper reference is given to the “peculiar business” of an increasingly entangled health sector, that has received significant policy support during the pandemic.

The provision of financial bailouts or concessional loans for politically-sensitive industries (e.g., aviation, hotel accommodations, transport logistics), measures to relax bankruptcy laws for heavily-indebted firms, and so on, is also noted. The primary concern is with the implications of pandemic-period wage subsidy schemes in countries such as Australia, Canada, New Zealand, Spain, and the United Kingdom. It had been estimated that, by May 2020, some 50 million jobs were covered by wage subsidies and similar job retention schemes—ten times greater than the numbers of jobs treated under similar arrangements during the 2008–09 “global financial crisis” (OECD 2020a).

Despite their extensive coverage, some criticisms have been levelled against wage subsidies. One of the more common of these is that those workers eligible for the subsidy arrangements are effectively treated as gainfully employed—even if there are minimal (or, in some cases, no) hours worked, and the hiring business is closed owing to a lack of general economic activity or enforcement of shutdown regulatory edicts. The effectual distortion of unemployment statistics under wage subsidy schemes injects ambiguity and confusion concerning the true state of the economy, and at the same time facilitates political rhetoric to the effect that the Covid-19 crisis is not as economically deleterious as initially feared. This is consistent with Wagner’s (2020b) insight that, given the impossibility of action imposing upon the *entirety* of an economic system, macroeconomic phenomena are properly understood as representations of statistics, projections, beliefs, and ideologies with some influence on micro- and meso-level entanglements.

Downturns are seen by some economists as an opportunity to recalibrate previously-existing economic connections, in preparation for a future period of economic and productivity growth. In the language of Caballero and Hammour (1994), for example, the Covid-19 recession might fruitfully “cleanse” an economy of low value-added pursuits today, paving the way for more robust, value-generating entanglements tomorrow. By subsidising the wage costs of employees of economic enterprises, it can be argued that government wage subsidies are an attempt to preserve economic connections which existed prior to stringent pandemic policies. In other words, governments are attempting to repress the cleansing function of recessions, to the extent this actually exists. As noted previously, it would be highly unlikely that governments can ensure the return of pre-Covid entanglements given the broader impact of policies upon economic expectations, supply chain robustness, and the like.

It needs to be clearly stated that entanglements are a necessary condition of economic interaction. The networks which catalyse entanglement are conducive to exchanges of finance and resources, information sharing, and other operations conducive to the generation of value. Even in an entangled political economy exemplified by constrained involvement by political enterprises, perhaps arising from the maintenance of rules promoting a liberal economic order, entanglements will still emerge. From a liberal perspective the reason of rules—pertaining to such matters as contractual freedom, preservation of property rights, and freedom of economic entry and exit—is that it ensures that decentralised, polycentrically-situated entrepreneurs and other economic actors are afforded the dignity and respect to self-select their own operations managing resource transformations, and entanglements to fructify such operations. The resulting networks of economic intertwinement under a “constitution of liberty” are held to be dynamically robust, in that individuals and their enterprises avoid the knowledge and incentive problems otherwise associated with extensive political involvement in economic operations (Pennington 2011).

It is understandable that policymakers would seek to minimise the economic disruptions arising from the Covid-19 pandemic. Our argument is that wage subsidies move well beyond the accepted role of governments to establish abstract and generic rules of economic interaction, thrusting policy concerns even more deeply into the realm of operational settings of economic enterprises themselves. Concerns have been raised in some quarters that the “politico-operational creep” of subsidisation, together with the radical easing of fiscal-monetary policies, will promote the creation of “zombie firms,” whose existence will be dependent upon continuation of public sector subsidies even as the worst of the pandemic has eased (e.g. Julius 2020; Sharma 2020; for a discussion of zombie firms pre-pandemic, see Gouveia and Osterhold 2018). The consequences of continuing political-organisational creep are also potentially significant. Unless there are clear and consistent plans to swiftly withdraw wage subsidies, and other fiscal and regulatory privileges for corporations, the interaction order of the economy is likely to be infested by an “accumulation of legislative redress of the negative consequences of meso trajectories by the so effected who could then organise into political units” (Potts 2005).

