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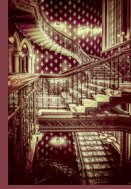
COSMOS + TAXIS

Studies in Emergent Order and Organization



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COVER IMAGE

George Gilbert Scott's Grand Staircase at
St. Pancras, London.

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Outgrowing
Methodological
Individualism:
Emergence, spontaneous
orders, and civil society

GUS DIZEREGA

It doesn't matter if a cat is black or white, so long as
it catches mice.

— Deng Xiaoping

Abstract: Methodological individualism provides important insights into spontaneous orders abstracted from their environments, but cannot probe the depth of their impact upon individuals whose actions generate the system, comprehend learning across generations, or the mutual impact of different spontaneous orders. Systems theory suffers no such limitations. This paper integrates Paul Lewis's exploration of emergent qualities in complex orders with the author's exploration of interactions between multiple such orders. Such an approach enriches our understanding of social complexity by demonstrating how causality flows in both directions, from individuals to society and from society and back. There is no starting point. Secondly, it provides a foundation for understanding civil society as a higher order adaptive system than are spontaneous orders.

A scientific methodology is only as useful as the light it sheds on phenomena that interest us. Methodologies are tools for studying reality, and like any tool, incorporate an ontology, assumptions about the reality they are supposed to investigate. Based on these assumptions, scientific methodologies select what matters most in understanding something from the enormous number of phenomena in the world. In doing so, each methodology necessarily simplifies its field of study, arguing doing so enables us to focus on a question without being overwhelmed with extraneous details. Simplifications are unavoidable, and even the most successful simplifications risk leaving out something important, or making misleading assumptions when employed to study new phenomena. Such is the case with methodological individualism.

Methodological individualism has been a successful tool in important fields within the social sciences, especially economics and, in a different way, Weberian sociology. Conceptually, methodological individualism is simple: all social phenomena, including the unintended, can ultimately be explained by individual action, *without remainder* (for example, Vanberg 1986, p. 80; Caldwell 2004, p. 413; Oliverio 2016, p. 38; 2015, p. 38; Rothbard 1962, p. 2).

Methodological individualism has enabled economists to trace out the logic of independent decisions shaped by a

framework of enabling rules to collectively determine prices in the market. Individuals are always the ultimate initiators of these phenomena.

The purest version of methodological individualism might be “Crusoe economics,” which initially considers an isolated man face-to-face with nature. His actions are all means to his ultimate ends, deriving their value from their contribution to achieving them. Many key economic concepts such as time preference and capital are introduced by analyzing Crusoe’s choices (Rothbard 1962, I, chaps.1 and 2.). When “Friday” arrives, this introduction of interpersonal relationships supposedly supplies “the indispensable groundwork for the entire structure of economics” (Rothbard 2007).

Fundamental to this conception was “man’s” *isolation* from the world in which he found himself, and about which he needed to learn in order to get what he wanted from it. Crusoe economics was atomistic, linear, and reductionist, *assuming* a cultured being with wants, and proceeding from there. More sophisticated approaches, such as employed by Mancur Olson (1965), William Niskanen (1971), James Buchanan, and Gordon Tullock (1999), presented increasingly complex images of human beings, with less isolation from their context.

What is called “behavioral economics” is also largely methodologically individualist. Its insights’ power is rooted in analysis of individual choices that consistently do not meet the expectations predicted by rational choice models (Lewis 2017). While behavioral economics focuses on “anomalies” the neoclassical system could not explain, its approach is devoted primarily to individual fixes, retaining many neoclassical axioms, such as methodological individualism (Snower 2020).

Perhaps the most sophisticated form of methodological individualism is called “complex methodological individualism,” which will be discussed later (Di Iorio 2016). But all argue social theory ultimately must be *rooted* in individual choice.

HAYEK’S BIOLOGICAL TURN

During the first decades of his career, F. A. Hayek had argued the social sciences differed from the natural sciences because, unlike within the natural sciences, we had access to human minds, and the implications of their subjectivity for explaining action. Among human beings, knowledge was fragmentary and contextual, distributed unevenly within a society, and sometimes in error, yet society was not chaotic. No equivalent problem confronted the study of physics.

Consequently, different methods were needed to pursue the social sciences as distinct from the natural sciences. This distinction argued methodological individualism was a tool essential for the social sciences, but not needed in the natural sciences (1952).

In time, Hayek’s research went beyond traditional economic questions, such as the market vs. central planning debate. Hayek’s effort to understand the social institutions needed to support a market economy changed his research focus. Increasingly, he emphasized the cultural and legal environment facilitating markets, rather than focusing on issues within economics more narrowly defined. As Bruce Caldwell puts it, along the way Hayek discovered, “orders in many sorts of unrelated phenomena in both the natural world and in the social relations and institutions that comprise a part of that world, orders that emerge due to rule following on the part of the relevant constituent elements” (Caldwell 2014, p. 2).

A sign of the new territory Hayek had entered was his emphasizing the similarities between Darwinian and social evolutionary processes rather than the distinction between social and natural science. Caldwell observed “when Hayek illustrates his claims about sciences that study complex phenomena, he chooses not economics, but the *theory of evolution* as his exemplar” (Caldwell 2004, p. 30). By the 1950s Hayek had begun incorporating evolutionary themes in his work, and made them central to it in the 1960 *The Constitution of Liberty*.

This shift was accompanied by others reflecting the same reorientation. Instead of emphasizing the distinction between the natural and social sciences, Hayek increasingly distinguished between what he called the relatively “simple” and “complex” sciences. It was in this new context that he introduced the term “spon-

taneous order” in the *Constitution of Liberty* (1960, p. 160). The former distinction between the social sciences and sciences such as physics still existed, but was no longer important for the research he was now doing. Methodological individualism played no role in other complex sciences, such as evolutionary theory. Consequently, it could not explain processes they shared in common.

A similar shift took place in how Hayek treated the thinkers of the Scottish Enlightenment. They continued to be important, but with a difference. In “Individualism True and False” Hayek had described David Hume and Adam Smith, as well as John Locke, as representative of “true” individualism. (Hayek 1948, p. 4) In his later work, what was important about Hume and Smith’s thought was that it was evolutionary, not that it was individualist (1967b, pp. 111, 119). Significantly, Locke, an individualist, was never mentioned as part of the evolutionary tradition (1973, p. 52). Hayek continued to identify him as a ‘classical liberal,’ but Locke’s reasoning shared more with the constructivist than evolutionary tradition (1973, p. 118).

Very un-Lockean insights developed during the Scottish Enlightenment led to the theory of evolution, with Darwin’s grandfather, Erasmus Darwin, providing one connection to both (Hayek 1967b, p. 119; Richards 2017, pp. 74-5, 82-90). Hayek argued “it was from the [Scottish enlightenment’s] theories of social evolution that Darwin and his contemporaries derived the suggestion for their theories” (1960, p. 59; 1967b, p. 119). In making this connection, Hayek ignored his earlier distinction between natural and social science, appropriating, in Paul Lewis’s terms, “for economics the ideas developed by theoretical biologists like [Ludwig von] Bertalanffy” (Lewis 2016, p. 147).

Methodological individualism could explain patterns arising from individual actions, but now similar patterns were arising outside the social realm. Methodological individualism played no explanatory role in these other patterns, and so could not serve as a unifying framework. Another was needed.

SYSTEMS THEORY

Warren Weaver had distinguished between three kinds of phenomena studied by modern science. For most of its history scientists had focused on *two variable problems* amenable to investigation in terms of linear causality, such as Newtonian physics. Later, scientists began investigating what Weaver termed problems of *unorganized complexity*, amenable to statistical analysis. Now, Weaver argued, the sciences were increasingly concerned with problems of *organized complexity* where many interdependent variables mutually influenced one another, making both exact predictions and statistical certainties impossible (Weaver 1948; Caldwell 2014, pp. 14-15; Hammond 2003, p. 118). In the 1940s Ludwig von Bertalanffy argued “general systems theory” was an all-inclusive scientific outlook free from the problems plaguing the dominant reductionist and statistical approaches (Bertalanffy 1968).

Bertalanffy argued Weaver’s laws of organized complexity were “systems laws” that could shed light on multivariable interactions, organization, hierarchic order, differentiation, goal directed processes, and “negentropic” trends (where order increases, in contrast to entropy) (Bertalanffy 1971, p. 60). These principles provided a basis for unifying disciplines long treated as distinct, such as physics, biology, and sociology, within a common theoretical framework. Bertalanffy built this argument around the core concepts of system, organization, emergence and hierarchy.

Joanna Macy explained while traditional science could understand causal relationships between two things, it “had difficulty applying unidirectional causal notions to situations involving more than two variables. . . . To map multivariable complexes in terms of linear relations involved piecemeal analysis, where the forces at play are reduced to sequences of interacting pairs. [This approach] cannot map the flow of the whole interactive complex” (Macy 1991, pp. 70-1).

A system’s approach focused on wholes, not parts. Rejecting traditional reductionism, systems theory emphasized how relations between the system’s parts shaped a whole from which new properties emerged that had not been present in its parts, and so could not be reduced to them. Consequently, for understanding systemic wholes, the principles structuring relationships between their parts were more important than the parts themselves.

This observation held from very simple systems, such as water, to vastly more complex ones. Water's mass is a simple addition of the mass of one oxygen and two hydrogen atoms, and so comprehensible within a reductionist framework. However, its wetness at room temperature cannot be deduced from these parts. At that temperature, both are gasses. It is water molecules' relations with one another that create wetness, and even more unusual qualities (Gallagher 2015).

Biological wholes resisted reductionist efforts even more strongly, resulting in a paradox. The Second Law of Thermodynamics states order always tended towards disorder. In this respect water was no different than oxygen and hydrogen. Left in isolation, a glass of hot water in a cold room reaches a temperature common to both.

Despite the Second Law, evolution brought forth increasingly complex life forms, immersed within increasingly complex ecologies, all far from equilibrium. Order increased. Only upon death did equilibrating tendencies triumph.

Bertalanffy argued the Second Law held only for closed systems. By incorporating energy from their environment, open systems can increase their internal order (Lewis 2016, p. 131; 2015, pp. 185, n. 14). Macy described this process as "anti-entropic," producing an "increase of order within the overall thermodynamic tendency towards randomness and disorganization" (Macy 1991, p. 93).

Such an ordered pattern could persist even if all its individual elements were replaced. The parts are secondary to the relationships between them. Comprehending such a system necessarily required understanding its environment, as well its internal characteristics (Hammond 2003, p. 105; Macy 1991, p. 72).

Individual organisms, biological communities, and social systems are all systems in this sense, sharing qualities of interdependence, self-regulation, adaptation to disruptions, and stable patterns. Bertalanffy termed this kind of pattern a "spontaneous order" (Lewis 2016, pp. 131-2). What distinguished biological and social systems from organisms was how closely their parts were coupled, a distinction subsequent biological research has increasingly blurred (Margulis 1998, p. 64; Schmidt 2015; Sheldrake 2020, p. 88).

Bertalanffy argued a system's parts are themselves systems, shaped in turn by *their* parts and interactions with *their* environment. In such systems, qualitatively new properties emerged that were not implied in the properties of their parts. Each system is made up of simpler systems as well as being part of another more inclusive and complex "higher order" system exhibiting new properties. It was systems, (not turtles,) "all the way down." Absolute wholes and parts *do not exist*.

The result was a bottom-up hierarchical model of distinct systems. Organisms are multi-levelled hierarchies of semi-autonomous 'sub-wholes,' themselves expressions of sub-wholes of a still lower order. Even the individual cells making up our bodies are composed of what were once separate organisms, now existing symbiotically, and unable to flourish outside this relationship (Margulis 1970). Systems emerged from the bottom up as systems lower in complexity entered into networks within which new qualities emerged in higher, more complex, systems.

Hayek found his friend Bertalanffy's work valuable (Lewis 2016). Hayek had already developed a theory of how neural integrations led to what he termed the "sensory order" (1952b, p. ix). Bertalanffy's concept of emergent order explained how these interconnected neurons that comprise the brain's physical order give rise to the emergent order of the mind at a higher level of reality. Hayek's study of the market order, and the larger cultural framework within which it existed led him to argue "*all* enduring structures above the level of the simplest atoms, and up to the brain and society ... can be explained only in terms of, processes of selective evolution. ... These changes in structure are brought about by their elements possessing such regularities of conduct, or such capacities to follow rules, that the result of their individual actions will be to restore the order of the whole if it is disturbed by external influences" (Hayek 1979, pp. 158-9; 1973, pp. 73, 362).

That *both* the emergence of mind and the market could be described in similar systemic terms illuminated the centrality of hierarchy for understanding systems. Hayek described more inclusive systems as "wholly different ... [from any] regularity in the behavior of the elements" (quoted in Lewis and Lewin 2015, p. 7). Higher level systems could not be reduced to lower level systems.

Viewing the market this way emphasized different phenomena than did unpacking the logical implications of individual choice. Human agency did not disappear, but existed within a larger context that in turn shaped it. The larger pattern created by people's choices was derived from the principles governing the system, not from particular choices themselves. Decisions took place within networks of mutual influence, and it was these networks, not individual decisions, that created the patterns observed. In a system of this kind, *no matter what the choices, a common pattern emerged*.