Scholars versed in EPE studies have often referred to the potential for “monstrous moral hybrid” entities to become foreground models of economic organisation within society (Wagner 2016, 2017). The operationalisation of these hybrids reflects a commingling of private and public ordering precepts, in such ways which distort entrepreneurial prioritisations to competitively discover profitable means of engagement with market participants. It would seem the “zombification” of economic enterprises—courtesy of wage subsidies appearing to aim at overriding emergent adjustments (including of a cleansing nature) amongst product and factor markets—represent a real-world approximation of the monstrous moral hybrids discussed by Wagner and other EPE theorists. Furthermore, it is anticipated that proposals to reverse pandemic-era wage subsidies, and other schemes aiming to preserve pre-existing business operations, will elicit a process of intense contestation and tectonic rupturing between rivalrous economic, political, and social interests.

### 3. BIG G AND THE COMMANDING HEIGHTS: THE PECULIAR ECOLOGY OF HEALTH CARE

Long before the initial detection of Covid-19 in Wuhan, China, and its rapid global spread, academics and commentators, alike, recognised the prominent status position and extensive roles of health care. Whether measured in terms of expenditure, employment, or investment, general statistical trends indicate strong growth in the flow of resources to health care. Techno-social developments such as improvements in technology and population ageing have contributed to the increasing supply of diverse medical treatments—ranging from pharmaceuticals to acute hospital care. The prominence of health care led Kling and Schulz (2011) to proclaim it (along with education) as embodying the “new commanding heights” within increasingly services-oriented modern economies.

The meso-centric orientation of EPE would suggest that health care represents an ecology of purposeful interactions between different agents to meet the health needs of patients in a variety of settings. Per-

sonnel responsible for healthcare provision—such as general practitioners, medical specialists, nurses, and physicians—provide care labour and treatment services for patients in accordance with a complex array of knowledge and practices, in turn informed by contracts, credentials, policies, procedures, skills, standards, and technologies. The provision of health care is channelled through diverse economic and political enterprises, as well as through other organisations such as not-for-profit entities, and these efforts are supported by resources financed by a range of sources. Even a domain of organisation and practice perceived as increasingly incorporating monocentric qualities, such as health care, retains some assortment of interactions and relationships, albeit with sufficient coherence and purpose to meet the health needs of communities.

Health financing and provision is understood by EPE researchers as conducted by a network of participants. It is not presumed that the resulting entanglements are evenly distributed amongst all of the health care participants; in other words, some individuals and organisations conduct activities which are somehow conceived as being more pivotal than those carried out by others. Economist Roger Koppl (2002) has described the unevenness of economic-political entanglements as attributable, to some degree, by the existence of “Big Player” network effects. Big Players both possess immense discretionary power over allocational and distributional decisions, and a significant degree of immunity from competitive economic pressures. The suggestion is that the presence of Big Players has become an elemental feature of the health care sector of many countries (for a recent illustration of this phenomenon in the U.S. context, see Case and Deaton 2020).

The type and extent of influence of health care Big Players may vary in accordance with their specialised range of activities. For example, a relatively small number of large, multinational corporations tend to dominate the production of, and investment in, pharmaceuticals. Furthermore, pharmaceutical enterprises are seen as a major influence upon drug prescription practices within medical facilities and the conduct of policies with respect to drug subsidisation, and health insurance, as well as generic competition and innovation policy. As mentioned previously, political enterprises are typically heavily intertwined with other participants within the broader healthcare system. This is evident with respect to hospital facilities, for example, wherein the public sector tends to assume a dominant role providing complex, acute care procedures. Public sector bodies, and the officials overseeing them, play an important role in classifying diseases, and the medical treatment regime for them, as well as determining care standards to be delivered to patients. The presumption of a relatively tight clustering of health care relationships would appear reinforced by the function of legislatures as an organisational-institutional site for the political negotiation and assent of bargains between Big Players, and other influencers, over the provision and financing of health care services (Wagner 2012).