As Hayek wrote. "What we single out as wholes, or where we will draw the 'partition boundary', will be determined by the consideration whether we can thus isolate recurrent patterns of coherent structures of a distinct kind . . . The coherent structures in which we are mainly interested are those in which a complex pattern has produced properties which [preserve] the structure showing it" (Hayek 1967c, p. 27). A system's boundaries could be described as the outer limits of coherent patterns maintaining themselves over time.

There was more to markets than their being the product of human action but not of human design. Choices were secondary to the framework of *rules* in which people acted. Similar kinds of patterns arose and persisted in other complex adaptive systems with different rules, such as biological evolution, where human action played no part at all. Market patterns arose no matter what people's motives and exchanges were so long as the rules were followed. From a systems theory perspective, methodological individualism was not rejected, but subordinated to a larger systemic framework within which it played a secondary role.

SOCIETY, CHOICE AND EMERGENCE

Methodological individualism assumes un-intended social structures are ultimately creations of human agency. Anthony Evans writes "If only individuals *choose*, then the way to understand cultural concepts such as 'society' is through an analysis of individual action" (Evans 2020, p. 3. my emphasis). Evans elaborates, institutional "Routines, habits and customs are our guideposts, but of our own making since we *consent* to adopting them" (Evans 2010, p. 9, my emphasis).

Robert Nadeau makes a similar point, "groups of people are selected for their rules because the economically successful individuals get *imitated* by others, and form dominating communities" (Nadeau 2016, p. 19, my emphasis). *In these descriptions causality flows one way*.

This happens, but not initially. Examining the broad Weberian methodological individualist traditions demonstrates why. Peter Berger and Thomas Luckmann's defense of methodological individualism open the door. They argue subordinating social structure to human agency is best grasped by considering *three* distinct elements in the creation and maintenance of society: "Society is a human product. Society is an objective reality. Man is a social product" (Berger and Luckmann 1966, p. 79).

People interact with one another, producing society, and networks of custom and belief continuously react back on their producers. By shaping their consciousness and actions in turn, an unending chain of reciprocal influences arises. Over time, forms of behavior and institutions originating in human agency come to be experienced by others as social 'facts,' existing independently of people's actions. These 'facts,' rooted in culture, and often held tacitly, are ultimately of individual origin, but accepted as simply true by subsequent individuals.

What people initially take for granted are intellectual maps, and maps are not the territory (Damasio 2012, p. 88). Personal engagement encounters the territory as previously mapped, and when the map misleads, people might revise it. Even so, these questions still arise within a more embracing context of unquestioned beliefs. Agency exists, but always within a larger taken-for-granted context.

Alfred Schütz, whose work strongly influenced Berger and Luckmann's analysis, and who considered himself a methodological individualist, wrote "By a series of common-sense constructs [human beings] have pre-selected and pre-interpreted this world which they experience as the reality of their daily lives. It is these thought objects of theirs which determine their behavior by motivating it" (Schütz 1972, pp. 98-9). Their socially mediated world is treated as part of their reality, unless they find cause to question it (Schütz 1970, pp. 87-8).

Berger and Luckmann's second element, our being social constructs, is easily understood if we consider how children incorporate cultural 'facts' as objectively true. These culturally rooted facts help constitute the mental maps they employ to make sense of their world. In Alva Noë's words, "Maturation is not so much a process of self-individuation and detachment as it is one of growing comfortably into one's environmental situation. We grow apart, but we attach to the world without. We integrate [rooting] ourselves in the practical environment" (Noë 2009, p. 51). In Hayek's terms, "Mind is as much a product of the social environment in which it has grown up and which it has not made as something that has in turn acted upon and altered these institutions" (Hayek 1973, p. 17).

Language structures our thought and how we view the world, and differences in languages shape our perceptions of what seems most real about the world. Compared to European languages, many Native American languages utilize relatively few nouns and many verbs. What English describes as objects, as nouns, are often understood in these Native American languages as processes, as verbs. This difference sheds light on why these cultures experience the world differently (Kimmerer 2013, pp. 48-59). As Kimmerer observes elsewhere, in these languages "There are words for states of being that have no equivalent in English" (Kimmerer 2017).

When Buckminster Fuller wrote *I Seem to be a Verb*, many Americans believed Fuller described a new way for them to think about themselves (Fuller 1970). (*I Seem to be a Noun* would not have been a catchy book title.) Fuller brought attention to something about human experience many Americans did not notice but, for other people, was an obvious feature of their lived reality. Fuller attracted so much attention perhaps because nouns and verbs are retrieved from differently distributed neural systems. Our perceptions are shaped both by our learning and our brains (Damasio and Tranel 1993).

In "The Primacy of the Abstract" Hayek argued our minds' ability to perceive particulars is rooted in a prior capacity to discover abstractions providing the framework within which we can make sense of these particulars. Our perception of our world depends on our mind's capacity to organize experiences into comprehensible patterns. Without this capacity we would be overwhelmed with sense data, with no clear way to make sense of it. As with culture in other beings, the *first* recognition of patterns precedes reasoned choice and is culturally embedded, as when learning a language. Only then do we have something to think about. We are not convinced by others that these patterns exist.

Anthony Evans' "consent" and Robert Nadeau's "imitation" *presuppose* this process. When we learn our first language we do not *attach* meanings, we *learn* meanings existing independently of us as individuals. For example, when I learn how to read, the role of imitation is small because the particulars of any book differ from the experiences that led to my learning to read. 'Consenting' and 'imitating' presuppose discovery. Learning *is* discovery.

Albertina Oliverio captures this insight when she writes "Societies are collectives bound together by shared frames of thought conveyed by the institutions. An institution is a memory, information which enables all to exercise their rationality as individuals. Knowledge is established collectively, used rationally by individuals, and then shattered by the complexity of social phenomena" (2016, p. 40).

The institution-as-memory can change over time. In Hayek's words, "[M]ind can exist only as part of another independently existing distinct structure or order, although that order persists and can develop only because millions of minds constantly absorb and modify parts of it" (1979, p. 157). Human minds exist because they were shaped by human societies.

As children mature, and amass their own experiences, they sometimes see contradictions between different "social truths" they have learned. Parts of their social reality become open to questioning, creating space for agency, but always within the context of a larger still taken-for-granted world. We are neither completely free nor completely determined.'

By recognizing society as an objective reality, Berger and Luckmann took an important step away from 'choosing,' 'consenting,' and 'imitating' as adequate explanations for culture. Even so, critics argued their argument ultimately broke down. Agency and society still remained separated. Paul Lewis explains "if social institutions consist of nothing more than people's current actions, there literally is nothing to struc-

ture and shape the current interactions through which shared meanings develop” (Lewis 2010a). This situation might be approximated if two aliens from different planets met and had to develop a relationship. But as generational transmissions of institutions demonstrate, this is not what happens among human beings. From birth to death we are immersed within a multigenerational context shaping the environment within which we exercise our agency and which we can sometimes modify.

Berger and Luckmann’s key insight about society being objective while agency is real is preserved when society is viewed as an emergent system where each dimension is *always* influencing the other. Lewis describes emergence as (Lewis 2010a, p. 9):

... the possibility that, when certain elements or parts stand in particular relations to one another, the whole that is formed has properties (including causal powers . . .) that are not possessed by its constituent elements taken in isolation. . . . Emergent properties are structural or relational in the sense that their existence depends not only on the presence of their (‘lower-level’) constituent parts but also on those parts being organized or arranged into a particular structure that involves them standing in specific relations to one another

A key phrase here is “including causal powers.” Lewis elaborates “If the emergent properties possessed by a system include causal powers—understood as the capacity to make a difference to events in the world—then higher-level systems possess causal powers that are different from, and irreducible to, those of its parts” (Lewis 2020a, p. 6). *There is no ultimate cause.*

With respect to the market, the emergent whole of agents *plus* institutions such as rules of contract, tort, and property rights as well as tacit foundations to relationships, such as the assumption of truth telling, generate the market order, creating an unintended but predictable pattern. In Lewis’s words, “rule-governed, relationally-defined social wholes that structure people’s interactions are causally efficacious, explanatorily irreducible factors in their own right and as such a key concern for social theorists” (2010a, p. 12; 2015, p. 8). Consequently, human agency and social structure “are both preconditions for and a consequence of the other” (Lewis 2010a, p. 13).

Causation runs in both directions. In economics, Hayek’s abstract rules, and Berger’s description of how social typifications arise, merge, providing the stable background knowledge enabling people to plan their responses to price signals while being reasonably confident other people will do what is required to bring those plans to fruition (Lewis 2010a, p. 15). People’s responses to price signals are shaped by shared knowledge of how the typical occupants of particular social roles act in certain circumstances. This knowledge can lead to profound changes in how people think and act.

A methodological individualist might reply rationality had to begin somewhere, but once emerging, it took on a life of its own. For example, Peter Boettke argues Hayek emphasized the co-evolution of reason and cultural traditions mainly “in the epoch when man was *first* emerging from his prehuman condition” (2019, p. 190, my emphasis). Rational individuality is an emergent product that laid the foundation for additional complex phenomena. Human agency ultimately triumphed as an *independent* force as a result of evolutionary processes, thereby making methodological individualist explanations possible.

Boettke is mistaken here. This process long preceded human beings, or even the genus *homo*, and continues to this day. Referring to the work of Michael Polanyi and others, Hayek emphasized the importance of “non-articulated rules in determining action [as] mental factors which govern all our acting and thinking without being known to us. . . .” (1971, p. 313). These rules generate “dispositions” and any particular act will reflect the collective interactions of many of these abstract rules. The formation of new abstractions “seems *never* to be the outcome of a conscious process, not something of which the mind can deliberately aim, but always a discovery of something which *already* guides its operation” (1971, p. 320). Hayek’s observation that “*mind and culture developed concurrently and not successively*” is well-grounded (1979, p. 156). As my example of how language’s verb and noun structures shape the world we experience demonstrates, culture *remains* a decisive formative influence. Something as basic as whether something is a verb or a noun

is culturally shaped, and we learn to think within these different ways of perceiving. The development of a rational mind and culture *never cease*.

Alva Noë writes “Scientists have tended to think that to have a mind like ours, we must be able to think and calculate and deliberate as we do. In fact, to have a mind like ours, what is needed are habits like ours. Habits and skills . . . are triggered by environmental conditions and they vanish in the absence of the appropriate environmental setting” (Noë 2009, pp. 97, 125). Speaking a language is such a skill. The same holds for all learned skills and habits, and the first of them are not acquired by imitation but by discovery. Reason requires a context to develop, and rationality in a human sense remains linked with culture.

We can now look again at Hayek’s shift from emphasizing the difference between social and natural science to distinguishing between simple and complex sciences.

CULTURE AND BIOLOGY

To be human requires having a culture, but *having a culture does not require being human*. Culture is linked to sociality, not to humanity, which emerged from pre-existing cultured social ancestors. Human life arose from pre-human cultural beings who were rational and could plan for the future. Many examples of rational action and planning ahead have been observed among chimpanzees and bonobos (De Waal 2013, pp. 204-5). Chimpanzees are rational in very human ways, building coalitions, rewarding allies, and building alliances with truly Machiavellian skill (De Waal 1982). Ambitious males even kiss babies to court the support of females! (De Waal 2016, p. 162). When a member of one chimpanzee culture enters another group with different cultural practices, it adopts them for itself (Hooper 2020, p. 17). Nor are chimpanzees simple calculators of self-interest (De Waal 2019, pp. 98-9, 114-20).

The circle of verified rational culturally-rooted action among birds and animals continues to enlarge (Safina 2020). A great many species cooperate together for mutual gain, and knowledge obtained by one is passed on to larger groups culturally. This knowledge includes the use of resources, making complex tools, and sharing (De Waal 2016, pp. 185-98). A strong sense of fairness exists in many animals, and for that sense to exist, a sense of who is or is not one’s equal in some sense is required, along with a sense of appropriateness (Bekoff and Pierce, 2009). When disease disrupted their strongly hierarchical, aggressive, culture, baboon troops have demonstrated a new culture could emerge based on more ‘fair’ relationships. It has lasted for generations, perpetuated by the young born into it, and raising new generations to adapt it as well (Sapolsky 2017, pp. 648-52; Sapolsky and Share 2004).

In Bruce Caldwell’s words, “To the extent that humans exhibit any rationality, it is probably better viewed as the *result* of certain institutional arrangements than as anything else. By starting with rational agents, standard economic analysis gets things exactly backwards” (Caldwell 2004, p. 286). Sociality, and its institutions, provide minds the rich environment within which to develop and become human.

Our “dispositions” also have a physical dimension. Repeated action in accordance with a rule or way of perceiving a context leads, as Lewis observes, “to the formation of new cognitive (neural) structures and therefore to people having new dispositions to conceptualize and respond to their circumstanced in certain ways . . . social rules can become physically embodied in people . . .” (Lewis 2012, p. 375; Damasio and Tranel 1993). This process begins in earliest childhood. (Eisler and Fry, pp. 78-89). Physical embodiment means “social rules, and the systems to which they give rise, possess the emergent causal power to shape human agency” (Lewis and Lewin 2015, p.7). The higher-level system develops emergent properties that, in turn, act causally on their component parts. *Cultures and cultural organisms co-evolve*. We exist on an evolutionary continuum that long preceded us. This process continues today.

Recent studies have focused on the profound differences between most human cultures and those increasingly identified as “WEIRD:” Western, Educated, Industrialized, Rich, and Democratic. On a great many psychological and social comparative studies, WEIRD people act significantly differently from the rest of the world (Henrich 2010; 2020).

In a series of extensive inter-cultural studies, distinctive patterns have emerged. There is significant evidence that engaging in impersonal market exchanges shifts behavior *away* from rational actor models (Henrich 2020, pp. 387-9). On balance, modern WEIRD people are more generous to strangers and treat them more fairly than would be expected from rational actor models. However, similar behavior by members of non-WEIRD cultures more closely resemble the ‘rational actor’ (Henrich 2020, pp. 210-19). People’s impersonal trust in others is also significantly correlated with increased interorganizational competition (Henrich 2020, pp. 340-8). Wage labor changes how people experience time and exercise individual patience and foresight. (Henrich 2020, pp. 371-3) All these effects arose from human action but not human design, and in turn powerfully shaped human action- and even identity (Henrich 2020, pp. 383-4).

SPONTANEOUS ORDERS AND POLYCENTRISM

After WWII, Hayek, and his friend Michael Polanyi, increasingly employed the term “spontaneous order” to describe social systems where more information than anyone could ever grasp was effectively coordinated to better serve the purposes of those acting within their framework of rules. The general idea the term described had a long pedigree, but it was Hayek and Polanyi who ensured its widespread use. Polanyi apparently used the term before Hayek, adopting it in 1948 to replace his earlier “dynamic order” (Jacobs 1999, pp. 116-8). Hayek, for his part, apparently adopted the term after Bertalanffy employed it in 1952, rooting it in general systems theory (Lewis 2016, pp. 131-2). But given their friendship, Hayek was possibly influenced by Polanyi and Polanyi was possibly influenced by its use by some Austrian economists (Bladel 2005). No matter who was ‘first,’ in William Buto and Thomas McQuade’s words, “after Polanyi and Hayek it did not need discovering again” (Buto and McQuade 2107, p. 2)

Both men also employed the related term “polycentric” to describe patterned systems where no center shaped the system as a whole. Hayek got this term from Polanyi, and both used it to describe spontaneous orders (Polanyi 1951, pp. 170-84; Hayek 1960, p. 160). In the analysis to follow I will argue *all spontaneous orders are polycentric, but not all polycentric orders are spontaneous orders*.

In their writing, Hayek emphasized the market and Polanyi science (Polanyi 1969, pp. 49-72; Buto and McQuade 2017). Both also used additional examples to emphasize the concept’s central importance, combining different kinds of systems by one criterion: that unplanned order arose that could not be traced to qualities in their parts, including natural phenomena like the growth of crystals and iron filings reacting to a magnet, with social phenomena such as science, common law, and the market. Polanyi included the arts, literature, and agriculture as well.

The connecting thread for all these examples was that ordered patterns emerged without the deliberate actions of anyone by a process of mutual adjustment. But beyond this, their differences were enormous. Once a pattern emerged, some “spontaneous orders” were essentially static, such as crystals and iron filings. Others were highly adaptive, such as science and the market. Like markets, some were dependent on the rules that generated them, others, like the arts, were vastly less so. Mutual adjustment could take place along a linear chain of influences, by system-wide feedback, or by both.

I think this concept’s blurriness was because Polanyi and Hayek were writing when there were few terms suitable for describing complex ordered phenomena arising independently of intention. With the subsequent appearance of additional terms focusing on different dimensions of these phenomena, such as self-organization, complex adaptive orders, and autopoiesis, we are more fortunate. We can more easily make distinctions within this broad class.

In this paper I limit the term “spontaneous order” to autonomous emergent social orders structured by rules promoting mutual adjustment among people pursuing any plan of their choosing in keeping with those rules, aided by systemically generated feedback signals recognized by those participating within them. This definition focuses on what science, law, and the market share compared to most other complex adaptive systems. I would add democracy although it will play a small part in this paper because I am focusing here on Hayek and Polanyi’s work, not my own (diZerega 2019a). These four have *standardized system wide feed-*

back signals. The arts, such as literature, do not. From this perspective, spontaneous orders are a subset of emergent complex adaptive phenomena, which are themselves subsets of emergent phenomena (diZerega 2013, p. 9).

Some emergent social phenomena exist at the boundary between spontaneous orders in this more focused sense and other complex adaptive systems. Language resembles spontaneous orders as I define them, but its systemic feedback is comprehensibility between two speakers, with no necessary impact on the system as a whole. Grammatical rules make emergent orders of language possible, but in language innovation, like innovation in customs, proceeds largely face-to-face rather than through systemic feedback. Today, “awesome” is often used very differently from when I was young, but no system-wide signals coordinated this shift. People adopted it one by one.

Within a spontaneous order, freedom involves respecting systemic procedural rules while individually choosing to pursue anything in harmony with them. David Hardwick and Leslie Marsh have emphasized the spontaneous orders of science and the market arise from *mutual adjustment* among *independent equals* using *systemically defined* feedback signals shaped by their constitutive rules as guides to their actions (Hardwick 2008; Hardwick and Marsh 2012). The same is true for the freedom of a common law judge.

In a spontaneous order community-specific rules apply to all equally. These rules are independent of particular people, and in that sense are impersonal. As judges and scientists demonstrate, “equality” refers solely to members of the community defined by adherence to these procedural rules. The views of people outside the community do not matter.

Within communities governed by these rules, systemic feedback minimizes the knowledge participants need to act effectively within their framework. Price signals provide the feedback in markets. In science, it is a claim’s standing within the scientific community. In democracies, votes provide the feedback. Acceptance of precedents and occasional widespread acceptance of innovations do the same in common law. Lewis and Lewin describe these signals as “knowledge surrogates” (2015, p. 3). As surrogates, they require interpretation by participants, and interpretations vary.

The knowledge transmitted by this feedback is necessarily simpler, but more inclusive, than that possessed by individuals acting within them. This knowledge is systemically defined, such as prices in the market, and serves as signals for acquiring resources for acting within the system. Systemic feedback, such as profit and loss, provides a means by which systemically relevant knowledge is discovered and systemically irrelevant knowledge is discarded.

If people wish success in acquiring systemic resources, the system imposes its own values on them, and eliminates these resources if a person’s own values get in the way of acquiring systemically defined ones. Systemic feedback strengthens a system’s values in influencing human action by rewarding systemic success or failure. For example, if too much profit is sacrificed in seeking other values, a businessperson will soon be out of business. Within spontaneous orders this shaping of the context of action is what Bertalanffy meant by a goal directed process (Bertalanffy 1971, p. 60).

In the case of economics, a society of many independent people pursuing self-chosen projects within a framework of rules common to all, Peter Boettke and Vipin Veetil claimed that “the market as such has no teleology” (Boettke and Veetil 2016, p. 46). Fernando Toboso elaborates that from the perspective of what he calls “institutional methodological individualism,” “no impersonal active entity with apparent aims, interests and driving forces of its own is included in the discourse as an explanatory variable, nor is any other impersonal systemic factor that possesses its own dynamics for which the responsibility may not, even indirectly, be attributed to any person” (Toboso 2001, p. 10).

For these claims to be correct, the rules must be neutral with respect to any value compatible with voluntary cooperation. They are not.

Systems in general have a kind of purposiveness. Joanna Macy writes that information does not flow through a system following a fixed pathway producing results directly, “Rather they are subject to the dynamics of the system’s internal structure. Incoming messages . . . are sorted, sifted, evaluated, and recombined before they are transmitted to effectors and translated into action. The open system . . . actively trans-

forms” external causes (Macy 1991, p. 92). The result is the pattern, and the pattern reflects the values that lead to its structure.

A spontaneous order’s procedural rules enable people motivated by different values and ends to profitably use the same rules. But to do so, the rules facilitating cooperation among strangers are *necessarily* simpler than the full field of values actually motivating people acting within the context of those rules. These rules’ *systemic bias* shapes the kinds of cooperation most likely to succeed in the system’s terms, and they will differ from system to system.

Consequently, pure market procedures provide a poor environment for pursuing scientific knowledge. At the same time, scientific procedures provide a poor framework within which to start and manage a business. Values inherent within the rules shaping these systems generate patterns independently of the intentions and values of those acting within them. *These values would be systemically enforced whether all, some, or none acting within a system personally shared them.* However, when a person’s personal motives are in close harmony with a system’s value bias, they will be advantaged compared to those whose personal motives are more different.

Spontaneous orders are often described as “self-organizing,” and I once preferred using this term. (diZerega 2000) The word ‘*self*’ is illuminating. In these cases the ‘self’ emerges from the system’s internal rules and the values they reinforce. A spontaneous order’s ‘self’ is an emergent value arising from people acting in accordance with its organizational rules, and thereby producing a pattern able to shape its environment reflecting systemic values while maintaining itself far from equilibrium (Capra and Luisi 2014, p. 145). Compared to human beings, spontaneous orders are ‘value-thin,’ and their selves are one-dimensional. But they will be selves as contexts shaping agency by enforcing the primacy of systemic values.

A system’s emergent pattern manifests over time, reflecting knowledge embedded in relationships shaped by rules independent of any particular relationship, and having an active causal influence on those relationships. To better grasp this point I will examine systemic values in science and the market.

The values pursued by those acting within a spontaneous order need not be those rewarded by the order itself. There is a distinction between the values reinforced by the rules and the values motivating individuals acting within them. Market economics is not the “science of choice,” It is the science of choice within a particular set of systemic rules. Science, another spontaneous order, cannot be adequately understood with purely economic methods.

SYSTEMIC VALUES IN SCIENCE

The best scientists are dedicated to seeking Truth. In addition, many scientists agree with American Nobel laureate Steven Weinberg: “[W]e would not accept any theory as final unless it were beautiful.” (Strevens 2020) But *as a system*, science never discovers Truth nor is beauty able to be defined scientifically. We have no idea what Truth is. Nor is beauty considered an important impersonal criterion for a theory’s scientific status.

Instead, science provides us with the most *reliable* knowledge we can obtain *at the time* about the material world (Ziman 1978). We can never know if and when a non-confirming discovery might arise, replacing even the most confidently held theory with a much different one, as Einstein’s theory of relativity did for Newtonian mechanics. From the perspective of science, even if we actually discovered Truth, we could never be sure.

Science depends on scientists solving puzzles about the physical world. But what defines an acceptable puzzle is shaped by the prevailing state of scientific knowledge. Perplexing puzzles from within a Newtonian perspective disappeared within a relativistic one. Questions such as the nature of quantum embeddedness would have been regarded as absurd from a Newtonian perspective. At any moment, what counts as good science depends on the community’s judgement as to whether a puzzle or announced finding is plausible as well as interesting (Polanyi and Prosch 1973, p. 134).

Like the rest of us, scientists' motives can be mixed. All-too-human failings of pride, rigidity, professional politics, ideology, ambition, and prejudice can shape individual scientists' motives as much or more than their personal dedication to seeking truth (Brooks 2016). Scientists also act within a culture that itself helps shape what is regarded as most interesting to investigate, and how to do so. At a personal level, beauty plays a role for many. Many accounts across all scientific fields describe this very human shaping what actual scientists do (For example, see Dreger 2016; De Waal 2013, pp. 98-100). Even in the absence of such factors, scientists' judgement always reflects their own personal perspective and evaluations as to plausibility, as demonstrated by the long debate about aspects of evolutionary theory between Charles Darwin and Alfred Russel Wallace. They never settled their debate, focusing as they did on different phenomena backed by different weighing of the evidence (Richards 2017, pp. 371-416).

Assume every scientist is personally motivated by the search for Truth. In seeking Truth, they follow the procedural rules accepted by their peers. Now let us suppose every scientist is primarily motivated to acquire fame and profit, treating their scientific work simply as a means to these payoffs. Long-term fame and profit arise from scientists following the procedural rules shaping their discipline leading to important findings, as is true for those motivated to seek truth.

Either way, science would provide us with the most reliable knowledge available in its fields. There would be less work in pure theory in the latter group because its payoffs are generally smaller. More effort would need to be spent policing claims because their devotion to truth will be weak. However, the pattern prediction of uncovering reliable knowledge would remain. The strength of the system forces scientists in to subordinate their values to the demands of the system. If they cheat, fame and profit will reward those who discover their cheating.

As a system, science ultimately dominates personal motives because it is internally self-correcting. As Frans De Waal noted, "Science is a collective enterprise with rules of engagement that allow the whole to make progress even if its parts drag their feet" (De Waal 2013, p. 100). Virtually every basic assumption with which early modern scientists began has been abandoned, as scientific investigations convinced scientists that other assumptions are closer to the truth (Toulmin 1990, pp. 109-115). *The achievements of modern science emerge from the system as a whole, are not reducible to its parts, and need not mirror scientists' personal values.*

SYSTEMIC VALUES IN MARKETS

The same is true for markets, which generate prices giving us signals to what resources can be most efficiently used (in monetary terms) among competing possibilities. Systemically, prices signal a resource's economic value at the time, relative to other priced means for meeting consumer demand. Personally, I can seek a profit because I wish to support my family. I can seek a profit because I want the admiration that comes from my being rich. I can seek to profit because the resources I acquire enable me to pursue another project of great importance to me. *It doesn't matter.*

Ludwig von Mises emphasized separating ends and means in human action (1963, p. 40). Instrumental rationality is the rational use of pure means to attain completely separate ends. Such action is always a "cost," deriving its value from the end towards which it is directed. (These costs are not the same as opportunity costs, which exist for all actions, even pure consumption.) This is a clear description of the market's systemic values, which can be far removed from most *human* action, that is not purely instrumental.