The Covid-19 pandemic has surely increased the relative luminosity of health entanglements, relative to others on the same societal plane of interactivity. Within this, growing public attention and activity has turned toward those linkages attending to public health and associated activity (e.g. hospital care of patients with severe symptoms). There are numerous anecdotal examples of new and strengthened health care entanglements in response to coronavirus. Governments called upon existing health care workers to repurpose their tasks toward the care of those suffering symptoms, as well as seeking retired medical professionals to return to the workforce. Health political enterprises engaged in procurement processes for additional personal protective equipment for nurses, physicians, and other medical staff, such as gowns and masks, as well as for equipment, such as coronavirus testing kits, and ventilators for patients suffering severe respiratory problems. Public sector entities sought to build additional health care infrastructure, such as physically-distanced telehealth facilities, as well as makeshift testing and care facilities for those suffering the illness. The relative expansion in the importance of public sector health Big Players was accompanied by a Covid-19 vaccine race by major pharmaceutical companies, and prestigious biochemistry and medical academics.

Prior to the pandemic the general economic consensus was that public sector health care spending (expressed as a share of gross domestic product) would increase throughout this decade. The presentation of aggregate health care statistics, such as the expenditure-to-GDP ratio, has proven fertile ground for

economic theorisation, in an effort to explain the underlying drivers of observed trends in health sectoral growth. William Baumol famously explained that rising health care costs is attributable to efficiency limitations arising from the personal care dimensions of medical treatment regimes, whereas James Buchanan (2001 [1990]) alluded to a lexicographical nature of health demand which drive increasing outlays on healthcare. Other explanations, such as the insensitivity of individual consumers to the tax-costs of subsidised services, exist to explain the economic evolution of healthcare to its present dominant status.

Whilst the explanations for the increasing presence of health care in the economic, political, and social landscapes remain insightful, statistical representations alone perhaps have a habit of concealing, as much as revealing, the nature of healthcare activity. An EPE perspective would emphasise, in a manner similar to Cox et al. (2020), that governmental spending is not functionally homogeneous. Spending is conducted by an array of political enterprises—authorised by an underlying legislative authority but, practically, allowing for some measure of discretion exercised by ministerial members of the political executive. The spending is typically given legal and operational form by contractual agreements and procurement obligations, giving rise to entanglements with beneficiaries situated elsewhere within the economy. The expenditure is financed either through tax attachments by political entities onto viable commercial entities, or more likely, given the severe downturn of regular economic activity, through some other financing vehicle, such as borrowing.

There is selective evidence available to the effect that the Covid-19 pandemic has solicited a wave of new entanglements in the form of contracts between governmental authorities, private sector concerns, and other entities.<sup>2</sup> These contracts pertain to the acquisition of medical devices and equipment to treat the anticipated uptick in coronavirus patients in health facilities, and diagnostic goods and pharmaceutical products to treat the sick, as well as agreements engaging construction work to expand hospital and other facilities. The presentation of funding and service provision opportunities might be considered to open rent-seeking opportunities for health care organisations, interest groups, and other individuals and groups (e.g. Daumann and Follert (2020)).

There seem little doubt that numerous, and perhaps politically well-connected, economic enterprises have gained from the onset of Covid-19 pandemic policies by governments around the world. As mentioned previously, economic entrepreneurs have seized upon biopolitical entrepreneurship to re-purpose their existing economic activities, and connections, toward health production. To some extent, such strategic, organisational, and practical reorientations coincide with the reality of a repressed environment elsewhere in the economy. Even so, the significant economic-political attention afforded to the pandemic has likely altered perceptions regarding the relative importance of public health considerations, both for individuals and society as a whole. As part of this, entrepreneurs and other economic actors perceive profitable opportunities as part of efforts to help respond to Covid-19.