An economy of saints would generate the same market process *pattern* as an economy of sociopaths, so long as they followed the rules, but it is the sociopaths who approach every action as instrumental. The details of what is valued and what is produced would vary between saints and sociopaths, but the role of prices and how they form would be the same. In both cases price signals need to be interpreted. A saint might interpret rising prices as a need to invest in making more of the item, to help others. The sociopath would interpret rising prices as a chance to make money. Both would create more of the item in short supply. The

motivations are different, as is the nature of the action, but the patterned results would be the same. For pattern predictions, *individual choices and values do not matter, following the rules matters*.

In the market, accumulating money is systemic success, and money's value is purely instrumental. The systemic value given precedence in the market process is: how useful is something for a purpose other than what it is now. Market feedback signals something's suitability for becoming something it isn't (diZerega 2019b; 1997).

All spontaneous orders independently shape society, transforming the environment in which people live, independently of their personal values. The market is the most powerful of these orders because everyone has needs. However, very few people would say their highest hope for their own lives, or that of their children, is to become satisfied consumers.

ANSWERING TWO QUESTIONS

These examples enable us to answer a question Bruce Caldwell raises in *Hayek's Challenge*. Given the shortcomings of methodologically individualist models of economic action, he asks why did "simple, unrealistic models seem to allow us to make passably workable pattern predictions about a complex world?" (2004, p. 387). The predictions were as good as they were not because their models describe human action, but because their models assume action is instrumental, thereby identifying the system's values with human agency (For example, Boettke 2019, p. 165; Boettke and Vittel 2016, p. 52n, 13; Rothbard 1962, p. 4). Outside economics the models do not work as well because feedback is not in prices, and even in economics, if Henrich's studies of WEIRD psychology is true, they are misleading.

Distinguishing between individual and systemic values also clarifies a confusion as to the nature of spontaneous orders. Polanyi wrote spontaneous orders were created to seek single values. Science pursues truth, law pursues justice, and the arts pursue beauty. He described these as higher, 'spiritual' values because they can be shared, without being used up. They are not consumed. By contrast "an automobile coming off an assembly line . . . is nothing at all unless some individual consumes it" (Polanyi and Prosch 1973, p. 199). However, for Hayek, spontaneous orders have no purpose of their own, but serve as frameworks through which individuals can pursue many, and often conflicting purposes.

Distinguishing systems values from those of people acting within them eliminates this apparent difference. Most scientists believe science is the most promising way to seek truth about the material world. But *as a system* science pursues reliable knowledge, which gives us the closest approximation to the truth many scientists believe we can achieve.

What of the market? People in the market use price signals to pursue an extraordinary range of values. The market makes this possible by reducing all within it to price data. For all but the final goods produced, something's utility in becoming something other than what it is. A car without buyers is worthless as a car. But people acting within markets are motivated by a wide variety of values.

Polanyi seemed to have had a weak sense of systems as applied to complex phenomena and Hayek did not emphasize systemic biases and values. Hayek and Polanyi's seemingly contradictory positions disappear when we realize they are looking at different dimensions of the same processes.

THE CASE FOR 'COMPLEX METHODOLOGICAL INDIVIDUALISM'

Some advocates of methodological individualism argue criticisms such as mine can be successfully incorporated into what Francesco Di Iorio describes as "complex methodological individualism." It merges "the concept of methodological individualism with that of a self-organizing complex system" (2016, p. 5). For Di Iorio "individuals are self-determined beings and . . . social order, and social phenomena more generally, must be explained as largely unintentional results of human actions—actions explainable on taking into account the meanings that individuals attach to them . . ."

Di Iorio observes society is an emergent property of individual action. While social conditioning exists, people's interpretive skills mediate between society and human action. "Society" is simply a collective noun referring "to individuals *and the systemic* and irreducible properties that emerge from their existence, their beliefs, their intentions, and their interactions" (2016, p. 2, my emphasis).

There are serious problems here. Most importantly, individuals as human beings are *also* emergent properties of the societies in which they live. Each is crucial in bringing the other into existence. Di Iorio sees causality flowing only in one direction when in fact it flows both ways.

Di Iorio also seems to use "emergent" as an equivalent for "unintended consequences," referring to the price system as an 'emergent' quality of markets (2016, pp. 4, 5). To be sure, it arises from a functioning market but, other than improving the use of limited means for whatever goals a person seeks, the price system has no impact on what those actions will be. In economics, the price system does not change people, it signals the availability of different means to their economic ends.

But the issue here is not that unintended patterns arise from individual actions, it is that *qualitatively new* unintended circumstances emerging from individual actions *react back* upon the actors, changing them, which in turn changes their actions. It literally changes how people think.

Hayek recognized the importance of these effects, which is why he supported a guaranteed annual income as not only "legitimate" but even "necessary" for people who no longer live with the security offered by small pre-capitalist groups, and "find themselves without help when, through no fault of their own, their capacity to earn a living ceases" (1979, p. 55). Involuntary unemployment from the current covid pandemic is an excellent example.

Earlier I described findings that members of more traditional cultures treated strangers in ways compatible with the rational actor model, whereas people immersed in powerful market economies treated strangers more fairly (Henrich 2020, pp. 210-19). Additionally, people's impersonal trust in others is significantly correlated with increased interorganizational competition (Henrich 2020, pp. 340-8). Like prices, these important effects arose from human action but not human design, but unlike prices, these emergent qualities exert important causal impact on what humans seek to do and how to do it.

Without individual action, intersubjective collective beliefs, spontaneous orders, and the institutions arising within them would not exist. But without emergence in the sense Lewis and I have described, people as we understand them would not exist. Causality runs both directions, human agency and social structure "are both preconditions for and a consequence of the other" (Lewis 2010a, p. 13). This has been the case since long before human beings existed. This causal circularity is missing in Di Iorio's analysis.

Di Iorio argues methodological individualism as a principle can be traced from the Scottish Enlightenment to Menger to Mises to Hayek. This genealogy is flawed. In Menger's time neither the terms systems theory nor methodological individualism existed. Coming from a Weberian perspective, Joseph Schumpeter coined the latter term (Schumpeter 1909; Udehn 2001, p. 214). One could still argue 'methodological individualism' was implied by Menger as the foundational methodology in the social sciences, but the truth is more complex.

Menger employed what we call methodological individualism to understand complex *economic* phenomena (Menger 1985, pp. 93-4, 195-6). But the individual knowledge, plans and actions that generate economic phenomena take place within a larger social context where, in Menger's terms, each part of society "serves the normal function of the whole, conditions and influences it, and *in turn is conditioned and influenced by it* in its normal nature and its normal function." (Menger 1985, p. 147, my emphasis). Menger describes a system in Bertalanffy's terms, *within which* methodological individualism is essential to understand economic phenomena as a part of it. While he lacked the later vocabulary, Menger recognized the systemic nature of social processes more generally, *within which* he focused on narrowly economic issues.

Significantly, Ludwig von Mises never cited Menger's work on methodological issues, in Lawrence White's terms, filtering them out from his discussions of methodology (White 1985, p. ix). As I remember reading Mises, and Bruce Caldwell apparently agrees, while recognizing individuals were socially embed-

ded, he was uninterested in how their choices and actions were made, only that, whatever they might be, “praxeology” could encompass them (Caldwell 2004, pp. 129, 193-6).

Mises’ failure to mention Menger takes on added significance when we consider Hayek’s dropping Locke from his association with the Scots when he shifted from emphasizing their individualism to their laying the foundation of evolutionary analysis. Absences such as these are as significant as presences in understanding what groups share in common.

Di Iorio might still argue that, complex as it is, the entire process begins with individuals making decisions and choices. But beginning with an individual or a species when analyzing any complex adaptive system is a pragmatic step, not a principled one. One could as well analyze the system’s pattern and then explore how it acts causally on the individual organisms within it, whose actions subsequently reinforce or change the pattern. This is common when studying an ecosystem. Where to start analysis is a matter of practicality.

A systems approach acknowledges both causal directions. Only when the system’s reciprocal causal impact on its parts is integrated with its parts’ impact on the system do we have a good analysis. This observation eliminates the false dichotomy Di Iorio describes between individualism and a holism “of superhuman hidden powers and individuals as unconscious instruments of those powers” (2016, p. 2; also see Boettke and Lopez 2002).

OUTGROWING METHODOLOGICAL INDIVIDUALISM

Step One: Systemic tensions within a spontaneous order

Hayek wrote the market order “is a system which imposes upon enterprise a discipline under which the managers chafe and which each endeavours to escape” (Hayek 1973, p. 62). His observation is in harmony with Adam Smith famously observed “People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices” (Smith 2003, Book I, Chapter X). Smith and Hayek are describing a *systemic* tension as it manifests within a *particular* spontaneous order, rather than merely the failings of some individuals. Because the value biases of the market as a system, and business organizations as systems seeking to survive can conflict, the problem lies deeper than individual choices.

Some Austrian methodological individualists are seeking a way to integrate Austrian methodological individualist analysis with that of Max Weber (Boettke and Storr 2002). Here is a largely unexplored opportunity to deepen their analysis. But they need to learn from Weber rather than just tacking him on.

Weber’s ideal types help us understand dynamic relationships. Weber scholar Reinhard Bendix wrote “Every [ideal] type . . . represents an effort to reconcile tendencies of thought and action that would be irreconcilable if each tendency were elaborated fully and with complete logical consistency” (Bendix 1962, p. 410n). For example, in human societies authority can be described in pure ideal typical terms as traditional, charismatic, or legal rational. However, due to the interplay of institutions and human motives, pure types rarely exist in actual societies, and in practice there is always a tension and contestation as to their mutual relationships. Bendix explained “a fully consistent charismatic leadership is inimical to rules and tradition, but the disciples always wish to see the leader’s extraordinary capacities preserved for everyday life.” Success undermines “the charisma they consciously mean to serve” (Bendix 1962, p. 296). Weber used ideal types “to sort out the constituent elements in each empirical constellation and to pinpoint the areas of possible tension . . .” (Bendix 1962, p. 410, n). The nature of organizations is influenced by, but also influences the kinds of leadership most suited to it (Price 2012, pp. 14-22).

I have adopted a similar approach in contrasting the contrasting systems of market and organizations, which necessarily exist within complex markets. The same tension arises between organizations and the

spontaneous orders of science and democracy. “Spontaneous order” and “organization” are ideal types within whose relations human beings navigate.

Systemically, *all* successful organizations in *all* spontaneous orders are in the *same* systemic situation. The order that made their success possible can also undermine or end it. Political parties seek to insulate their elected officials from electoral challenge by tilting the rules in their favor. Successful businesses seek to influence legal rules and obtain political favors to strengthen their position. In science, schools of thought often deny alternative perspectives positions within their departments. Methodological individualists tend to pick out this pattern in the market, and call it “crony capitalism.” But while individual intentions certainly matter, so do the systemic incentives facing organizations within spontaneous orders (diZerega 2015). The term “crony capitalism” misdiagnoses a problem inherent in the nature of capitalism, and in all spontaneous orders (diZerega 2019b).

A sophisticated methodological individualism can take us this far, and to be sure, that is quite a way. But as our examination of Berger and Luckmann’s analysis demonstrates, it is easy to move deeper, integrating a Weberian approach into a more inclusive systems theory.

Step Two: Systemic tensions between spontaneous orders and actors within them

Advocates of methodological individualism treat organizations simply as extensions of human intentions, made more powerful by being organized. For example, Peter Boettke and Edward Lopez contend “selves” were fundamental and irreducible units in social action, and governments and other organizations are akin to machines created to pursue some goal or set of goals, a task they can perform better or worse. They write “government is neither a collective entity nor an instrument of ruling classes, but a vehicle or ‘machine’ by which individuals choose to act in concert with one another for the purpose of producing collective goods” (Boettke and Lopez 2002). Organizations are simply tools.

Boettke and Lopez emphasize two important characteristics of individuals that differ from earlier rationalist models of society: all people have limited knowledge and we cannot assume anyone’s benevolent motives. But important as these insights are, (and they are very important) they remain inadequate to build a solid foundation for liberal thought, let alone social science.

Organizational logic leads organizations to redefine their reason for existence in ways harmonious to the perpetuation of the organization and its power. As they do this, people within the organization generally come to do the same, identifying with the organization, over its original reason for being created (diZerega 2015). Those who do not fit are excluded. This is why whistleblowers are not only rare, they are frequently ostracized, and sometimes worse, by the organization’s other members (for example, see Maas 1973). As Paul Lewis states more generally, “When individual elements are arranged into structures, their behavior is often different compared to when they are isolated from each other” (2019, p. 6).

This finding is hardly unique to human groups. A fascinating study of stickleback fish demonstrated that as individuals they behaved with significant differences in initiative and boldness when seeking food. However, when in a group, the individual distinctiveness of particular fish “faded away” (Goldman 2016, p. 24). Group dynamics may well be an independent factor influencing the behavior of many species besides ours.

Organizations are not ‘tools’ as Boettke and Lopez suggested. They actively shape the priorities and even the personnel of those within them. Hayek was aware of this problem, suggesting organizations are distinct from individuals to some degree, and so *independent actors* in the cultural realm (Hayek 1973, pp. 466-8; 1988, p. 37). Any analysis that fails to confront this reality attributes to individual motives and values what are in fact values arising from an individual’s prior relationships with an organization.

Hayek identified another tension. In *The Constitution of Liberty* Hayek wrote employed people naturally came to see society as “one great hierarchy,” likely caused by the ever-growing influence of large organizations (Hayek 1960, p. 119). Years later he elaborated (1976, p. 134):

One reason why in recent times we have seen a strong revival of organizational thinking and a decline in the understanding of the operation of the market order is that . . . an ever increasing part of the people spend their whole working life as members of large organizations, and are led to think wholly in terms of the requirements of the organizational form of life.

Organizations that act successfully in markets operate on opposite principles to those of the market order. Not only do business organizations chafe at market constraints and uncertainties, they also shape the thinking of those within them, who constitute an increasing percentage of the population. They in turn shape the cultural context within which markets operate. As a critique of why total economic control by the state would lead to a totalitarian outcome, Hayek's *Road to Serfdom*, is, more abstractly, an exploration of the inner logic of *Taxis* without external checks.

The inadequacy of methodological individualism as a foundational principle deepens once we take seriously the existence of multiple spontaneous orders. Boettke and Storr acknowledged the existence of multiple spontaneous orders, but seem not to grasp their dynamic interrelationships (Boettke and Storr 2002, pp. 172-6).

Step Three: Systemic Tensions when acting within two or more spontaneous orders

A second major tension exists between spontaneous orders themselves when organizations must act successfully in more than one such order. This issue first became clear to me when, as a Political Scientist, I studied the American media's political role (diZerega 2004). Today the press largely responds to two self-organizing value systems: the market and democracy. To survive, it must be economically viable, but to justify constitutional protection as an essential part of a democratic polity, it must be a watchdog and informant on public affairs. The pressures to serve one can undermine serving the other.

For example, Leslie Moonves, then executive chairman, president, and CEO of CBS defended their one-sided focus on Donald Trump during the 2016 Republican primaries: "It may not be good for America, but it's damn good for CBS," he said of the presidential race. "The money's rolling in and this is fun." He observes "I've never seen anything like this, and this going to be a very good year for us. Sorry. It's a terrible thing to say. But, bring it on, Donald. Keep going" (Bond 2016).

And Donald did. This example alone should be enough to make my point.

Step Four: Systemic Tensions Between Spontaneous Orders

If spontaneous orders need not reflect the values of those acting within them, and their emergent properties influence the thinking and values of those acting within them, *how do different spontaneous orders interact?* Individual spontaneous orders' general patterns emerge from people following simple procedural rules generating useful feedback signals. However, when we look at the mutual influences of *different* spontaneous orders on *one another*, there are no common simple relations shaped by procedural rules generating standardized feedback signals, such as prices.

Research costs money and, when done by market-based organizations, financing is dependent on the possibilities of making a profit from the discoveries. For example, snake bites kill at least 20,000 people annually and effective antivenoms have existed for some time. Even so, they are expensive to produce and there is so little demand that the pharmaceutical company stopped making them in 2003 (Heineman 2016). In a related example, research on nonpatentable natural ways for treating diseases is hamstrung compared to research that can generate exclusive patents to recoup expenses and make a profit.

From a different direction, in the market information's value is reflected in the price people are willing to pay for it, or to keep it from others. In science information is ideally treated as available to all who might want it, at no price. The tension is innate. For example, in the 1970s oil companies had discovered the

Chicxulub crater that brought an end to the Cretaceous period, but regarded the evidence as proprietary. This information did not reach scientists seeking the crater for years (Sumner 2017, p.17).

From yet another vantage, what is valuable knowledge in science is not connected to what is valuable in the market. James Clerk Maxwell and Heinrich Hertz who worked out the bands of electromagnetic waves were not motivated by commercial opportunities. Albert Einstein did not develop the Theory of General Relativity for practical purposes.

Sometimes the ‘useless knowledge’ scientists seek ends up being very important commercially, but often such motives often do not play a role in discovery (Cossins 2017). This is even true when the discovery is potentially very profitable in market terms. Jonas Salk refused to patent his polio vaccine. In 1923, Frederick Banting, along with James Cillip and Charles Best, invented insulin in 1923, and sold the patent to a university for \$1. Now that it has been modified and surrounded by corporate owned patents, the annual average cost for treating diabetes in the US is \$5,705 (Pulu 2021).

Science is predicated on the logic of the gift economy, where rewards come to those who make “contributions” to their field (Hyde 1979, pp. 77-83). The market is based on producing commodities and services for sale. Scientists want their contributions to be freely available to all who are interested whereas the logic of the market wants them to be available to those willing to pay for them. When the two interpenetrate, as with the commercialization of scientific journals, problems arise (Andrei 2020; Buranyi 2017; Curry 2012). On the other hand, when scientific research can be freed from market constraints through innovative institutions, it can be invigorated and enhanced (Hardwick 2011).

As these examples demonstrate, there is no common feedback.

Those seeking to work within the context of methodological individualism, even in its most sophisticated forms, apparently fail to see these issues. For example, Peter Boettke correctly observes, that “One simply cannot do political economy without addressing the institutional infrastructure within which economic activity takes place” (Boettke 2019, p. 168) But his one-dimensional treatment of spontaneous orders leads him to write “Liberalism, correctly understood, is little more than the persistent and consistent applications of the principles of economics to the affairs of men...” (Boettke 2019, p. 200). This is simply false.

Michael Polanyi observed: “in the free cooperation of independent scientists we shall find a highly simplified model of a free society” (1969, p. 11). Developing Polanyi’s insights, physicist John Ziman wrote “The whole ideology of Science, the principle of a *freely* accepted consensus implies a society in which there is general freedom of speech and comment” (Ziman 1968, p. 116). Scientists most definitely do not apply “the principles of economics to the affairs of men.” Science’s dependence on the gift relationship among scientists is fundamentally different from economic reasoning (Hyde 1983).

Without a common feedback between systems, the coordination problem as discussed in economics and other spontaneous orders *does not exist*. Different systemic values expressed within different spontaneous orders interpenetrate in ways both advantageous and disadvantageous. There is no equilibrating tendency because there is no equilibrium, even theoretically.

CIVIL SOCIETY: A HIGHER ORDER SYSTEM

When multiple spontaneous orders interact, a new level in the hierarchy of systemic complexity arises: *a polycentric system of polycentric systems*. At every step in the hierarchic systemic elaboration of the human world, and complexification of social structures, we find emergent structures *both* facilitate *and* shape human agency. In addition, we find human beings can and will react creatively to both the constraints and opportunities (Lewis 2000b, p. 259). At every level of systems hierarchies, new properties emerge from and react causally on those below.

These considerations enable us to consider a higher order of system than a spontaneous order. We must be careful here about terminology. Hayek did not distinguish between spontaneous orders in the sense I have used the term and other uses of the term, as when he described society as a whole as a spontaneous order containing “*numerous other spontaneous sub-orders or partial societies of this sort as well as of the*

various organizations existing within the comprehensive Great Society” (1973, p. 47). Spontaneous orders exist within other more inclusive spontaneous orders. In describing Hayek’s unfinished manuscript, “Within Systems and about Systems.” Bruce Caldwell writes “In his model, communication takes place between two systems, each system being a classificatory system that itself contains numerous classificatory systems” (Caldwell 2004, p. 299). In Bertalanffy’s terms, Hayek is describing a *higher order* system than a spontaneous order in the sense I have developed in this paper.

What I, and many others, call “civil society” is the higher order complex adaptive system that emerges from a social ecology of many simpler complex adaptive systems, or spontaneous orders (Novak 2018). It encompasses all consensual relations between non-intimates who possess equal legal status and freedom to engage in individual or cooperative enterprises. All are independent equals (Hardwick 2008).

Equal status is not a procedural rule about how to do something, but how to relate to others, facilitating peaceful cooperation along whatever lines, and in pursuit of whatever values people choose that are compatible with them. This includes markets, science, the arts, religion, recreation, and anything else people can do cooperatively or individually without violating others’ equal rights. Civil society constitutes the only sphere of social existence other than that of intimates where the full range of consensual values and virtues can be expressed without some of them being penalized by systemic biases.

Civil society shares with spontaneous orders traits such as equality of status and formally voluntary relationships, but these traits do not generate a discovery process shaped by system-wide feedback. In this respect civil society is more like a complex emergent linguistic system than a spontaneous order. *There is no single coordination problem because there is no standard by which more effective coordination can be judged.* Lack of standardized feedback and the value it reflects means there is not even a minimal ‘self.’ Civil society is biased in favor of no particular value other than enabling voluntary cooperation in whatever form it takes that does not injure others’ similar capacity. Boettke’s claim the market is not teleological was mistaken, but at the next level in systemic hierarchy his statement applies. *Civil society, not the market, is the ultimate expression of liberal principles.*

Civil society in the sense I use the term is an expression of liberal modernity. Entrepreneurs, markets and price signals long predated civil society. Individuals deeply devoted to understanding the nature of the physical world long predated modern science. Athens embraced political equality for its citizens over a thousand years before anything close to an inclusive civil society arose. Common law existed in societies with deeply entrenched status inequalities. In themselves these traits were not evidence of a liberal society. Liberal society was the unintended result of changes in how people engaged with one another, an emergent quality arising from equalizing status and freedom across far broader populations than ever before (McCloskey 2017).

David Hume was perhaps the most insightful observer of its early rise. As Hume (1985, p. 271) described the complex new society emerging in England:

The more these refined arts advance, the more sociable men become . . . They flock into cities; love to receive and communicate knowledge; to show their wit or their breeding; their taste in conversation or living, in clothes or furniture. Curiosity allures the wise; vanity the foolish; and pleasure both. Particular clubs and societies are every where formed: Both sexes meet in an easy and sociable manner; and the tempers of men, as well as their behaviour, refine apace.

In Hume’s time most people were still barred from such lives, but what existed was still far beyond anything that previously existed.

In *Democracy in America*, Tocqueville meant by “democracy” not a system of government, but a society where, to an unprecedented degree, citizens enjoyed equal legal status. Tocqueville observed (1961, p. 216):

In no country in the world has the principle of association been more successfully used, or more unsparingly applied to a multitude of different objects, than in America. Besides the permanent associations which are established by law under the name of townships, cities, and counties, a vast number of others are formed and maintained by the agency of private individuals.

That this description primarily included white men in Tocqueville's time is irrelevant to my point. Despite this shortcoming, American society was radically different from European societies defined by legal distinctions between all classes of people. In the new U.S., all male citizens were supposed to be equal in basic rights, and many rights were shared by women. More importantly, in principle these values could be applied universally to humanity as a whole, institutionalizing a reform agenda for the future.

As in spontaneous orders, the dynamic relationships within civil society are not intuitively obvious. In fact, they are even harder to grasp because civil society weaves together so many such orders and many rules are tacit. A French market place would be easily comprehensible to an American visitor, as an American one would be to the Frenchman. It was the broader cultural context within which the market existed that was different. Tocqueville observed, "No sooner do you set foot upon the American soil than you are stunned by a kind of tumult; a confused clamour is heard on every side; and a thousand simultaneous voices demand the immediate satisfaction of their social wants" (Tocqueville 1961, p. 292). But under this incessant tumult, a kind of order existed. "The appearance of disorder which prevails on the surface, leads [a European] at first to imagine that society is in a state of anarchy; nor does he perceive his mistake till he has gone deeper into the subject" (1961, p. 90).

What is the nature of this order?

Spontaneous orders provide essential structure to the intricate social ecology of civil society. Not only do they provide feedback signals in their own terms, these signals provide important information to people whose motivating values are different from those shaping the systems they use.

Civil society provides a context within which more specialized kinds of cooperative systems can blossom in all the ways human beings are capable of attaining (diZerega 2014, p. 50). No single standard of systemic success or failure exists. Individuals have wide latitude as to which kinds of feedback to attend to, and how much. So long as relationships are between status equals, success or failure is a matter of individual judgement. Within civil society human choice trumps any given feedback signal.

What prevents chaos within civil society, along with the coordinating impact of spontaneous orders, is the system of customary, and often tacit, rules governing relations that preserve equality of status and formally voluntary relationships by facilitating trust. For example, expecting promises to be kept, even when not legally enforceable, goes well beyond supporting market economies (Henrich 2020, p. 299). People are expected to usually be truthful, even without a contract. Other tacit rules could vary significantly from society to society, but still be important in facilitating cooperation, such as what constitutes appropriate social distance.