The implementation of public health orders in various countries is one potential avenue through which lobbying and related interactions between economic and political actors may be energised. In the U.S. and numerous other countries, regulatory declarations have been used to designate certain kinds of private and public economic activities as “essential” to remain open, whereas others may be deemed “inessential” and potentially subject to enforced closure. Inherent knowledge problems arising from the subjectivity of preferences held by innumerable numbers of individuals, and not to mention the entangled nature of economic activities, defy an impartial political separation of productive activities, or their outputs, along the lines described here. Political determination, nonetheless, to answer the imponderable question as to what is “essential,” and not so, would seem to invite politically well-connected actors to articulate for others what ought to remain available and open. As described recently by Redford and Dills (2021) a combination of strategic interest group pressure, together with moralistic notions of repugnance, may explain shut downs of alcohol and drug retail in certain U.S. states during various stages of the Covid-19 pandemic. In effect, the dominating position of health care, and public health perspectives (including over questions regarding the appropriateness of private consumption matters), appears to have become *even more entrenched* as the coronavirus becomes a focal point of economic-political attention.

The re-entanglement of manufacturers and other business concerns into the health production space has been overlaid with neo-protectionist justifications about the need for domestic “self-sufficiency,” ironically in the face of politically-induced trade restrictions and supply chain disruptions. As noted by the OECD (2020b), governments also reconfigured contracting and purchasing advisory guidelines and policies to assist domestic political enterprises in acquiring goods and services, amidst an increasingly competitive procurement environment exemplified by rising product prices and supply limitations. Governments in advanced countries have also activated export bans and restrictions on the sale of medical equipment and products. The assessment of trade economists such as Razeen Sally (2020) is that this pandemic has merely accelerated “de-globalist” political tendencies which have been increasingly conveyed in political debates of recent years.

A contextually- and situationally-aware description of action at the meso level suggests that the elevation of Covid-19 as a public health crisis would both incentivise and rationalise certain entanglements which expand the boundaries of health care activity. Even so, there are some views to the effect that Covid-19 might depress other aspects of health care activity and expenditure in the short term. For instance, a rapid increase in pandemic-related spending maybe offset, at least partially, by cancellations of elective and non-urgent treatments (EIU 2020). In other words, the non-treatment of non-coronavirus medical cases represents a temporary abeyance or permanent deactivation of pre-pandemic connections between medical professionals and their patients. Public health authorities, politicians, and other relevant figures within the health arena have pleaded with populations to engage in physical distancing, and other behavioural adjustments, to “flatten the curve”—that is, to slow the spread of a virus which otherwise risks overwhelming health system capacities. A potentially unanticipated consequence of such exhortations is the non-presentation of other patient groups with serious medical issues, such as cancer, diabetes, heart disease, and so on, with delays in those other treatments likely to aggregate health care cost pressures longer term (e.g. Maringe et al. 2020).

The general pattern discerned amongst developed countries in recent years is that governmental activity within the health care arena has assumed an increasingly monocentric quality. At least on an anecdotal basis it would appear that the pandemic has accelerated this trend. This tendency in health care interacts with an even broader impetus toward monocentricity in policy advisory and development processes within the public sector as a whole. With respect to the latter, generalised monocentricity may be seen in such developments as power concentrations in the governing political executive, delegation of decision-making powers to “independent” regulatory agencies, and, within federal political systems, creeping centralisation of policy, public financing, and even service delivery responsibilities.