Importantly, civil society cannot be defined simply in terms of the intersection of spontaneous orders. If these orders provide a unifying system of signals, how those signals are utilized will be shaped by many other cultural elements. Germany and France are both civil societies, but remain distinctly Germany and France. Networks of these cultural elements coordinated by spontaneous orders give them their coherence. And these cultural factors cannot be taken for granted.

UNDERMINING CIVIL SOCIETY

Suppressing or systemically distorting communication networks within civil society can undermine its capacity to facilitate rich networks of cooperation. As we are discovering with the way social media has evolved, tacit rules of trust can break down even when immersed within strong market, scientific, and democratic systems.

Social media companies need to earn income to support themselves and encourage investment, but the internet was based on the scientific ideal of information ideally being available to all (Markoff 2005). The systemic values of science and the market clashed. The solution was to sell advertising based on information social media companies acquired from their users. Revenue would come from advertisers. But, as Tristan Harris, formerly with Google, observed, “If the product is free, you’re the product” (Enright 2020). Users were not customers, advertisers were.

The success of social media as a profit center depends on addictive strategies to ensnare users. They often work. Harris notes “The average person checks their phone 150 times a day. Why do we do this? Are we making 150 conscious choices? One major reason why is the #1 psychological ingredient in slot machines: intermittent variable rewards . . . Addictiveness is maximized when the rate of reward is most variable.” This principle is also what makes slot machines so profitable (Haselton 2018). The algorithms manipulate how, when, and what information becomes available to users. Users serve advertisers rather than advertisers serving users (Zuboff 2019).

But this practice can dissolve social trust. Different people searching for “climate change” often won’t get the same results. Google uses the data it collects to create user profiles and produces microtargeted search results for individual users. Social media companies use information derived from prior use to feed users information congruent with their beliefs, creating echo chambers where everyone can live within their own Truman Show (IMDb, 1998). Depending on who you are and where you live, googling “outdoor grills” or “climate change” will generate different lists. Some will contradict one another (The Social Dilemma).

Seeking information about a common issue, people end up in different knowledge universes that can be politically or culturally divisive. This outcome is not the intent of the searcher, nor the platforms, but results from algorithms used to select sites of interest to users while subordinating them to seeking money from advertisers. What may be irrelevant for “outdoor grills” can become deeply divisive for “climate change.”

In a study analyzing over 2 million recommendations and 72 million comments on YouTube in 2019, researchers found viewers consistently moved from watching moderate to extremist videos. Simulation experiments run on YouTube revealed its recommendation system steers viewers towards politically extreme content, exposing “a comprehensive picture of user radicalization . . .” (Ribeiro 2019).

Fake stories are designed to attract attention, and so, clicks. Viral fake election stories outperformed genuine ones on Facebook. Three times as many Americans read and shared the most popular fake election news story on their social media accounts compared to the top-performing article from the *New York Times* (Silverman 2016).

In August, 2020, a study exposed 82 websites spreading Covid misinformation reached a peak of nearly half a billion Facebook views in April. The 10 most popular websites drew about 300 million Facebook views. By comparison 70 million views were recorded for 10 leading health institutions (Zuboff 2021).

Many people are drawn ever more deeply into conspiracy sites, fragmenting society, undermining trust in fellow citizens, science and elections. Tacit values are undermined (Zuboff 2021). All too often people who would otherwise never ‘go there’ are led into sites promoting political violence. After an attempted right-wing coup against elections and the constitution Jan. 6, Facebook’s algorithms were ‘bombarding’ algorithmically identified right wing users with ads for combat gear (Vamos 2021).

If ‘users’ owned their data and had to pay for access to social media as consumers pay for Netflix, social media’s systemic impact upon consumers would be quite different than it is on users, even though people’s motivations for using the media would remain largely the same. (Lanier 2019) This is a systemic issue and any effective treatment must be understood systemically.

EMERGENT QUALITIES IN CIVIL SOCIETY

Within civil society spontaneous orders collectively shape the social environment two steps removed from being explainable by individual actions. Those acting within such networks are motivated by individual

values, but these values are shaped by the contexts within which they live. The values reinforced by a spontaneous order are systemic values, and different systems privilege different and nonreducible values. The collective patterns of such interactions in turn shape the values and actions of the individuals acting within them. As my discussion of social media illustrates, disrupting communication channels within civil society can be as destructive as similar disruptions in market price systems, scientific publications, or democratic elections.

Recent studies of Western societies as “WEIRD” (Western, Educated, Industrialized, Rich, and Democratic) compared to other people apparently illustrates emergent qualities arising from civil society. If Hume and Tocqueville’s descriptions are accurate, there appears to be a particularly nice fit between civil society as I have described it and findings that, compared to others, modern Western societies are WEIRD. This insight is rooted in systems theory, not methodological individualism. Bruce Caldwell gets it right, I think: the term methodological individualism “is no longer helpful and should be banished from the vocabulary, at least of those who would describe Hayek’s ideas” (Caldwell 2004, p. 419).

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What is a Legislature's Purpose?

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Abstract: Legislatures in modern democratic nation states are social arrangements in which individuals elected as representatives interact with each other and with professional lobbyists according to quite specific transactional modes, producing continually updated bodies of legislation. It is widely assumed that the purpose of such legislation is or should be to benefit the society to which it applies, at least on balance. But analysis of the epistemic limitations of legislators, studies of the potential for opportunism enabled by the types of transactions that take place within legislatures, and empirical documentation of so-called “government failure” create doubt as to the validity of that assumption, and raise the question of how such a social arrangement can not only survive but grow in its influence over society. It is suggested that better understanding of this phenomenon can be had if the assumption of purpose, inappropriate for a complex social arrangement in that it conflates systemic purposes with ones appropriate for individuals, is abandoned and the legislative system's operation is examined in terms of the overall organization of the processes which take place within it.

Keywords: legislatures, politics, government, anticipatory systems, process closure.

I. INTRODUCTION

Legislatures are the legislation-producing component of democratic government.¹ They are arrangements in which a limited number individuals, some of whom are elected as representatives and others of whom are private lobbyists whose business it is to influence legislation,² interact according to specific transactional modes, producing continually updated bodies of legislation.³ Legislatures were conceived in a constructivist manner as organizations with fairly simple constitutional specifications, but they have evolved into much more complex arrangements and are more usefully characterized as spontaneous orders.⁴ Any doubt as to their complex, adaptive nature should be quelled by a perusal of Riddick (1992), an exposition of the accumulated rules governing the activities of the U.S. Senate, which describes over 10,000 precedents.⁵ In analyzing such systems, then, it is not unreasonable to differentiate between planning and acting on an individual level and the emergent systemic outcomes which are a side-effect of that activity in a particular context.

Common parlance is an impediment to clarity about the systemic nature of legislatures. The terms used to refer to legislators, like “policymaker” and “lawmaker”, contain the implication that it is the individual legislator who makes the legislation. But this is obviously not so. A legislator may draft bills, and she⁶ may have a clear idea as to what specific legislation she would like to see passed, but she cannot enact it unilaterally. She must become a participant in a process in which proposed legislation is discussed and amended, where it is subject to the vagaries of compromise and logrolling, where even when initially passed it is subject to further modification in the process of reconciliation in conference committees. The legislation that ends up being enacted is emergent from this process and may bear little relation to the initially proposed bill.

The characteristics and purposes of individual legislators and lobbyists, and their epistemic and other limitations, are important considerations in understanding their behavior, but for understanding the operation of legislatures it is necessary in addition to examine not only the processes involved in legislator and lobbyist activity and interaction but also their organization, because adaptation and growth are features of the system as a whole. Legislatures are systems which are obviously capable of adaptation in order to survive and prosper, but attributing to them goals appropriate for individuals is a serious misconception.

But there is nothing original in the observation that legislatures are not individuals.⁷ It has been common in the past for economists from Pigou to Samuelson to characterize legislatures as if they were a powerful person (a benevolent dictator, for example) with motivations and goals such as would be reasonable or desirable (in the opinion of the analyst) for such a person.⁸ However, this is now sometimes recognized as a metaphor that should at least be qualified, as much attention has been devoted to the study of the internal structure of legislative systems. Economists and political scientists in the “rational choice” tradition⁹ have theorized about political arrangements in much the same methodologically individualistic way that most economists approach market arrangements—individuals, constrained by the given arrangements, choose the best of the expected outcomes from the available options according to their preferences, which are assumed to be comparable and transitively ordered, i.e., they maximize expected utility.¹⁰ The problem then becomes to examine how groups of individuals, faced with making a “group choice” will tend to react under different institutional arrangements. There is no assumption here that the group is merely the individual writ large; in fact one of the major findings of this line of research is that there exists no reasonable (which excludes dictatorial) way of forming a coherent group preference from the preferences of rational individuals.¹¹ Furthermore, theorists in this tradition, Buchanan and Tullock (1962), for example, explicitly reject naïve personifications of both the State and society at large; that is (p. 12), they reject the “organic conceptions” of the State as “some *überindividuell* entity” and the existence of a “general will” or an overarching “public interest”.

What does not seem to have changed, however, is the unexamined assumption that legislatures have a purpose,¹² and that this purpose is to generally (on balance, at least) improve the lot of the citizens subject to the legislation produced. The legislative individual has faded into the background, but her purpose, like a Cheshire cat’s grin, is still very much in evidence.

II. THE PARADOX OF LEGISLATIVE SUCCESS

We have learned from many sources, most recently and convincingly from Scheall’s (2020) elaboration of “the problem of policymaker ignorance”, that the epistemic capabilities of legislators are insufficient to the task of accurately evaluating the fitness for purpose of the legislation they propose, let alone of accounting for the costs or benefits of the secondary consequences that might follow from its application.¹³ In addition, as Buchanan & Tullock (1962) and others have pointed out, legislators are self-interested (in a not necessarily pejorative sense) human beings who face a range of incentives, not all of which point to action geared to the well-being of the country in general, or even of specific constituent groups. It is widely presumed that the current mechanisms of democratic politics are very poor at conveying to policymakers in more than vague terms what constituents want or need¹⁴ (and this is complicated by the fact that constituents express

diverse and incompatible needs and wants); at least, they certainly do not convey in any practical detail how to realize policy in action. To bolster this rather dismal picture, there has been extensive documentation of what is characterized as “government failure”.¹⁵ And yet—and here we have a paradox—government, of which a legislature is a vital component, is one of the most successful social arrangements ever to appear, in terms of survival and growth of influence.¹⁶ How is this possible, if legislators and other government actors are inherently unable, in most cases, to fulfill promises made, and even when attempts are made at implementation, are unable to gauge the consequences, so that, even given the best intentions and despite the fact that there are always some beneficiaries of any particular item of legislation, a considerable amount of economic and social damage is inevitable?

It is obvious that this paradox can be resolved by asserting that the forms of government that have succeeded have done so because they have provided a net benefit. The hypothesis is that if government in its current form were not a net benefit, if the legislation produced were not in some sense “optimal”, then there would be incentive to change it or even do away with it. Since there is clearly no significant movement in this direction, it must be that, when all costs (including transaction costs) and benefits (including intangible ones) are taken into account, there must be a net benefit. This is the argument put forward by many prominent economists, including Becker (1983), Stigler (1992), and Wittman (1989).¹⁷ Unfortunately, no mechanism is given for how epistemically challenged and self-interested legislators could produce such optimal legislation, but it could be that each is “led by an invisible hand to promote an end which is no part of his intention”. How this particular “hand” could work in the context of legislatures is considerably more mystifying than how Adam Smith’s works in the context of markets, but this is something of a moot point, since the net benefit conclusion depends on the assessment of unquantified and unquantifiable costs and benefits in an assumed equilibrium, and so it is no more than an unjustified assertion, an untestable claim.

A much simpler resolution of the paradox would be to dispense with claims as to the net benefit or otherwise of the legislative system and to hold that it is successful because, first, it provides clear and viable opportunities for the pursuit of happiness of internal participants (whether that be power and prestige, or wealth, or the promotion of societal ends thought worthwhile); second, it is an arrangement which is capable of sensing (and even anticipating) and reacting adaptively to certain features of its environment; and third, its product is such that, over time, it at least partially conditions the feedback from the environment toward favoring the system’s sustainability and growth of effective authority. It is also worth noting that, while the reactions from the system’s environment become more pointed from time to time in voting exercises, such feedback, to the extent that it is effective, is directed at those internal participants who face election and not at the systemic processes, much less at the system itself, so that only in very extreme cases of widespread rebellion would its existence as a viable system be threatened.

The question arises, then, of exactly what sort of a “viable system” is a legislature. An extensive literature in political science and public choice economics gives us excellent detail about how particular processes within legislatures operate, but does not add up to an overall picture that addresses the issues of viability and adaptability of the system as a whole. In order to address the question, it is necessary to step back from the detail to view the overall system organization, focusing on understanding how the various processes within the system interrelate so as to maintain system integrity and enable adaptability.

In what follows, the hypothesis will be put forward that a legislative system can be characterized as a materially open system with a closed causal cycle of processes, each of which provides the necessary output for the succeeding one. The output of one of these processes is a modifiable body of legislation which is the system’s internal model of its environment but which also impinges directly on and constrains activity in that environment. This enables the legislative system to attach itself, parasitically, to its host, the market economy, and it is able to thrive and grow as long as that host is productive enough to sustain the extractions that are called for by the legislation produced. As a separate social system with its own internal components and processes, it is not purposeful in any sense other than to maintain its own survival and growth,

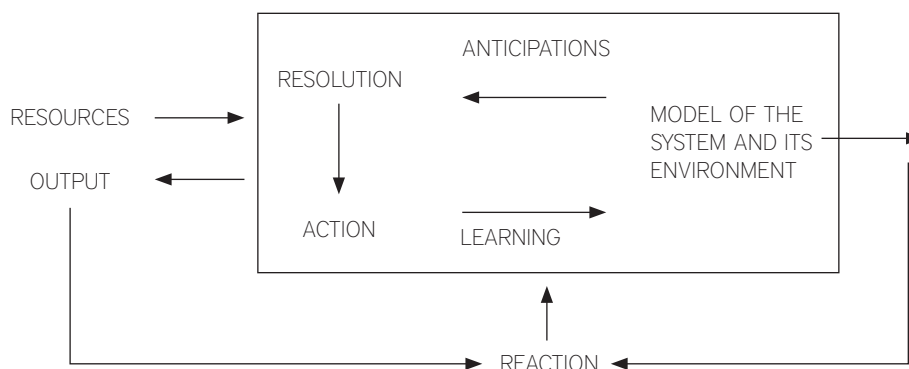
and to ascribe to it the explicit purpose of benefiting the greater society, whether one thinks that it succeeds or fails in that respect, is a serious misconception, an error of anthropomorphism.

No position is taken here with regard to the comparative virtues of different political systems. Democratic legislatures, and democratic governments in general, may well be, as Churchill (2008, p. 574) put it, “the worst form of government except for all those other forms that have been tried”,¹⁸ and if this is widely believed it would certainly be a stabilizing factor. The long lives of some examples of democratic arrangements could be construed as evidence in support of that assertion.¹⁹ But, be that as it may, the focus here is on the structure and interaction of the epistemic processes of well-established democratic legislatures, not on their merits relative to other arrangements, political or market.

III. THE SYSTEM AND ITS ENVIRONMENT

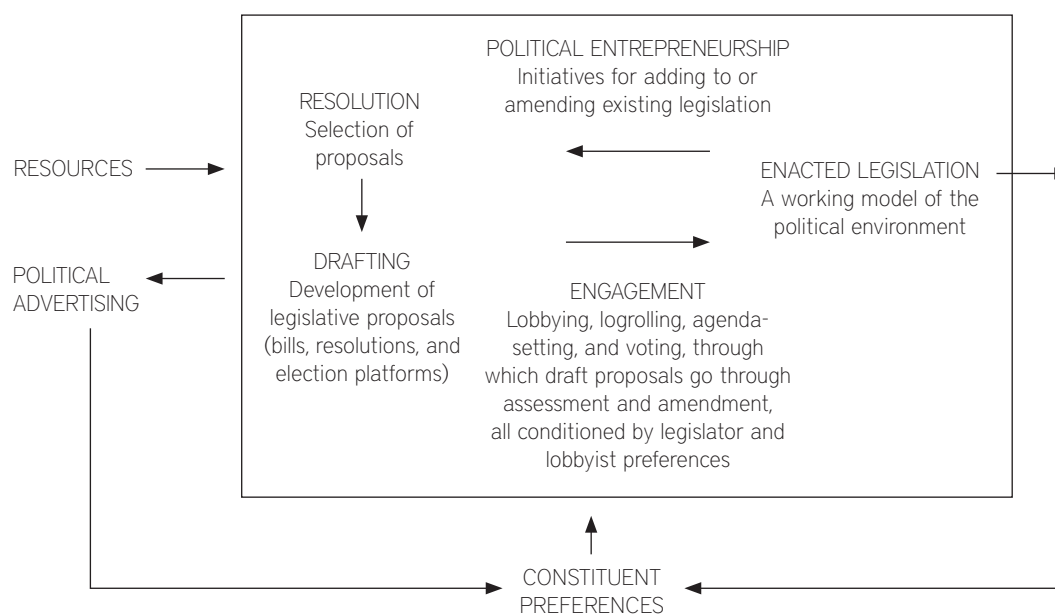
A legislative system as defined here encompasses the activities of people in their roles of legislators (and their staffs)²⁰ and lobbyists interacting according to specific transactional modes, which include lobbying, logrolling, agenda-setting, and voting, constituent relations, and engaging in the proposal, selection, and development of bills and resolutions (and amendments to these).²¹ Observable as the emergent²² result of this activity is a mutable body of enacted legislation. A mildly unorthodox aspect of this description is the inclusion of lobbyists as components of the system itself, as opposed to external influences acting on the system. This inclusion is suggested by the observation that lobbyists and legislators are in regular contact throughout the legislative process, and that lobbyists contribute to the development of bills and amendments along with legislators.²³ The general citizenry, on whom the legislation impacts, are part of the system’s environment. The focus here is on the organization of the various processes within the legislative system involving the activities of legislators and lobbyists, and by “organization” is meant how the separate processes, their inputs and outputs, are related to each other, and how this organization results in a coherent, potentially long-living, materially open but efficiently (in the causal sense) closed, adaptive system.

McQuade (2019) describes how, based on the work of systems biologists (particularly Bertalanffy and Rosen), social systems such as markets and sciences can be modelled in terms of the organization of their internal processes.²⁴ It is shown that these systems are organized in a generally similar way, and that this organization is conducive to the adaptation of the system as a whole to its environment. One of the organizational elements in these systems can be characterized as functioning as an internal model of the system’s environment—that is to say, the system is not merely adaptive, but capable of a form of anticipation employing its internal model.²⁵ Further, the systems are complete self-maintaining wholes in the sense that the conditions for the operation of each of their processes are provided by at least one other process in the system. While the systems are materially and energetically open, there is process closure in the limited sense that the processes form a cycle of efficient causation. The following is a schematic representation of the sort of social system being described:



“Action” processes within the system construct items which go directly to the environment but which may also undergo internal review and acceptance, modification, and rejection processes conditioned both by reactions from the environment to which the system is sensitive and by the tastes and preferences of the actors within the system. To the extent that these reactions from the environment are effective in the conditioning of the structure that emerges from the reviewing processes, this constitutes a form of “learning”, and is the means by which the system adapts to its environment. This emergent structure, therefore, can be regarded as the system’s “model” of its environment. The “anticipations” occur when entrepreneurial actors within the system can, based in part on the existing model, propose additional items which they guess will, if constructed, generate favorable reaction and thus will survive review and be incorporated in the system’s model. “Resolution” processes perform a culling operation on these proposals, selecting those which are actionable.²⁶ The model of the environment may be itself visible outside the system, and so is a component of the system’s overall “output” to which the environment reacts.

If this sort of arrangement is to have any relevance for understanding legislative systems, there must be identifiable a structure which serves as an actionable model of the system’s environment, as well as processes which effectively update that model and which employ that model to influence the propensities of the system for interacting with the environment. The following schematic suggests these identifications:



The body of enacted legislation, largely stable but changeable (almost always by accretion) in reaction to new initiatives and reassessments, is the structure within the system that serves as a model of the system’s environment—a model that is continuously updated by environmental feedback transmitted (and filtered) by the agency of repeated legislative transactions through which legislators and lobbyists engage with each other. Political entrepreneurs within the system rely, at least in part, on this existing knowledge base in imagining new legislative initiatives and in assessing the feasibility of these surviving, at least in part, the encounter with other legislators and lobbyists, and thus act as an anticipatory process affecting the system’s bill-and-resolution-drafting and platform-development propensities.²⁷ The “resolution” processes serve to cull from the legislative initiatives those in control of these processes (committee chairs, for example) view as actionable. The “drafting” processes include formalization of legislative proposals for submission to the “engagement” processes, as well as explication of proposals and platform to constituents, an activity labelled here as “political advertising”.²⁸ Out of repeated transactions (involving lobbying, logrolling, and

agenda-setting with respect to the consideration of bills) between legislators and lobbyists (acting according to their individual subjective preferences but, for legislators, conditioned by perceived constituent preferences), and eventually terminated by voting, there emerges the structure of enacted legislation.

It is the purposeful agency of the legislators and lobbyists, in the course of acting according to their subjective preferences and motivations, which provides the motive force animating the processes in the system.²⁹ Legislators and lobbyists interact by participating in engagement, entrepreneurship, resolution, and drafting under the institutions of legislative procedure—a set of processes which, given the system’s material openness, are each necessary for the function of the others, and which together are sufficient to enable the system’s existence as a self-maintaining entity.³⁰

To summarize, this organization of processes represents a legislative system as an anticipatory system incorporating and maintaining a working model of its environment, a model which can be accessed internally within the system to project the anticipated effects of future actions taken by the system. As with other social systems such as markets and sciences, the internal model of the environment has causal effects on the environment.³¹ Reaction from the environment is taken into account in the processes which update the model, and this in turn provides an enhanced picture of the environment upon which entrepreneurial actors can base proposals which condition the propensities of the system to act on the environment.³²

From the perspective of an individual within the system, participation has many potential benefits, both tangible and intangible: doing good for society, righting perceived wrongs, joining with others in promoting an ideological agenda, gaining power and influence, benefiting monetarily. From the perspective of the system, these motivations played out in the context of the particular transactions possible within it have the emergent effect of endowing the system with adaptability in the face of those reactions from its environment to which, for its own survival, it must be sensitive.³³

IV. THE ANCHOR TO THE ENVIRONMENT

One feature of this legislative system which differs markedly from market and science systems is the nature of its anchor to the world outside of it. Markets face real scarcity as a hard constraint; sciences (to varying extents) prioritize conformity with observation of real events. In contrast, the only serious fully external constraint on legislatures (besides constitutional constraints³⁴ and the input of market-generated resources) is the preferences of constituents, and these are notoriously divergent and usually expressed as generalities lacking in specificity as to both implementation and understanding of possible adverse consequences,³⁵ and can be conditioned to some extent by political advertising. It may be argued in addition that constituent preferences are taken account of only intermittently, at election time, but legislators, like monopolists attuned to the effects of their actions on possibilities for future competitive entry,³⁶ are attentive to current moods as harbingers of possibilities for being voted out at future elections.³⁷ There is continuous political advertising aimed at conditioning constituent preferences. As public choice analysis has emphasized, the personal preferences of legislators and lobbyists loom large, but they are certainly always conditioned by perceived constituent preferences.³⁸

In short, while constituent preferences are the legislative system’s anchor to reality, and as such certainly do affect legislators’ perceptions and behavior, that reality is not composed of hard and stubborn facts but is a shifting amalgam of diverse, abstract, inconsistent, and emotional ideas.³⁹ And yet, this shifting amalgam has an underlying coherence; its basis is in ideologies, the belief systems that all people adopt in order to simplify a complex reality and give meaning and sense to their social experiences.⁴⁰ The dominant ideologies in a society⁴¹ are not static; they change over time as social experiences change,⁴² and one major factor in those changes is the experience of living under legislation. There is two-way feedback between dominant ideologies and the legislative system.⁴³ Higgs’ (1987) exposition of “the ratchet effect” highlights the particular role of societal crises and of the experience of surviving the crises while living under the legislative edicts introduced as the government’s method of addressing the crises. With legislators attuned to dominant ideologies which take it for granted that a crisis requires legislation to authorize “doing something”,

the effect is that the legislature's disposition to deal with the crisis not only by expanding its scale but also by widening the scope of its activities is enhanced, and legislation enacted following such a disposition results in increasing legislative authority over aspects of society not previously subject to it. When the crisis passes, when the war is won, when the depression is over, when the pandemic is survived, there may be pressure to repeal the extraordinary measures, but the experience of living through the crisis under those measures and successfully returning to normalcy has the effect of validating to some extent those legislative advances, and repeal will be, at best, incomplete.⁴⁴

It is not only as a result of crisis survival that the legislature's output conditions its ideological environment. The nature of legislation is such that any particular piece of legislation will result in (at least short-term) benefits to some and costs to others. As the quantity and scope of legislation increases, most constituents will experience both costs and benefits and can come to regard their benefits as a right. The presence of lobbyists within the system, together with the imperative faced by legislators to get reelected, conditions legislation to concentrate benefits and distribute costs,⁴⁵ and this property of legislation enhances in individuals a perception of general benefit (especially if the financing of the benefits can be achieved by borrowing or money creation), so that, even if (by some measure) it were possible that one could show net cost overall, it would be unlikely to be convincing at the individual level.

In short, a legislative system, like other adaptive social systems, has an anchor to reality, but the reality to which it reacts is ideological rather than physical. Systems anchored to physical aspects of their environment face hard constraints; and although it is conceivable that intangible constraints can be effective, in the case of legislatures the intangible constraint is subject to modification by the system's own output in a way that is favorable to the system's growth.⁴⁶

V. SUMMING UP

The question addressed here is why, given its unlikelihood in the face of the severe difficulties characterized by Scheall (2020) as "the problem of policymaker ignorance", the significant possibilities for individual corruption detailed by political scientists, and the pervasive phenomenon of "government failure" documented by public choice scholars, the institution of the legislature has not only survived as an integral part of society but has been able to greatly expand its influence over society at large. A partial explanation has been given by Boettke et al. (2007), who point out that the political survival of individual legislators is not closely tied to whether or not the legislation they enable enhances economic efficiency.⁴⁷ Legislators are not ignorant of what is needed to succeed within the legislative system; it is just that economic knowledge is seldom helpful (and its application often distinctly unhelpful) in that regard. The feedback to the legislative system (and to individual legislators) from the economic effects of legislation is not direct but is filtered through an ideological lens; legislators rarely suffer political losses from economically inefficient or damaging legislation provided that the legislation can be characterized as conforming to the ideological presuppositions of the majority of constituents.