A clear manifestation of centripetal momentum concerning political activity has been both the substantial and sudden elevation of public health authorities in the determination of Covid-19 policy responses. Podemska-Mikluch and Wagner (2020) and Wagner (2020a) explore in great detail the contribution of certain academic researchers, and research groups, toward the rationalisation of oft-predetermined political positions by governmental authorities. A not unrelated tendency of contemporary pandemic biopolitics has been the elevation of certain public health officials—such as Anthony Fauci (U.S.), Chris Whitty (England), Brendan Murphy (Australia), and others—in political discourse. The public involvement of heads of multilateral health organisations, such as Tedros Adhanom Ghebreyesus of the United Nations’ World Health Organization, is, likewise, noted. While circumstances vary from one jurisdiction to the next, these officials have often been charged with publicly providing frequent updates of coronavirus cases and fatalities, and engaging in public debates with media reporters and others, even in the presence of their overseeing minister. In some instances, such as the case with Dr. Fauci, public health officials have enjoyed quasi-celebrity political status as populations have become actively attuned to their health advisories, opinions, and perspectives.

Researchers of public governance have observed organisational and institutional reform of regulatory policymaking over the past few decades. A key manifestation of such reform comes in the shape of arms-length administrative relations between legislators and regulators (Aligica et al. 2019). A plausible expla-

nation for such a development is that the regulators may be insulated from political imperatives compromising the integrity and quality of policy advice and enforcement. It is also supposed that insulation from political imperatives enable legislators to gain impartial insights from regulators, with the former taking advantage of epistemic advantages held by the latter. It may also be the case that the perception of separability in the accountability relations between legislator and regulator insulates the former from political censure or demotion in the case of policy failure, insofar as blame for failure can be sheeted home to the regulator. None of these insights suggest that the regulator, or policy advisor, ought to assume an active or conspicuous public profile, potentially elevating themselves as identifiable political participants in their own right.

The raised profile of public health officials is characterised as yet another example of tightening entanglement within the health care space, but which also invokes blurriness in the relationship between the two sets of actors. Public health officials are presented a discursive platform to propagate independent, but perhaps alternative, sources of medical advice which may contradict the messaging of the government's own Health Minister. Putting aside questions of epidemiological accuracy and truthfulness in claims-making, the suggestion here is that the prospect of contradictory sources of advice could aggravate uncertainty during a pandemic period. This, in turn, may generate confusion as well as potentials for misinformation and conspiratorial thinking with respect to coronavirus incidence, its medical severity, and the reasonableness of proposed policies, *in addition* to outbursts of fear, panic, moralising, and stigmatisation during periods of crisis and acute societal stresses (Strong 1990).

It should also be recognised that a public profile for public health officials does not substantively alter the fact of epistemic limitations inherent in one single source, or limited sources, of authority (Koppl 2018). Scientific understandings of coronavirus properties and human impacts continue to remain a source of (distributed) intellectual discovery, so there is a risk that widespread community trust in *erroneous* advice propagated by an official imbued with political authority could lead to catastrophic effects. As stated by Lavazza and Farina (2020) great care must be observed in the conduct and messaging on the part of public health officials, given debates about Covid-19 represent a source of contestation within the political arena as well as for potential social rupturing.

Arguments amongst politicians, public health officials, and other key actors in health care over the handling of the worsening coronavirus pandemic during 2020 illustrates the propensity for mischief, if not impropriety, in public health discourses. Difficulties in discussing health matters are compounded by the understanding that most health care output possesses “credence good” characteristics, wherein the user experiences great difficulty in verifying qualitative claims about the performance of products, treatments, or services (Emons 1997; Wagner 2016). To assist public health authorities to detect infected persons, governments have requested citizens to use digital contact tracing applications on their smartphones. In countries such as Australia the take up of such apps have been somewhat underwhelming, a trend attributed to the credence good aspect of apps together with data privacy concerns (Vaithianathan et al. 2020).

The extensive governmental subsidisation and regulation of health care services implies that “policy-makers—rather than consumers and producers—will come to dominate more and more of ... economic life” (Kling and Schulz 2011, p. 15). Furthermore, as political influence within the entangled ecology of health care continues to expand it will become difficult to assess its conduct and performance against commercial or economic standards: “concepts like economic value, efficiency, productivity, and consumer preferences are obscured. And as these sectors continue to grow more central to our economy in the years ahead, our broader economy will therefore become more difficult to analyze and understand in traditional market terms” (ibid., p. 12). As mentioned, the Covid-19 pandemic is likely to present “accelerationist” tendencies in health care toward the qualities of collective property which, particularly relevant during a pandemic, is partly influenced by public willingness to suppress health risks (Zweifel 2020). This assessment is shared by Podemska-Mikluch and Wagner (2020), who refer to the partiality of political prerogatives in the pandemic context and how such partiality—as reflected in fiscal and regulatory policy settings relating to

the pandemic—distorts the value of non-governmental initiatives in health financing, innovation, and provision.

## CONCLUSION

The onset of the Covid-19 pandemic, and the responses to it by individuals, businesses, and governments, brings into sharp relief an understanding that our economy, polity, and society is constituted by interactions and relationships. Indeed, it is our view that the entangled political economy approach provides a compelling framework for comprehending the synergies between human, biological, and physical systems in maintaining both productive and healthy relations. The coronavirus pandemic experience also reveals the challenges and opportunities arising from the spread of infectious disease, and the efficacy of efforts by various societal actors in response.

A key issue from the EPE perspective is the nature and extensiveness of alterations to entanglements existing prior to the onset of pandemic. The observed operational, policy, and rule adjustments in many countries suggests extensive re-entanglements of some relationships (and disentanglement of others) among economic and political enterprises. Economic reality is a far cry from political rhetoric to the effect that lockdown policies, and other pandemic responses, serve to “freeze” or “hibernate” the economy. As important as the question as to whether Covid-19 has induced an alteration to the networked patterns of economic commingling is how such rearrangements might affect the robustness of productive economic exchanges into the future. In this paper several considerations are outlined as to how public policies potentially reshape the very capacity of individuals and their entities to prepare for economic recovery. An issue for future research consideration relates to the increasingly interwoven conduct of fiscal and monetary policies, and how these developments interrelatedly bear on future economic-political entanglements and agility capacities of investors and producers (e.g. Eusepi and Wagner 2017; Salter 2020).

In raising the potential dilemmas and problems arising from governmental responses to Covid-19, this paper does not present a “contrarian” or “fringe” view that public policies are, somehow, unwarranted to deal with public health problems. As noted by political economist and social philosopher Nick Cowen (2020), liberalism maintains a commitment to the preservation of life, in addition to liberty and property. Furthermore, luminaries of modern liberal thought—such as Friedman (for example, in his *Capitalism and Freedom*) and Hayek (e.g. in *The Constitution of Liberty*)—argued that a policy response to redress the negative externalities of a contagious disease, and to treat those suffering illnesses, are warranted. Nonetheless, the nomination of public health as a warrantable arena for politically-induced entanglement (via public health initiatives) should be accompanied by “proper appreciation of the levels of complexity in play and whether there are effective feedback mechanisms available to policymakers to cope with the uncertainties at hand” (Pennington 2020, p. 5).

A concern for dealing with the coronavirus threat whilst, at the same time, accounting for the economic and social ramifications of such dealings are not considered here to be inconsistent positions. Richard Wagner (2020a, p. 10) provides a compelling explanation in support of this proposition: “[t]here can be situations that call for monocentric organization, but these are rare. In the presence of modern societal complexity, which Covid-19 illustrates, we must find a way to enable experimentation to flourish rather than suffocating those experiments through embracing the pretense that the right set of political authorities possess the one best approach.” Entangled political economy provides a conceptual pathway as to how distributed human insight, intelligence, and knowledge may be harnessed to respond to Covid-19, without irreparably damaging those liberal institutions, procedures, and standards which catalyse and support entangled networks of voluntaristic interaction.

## NOTES

- 1 I credit Dr. Abigail Devereaux (Wichita State University, Kansas) for raising the entanglement-agility relationship in a 2019 Facebook post.
- 2 A useful summary of contracts under the U.S. Coronavirus, Aid, Relief, and Economic Security (CARES) Act is provided by the “Covid Stimulus Watch” funding tracker (<https://covidstimuluswatch.org>).

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