But this is not the whole story. The fact that individual legislators can prosper in the face of epistemic and other difficulties does not fully explain why the system as a whole should survive and prosper. To explain that, it is necessary to inquire into the organization of the system's processes and to show how these processes combine constructively to endow the system with the capability for adaptation to (and even anticipation of) environmental feedback which may threaten its integrity. The bases for this feedback are the ideological preconceptions prevalent in society, and those preconceptions are, over time, conditioned, by the experience of living under the very legislation the system produces, to favor the production of more of it. The ability to react adaptively to the external pressure of ideologies combined with the conditioning of those ideologies by legislation itself is how the legislative system is able to survive and grow in scope and influence. To get to the source and mechanism of the legislature's adaptability it is necessary to understand both its organization as a system of mutually supportive processes which generate emergent effects, and the reciprocal interactions between its emergent products and its environment.⁴⁸

NOTES

- 1 “Government” is an umbrella term for a linked collection of systems, differing in origin, structure, and evolutionary history. Legislatures are but one of these; others include executive arrangements, bureaucracies or ministries, systems of legal enforcement, military systems, and so on. Each has unique features in terms of internal processes and aspects of the environment (including other social systems) to which they are sensitive and on which they impact. What unites these government systems is that their impacts on other social systems and individuals can involve the legitimized (by government itself, but with the tacit consent of most of the governed) use of force. The focus on legislatures here is not to deny the importance of these other units of government; however, their structure and their interactions (including with legislatures) require a separate treatment.
- 2 While, conventionally, “legislature” refers to the body of elected politicians, I use it here as a synonym for “legislative system”, i.e., the system whose elements are the legislators, their staffs, and the lobbyists.
- 3 The usual characterization of legislators as “lawmakers” is inapt, as Hayek’s (1973, p. 72) distinction between law (spontaneously evolved rules of conduct) and legislation (rules deliberately constructed) makes clear. The common misconception that all law is legislation is (p. 73) “a product of the intentionalist fallacy characteristic of constructivism, a relapse into those design theories of human institutions which stand in irreconcilable conflict with all we know about the evolution of law and most other human institutions”.
- 4 A very clear statement describing the political sphere of society as a spontaneous order (as opposed to an organization) is given by Martin (2010). Also Butos & McQuade (2017, p. 14): “if social science is going to seriously treat the interactions of different complex systems (science and government, for example) then a first step is to include in the analysis that government is indeed a complex system with its own characteristic structure, internal transaction types, and emergent effects”. Devins et al. (2015, p. 613) observe that “Legal institutions, designed to be economies [i.e., planned and controllable entities, in their parlance], become spontaneous orders as they evolve in response to shifting political and social environments, unforeseen and unforeseeable by the designers of these institutions. All institutions, even the most seemingly fundamental, evolve so as to drift, even dislodge, from their original premises, so that attempts to engineer these institutions will always fall apart in the long run.”
- 5 Such a characterization applies to legislatures not only in the U.S. but in democratic societies in which the legislature has considerable (but not necessarily total) independence from the other branches of government. It applies perhaps somewhat more clearly to systems in which individual players (including the executive) have limited control over the legislative agenda. It certainly does not apply to “puppet” legislatures controlled by authoritarian rulers in which the order is anything but spontaneous.
- 6 To paraphrase de Jasay (1989, p. 1, fn. 1): wherever I say “she” or “her”, I really mean “he” or “his”.
- 7 In fact Bastiat (1848, p. 146) says, with his usual clarity: “I contend that this *personification of the state* has been in the past, and will be in the future, a fertile source of calamities and of revolutions.”
- 8 Ascribing purposes and goals to the state as a unitary entity is done in an offhand manner, without analysis or even consideration that there might be anything controversial about it. For example, Pigou (1932, p. 142) states “It is, however, possible for the State, if it so chooses, to remove the divergence [between private and social net product] in any field by ‘extraordinary encouragements’ or ‘extraordinary restraints’ upon investments in that field. The most obvious forms which these encouragements and restraints may assume are, of course, those of bounties and taxes.” In a similar vein, Samuelson & Nordhaus (2010, pp. 306-308) ask “What are the appropriate economic goals for government action in a modern mixed economy? ... A central economic purpose of government is to assist in the socially desirable allocation of resources. ... In addition, government tries to smooth out the ups and downs of the business cycle, in order to avoid either large-scale unemployment at the bottom of the cycle or high inflation at the top of the cycle.” De Jasay (1985, p. 1), however, deliberately takes this stance in an “as if” sense: “Braving the risks of confusing institutions with persons and the difficulties of passing from the prince to his government, [my approach] chooses to treat the state as if it were a real entity, as if it had a will and were capable of reasoned decisions about means to its ends. Hence it tries to explain the state’s conduct towards us in terms of *what it could be expected to do*, in successive historical situations, if it rationally pursued ends that it can plausibly be supposed to have.”

- 9 For a good introductory overview of the application of rational choice methods to politics, see Shepsle (2010).
- 10 A theorist is free to hypothesize the sorts of preferences that are likely to be uppermost in particular situations. For example, Riker (1962, p. 22) claims that “What the rational political man wants, I believe, is to win, a much more specific and specifiable motive than the desire for power. ... He wants to exploit each situation to his advantage, and he wants to succeed in a given situation.” Riker viewed political science as a study of what he called “heresthetics”, i.e., strategic behavior aimed at winning rather than persuading, which includes particular behaviors such as agenda-setting, coalition-forming, and logrolling. See Riker (1977).
- 11 This result is known as Arrow’s Theorem—see Arrow (1951). It means, in practice, that while group decisions may depend on individual preferences, they are manipulable by those with the power to set agendas for the process of translating individual preferences into group decisions.
- 12 An exception is Kohn (2004, p. 310), who in a critique of the dominant and long-lasting “value paradigm” of economic theorizing and its cornerstone assumption of trading equilibrium for its claim to be a general theory of economics, notes that “the interaction of these individuals within firms and governments is ignored by the value paradigm and the aggregates themselves are treated as though they had motives and intelligences of their own”. See also Martin (2010, p. 234), who is clear that “policy is the result of an emergent process, not an object of choice. Ideas do not translate one to one into policies in the same way they would for an individual. Politics is not purposive; but political agents are.”
- 13 See particularly Hayek (1989, p. 7): “If man is not to do more harm than good in his efforts to improve the social order, he will have to learn that in this, as in all other fields where essential complexity of an organized kind prevails, he cannot acquire the full knowledge which would make mastery of the events possible. ... The recognition of the insuperable limits to his knowledge ought indeed to teach the student of society a lesson of humility which should guard him against becoming an accomplice in men’s fatal striving to control society—a striving which makes him not only a tyrant over his fellows, but which may well make him the destroyer of a civilization which no brain has designed but which has grown from the free efforts of millions of individuals.” According to Scheall (2020, p. 1): “The problem of policymaker ignorance is the simple fact that the success of purposeful political action is necessarily limited by the nature and extent of policymakers’ ignorance and their capacities to learn. We cannot deliberately realize policy objectives beyond the ken and control of our political representatives. ... Policymaker ignorance is the ultimate barrier that we cannot breach in our attempts to deliberately reform society and ‘make the world a better place’ ...”.
- 14 The assumption of weak voter feedback is disputed by Wittman (1989), who argued that voters are sufficiently informed and legislators sufficiently disciplined by democratic processes that the legislation produced is wealth-maximizing. Among others, Boettke et al. (2007, pp. 136-141) have convincingly contested this view, at least in the extreme form put forward by Wittman. See also Boudreaux (1996) and Wagner (1996).
- 15 Since Buchanan & Tullock (1962) developed their theory of “collective choice” with the very reasonable assumption that individuals when participating in the political realm were no more nor less self-interested than when participating in the economic realm, a large literature has emerged under the rubric of “public choice” which has examined political institutions both theoretically (from a methodologically individualist perspective) and empirically. One result of this investigation has been the recognition that neither markets nor governments meet any standard of perfection and, further, that the shortcomings of government (even with respect to claimed intentions) are considerably more damaging than market failures. Keech & Munger (2015) present a comprehensive “anatomy” of government failure from a theoretical perspective, and Simmons (2011, pp. 185-320) provides an extensive catalog of case studies. Another list of examples, this time from an Austrian perspective and emphasizing the unintended consequences of government action is found in Gallaway (1998). See also Ikeda (1997).
- 16 Estimates by Tanzi & Schuknecht (2000, p. 6) of government expenditure as a percentage of GDP in a number of countries including the U.S. indicate a growth factor between 1870 and 1996 of about 4.5. But expenditure is a very incomplete measure of the size and scope of government. As Higgs (1987, pp. 31-33) points out, the growth of regulation is not captured by the standard measures of growth, and “the long-run growth of governmental activity in the U.S. economy has depended mainly on the scope of effective governmental authority over economic decision-making, not on the degree which existing governmental potential has been realized at any particular time”.

- A rough indicator of the growth of legislative activity is given by an estimate by Govtrack (<https://www.govtrack.us/congress/bills/statistics>) that, since World War II, “Congress has typically enacted 4-6 million words of new law in each two-year Congress”. Perusal of the Federal Register, which lists final rules (interpretations based on enacted legislation) of government agencies, shows a growth in such rules from about 4,000 in 1993 to over 94,000 in 2015. For a readable history of the growth of government in the U.S., see Hughes (1991).
- 17 According to Stigler (1992, p. 459), “every durable social institution or practice is efficient, or it would not persist over time. ... Tested institutions and practices found wanting will not survive in a world of rational people. ... So I would argue that all social institutions, including common and statute laws, must be efficient.” Wittman (1989, p. 1421) makes a more pointed claim, implying that democratic methods are as capable of disciplining legislators as market methods are of disciplining producers: “Behind every model of government failure is an assumption of extreme voter stupidity, serious lack of competition, or excessively high negotiation/transfer costs. Economists are very suspicious of similar assumptions regarding economic markets. This skepticism should be carried over to models of government behavior.” The Achilles heel of this line of thought is the fact that political and economic institutions and transactions are radically different in the incentives offered and the type of knowledge produced.
 - 18 In his speech to the House of Commons on 11 November 1947, Churchill prefaced this remark with “Indeed it has been said ...”, indicating that the quip was not original to him. A similar thought is articulated by Linz (1978, p. 18): “Our minimal definition of legitimacy is, then, a relative one: a legitimate government is one considered to be the least evil of the forms of government. Ultimately, democratic legitimacy is based on the belief that for that particular country at that particular historical juncture no other type of regime could assure a more successful pursuit of collective goals.”
 - 19 See, however, the observation cited by Bueno De Mesquita et al. (2003, p. 5) that “autocrats last in office, on average, about twice as long as do democrats”.
 - 20 According to U.S. congressional statistics published by the Brookings Institution (2019), the number of congressional committee staff and personal staff employees has grown from 39 in 1891 to 9,947 in 2015 (reaching a high plateau of over 11,000 between 1980 and 2006). Salisbury & Shepsle (1981, pp. 563-567) point out that staffs enable legislators to pursue multiple goals at the same time: getting legislation developed and ushered toward enactment, seeking advancement within the system, and working toward reelection.
 - 21 For simplicity, the various government departments which are tasked with the implementation of legislation are not dealt with here. But it is to be noted that departmental bureaucrats are also regularly lobbied, and the rules developed by these departments have, for practical purposes, the same force as legislation. Growth in the number and scope of such departments should also be taken into account in assessing government growth.
 - 22 The term “emergent” is used here informally to refer to a systemic property which arises from the interactions of system components. But it is not a simple concept. For an examination of the subtly different ways in which the concept is applied in economics and social theory, see Harper & Lewis (2012) and the articles in the volume for which that is the introduction.
 - 23 For in-depth studies of legislator-lobbyist interactions, see Baumgartner et al. (2009) and Godwin et al. (2013). According to Buchanan & Tullock (1962, p. 294), “Scientific progress in the analysis of politics cannot be made until this widespread activity [i.e., special-interest lobbying] is fully incorporated in the analytical models.” Also relevant is the literature on rent-seeking stemming from Tullock (1967) and Krueger (1974). There is also a large literature on legislator-legislator interactions, particularly logrolling and coalition-forming—see, for example, Buchanan & Tullock (1962, ch. 10 & 11), Weingast & Marshall (1988), Evans (1994), and Holcombe (2006). Buchanan & Tullock (1962, pp. 135-136) draw attention to an aspect of bill construction which they call “implicit logrolling”. This involves the development of complex bills covering multiple issues designed to take advantage of the fact that a legislator who feels strongly about one of the issues may vote for the bill even the other issues in it, about which he feels less strongly, are not to his liking.
 - 24 See Bertalanffy (1928; 1968) and Rosen (1975; 1985; 1991). When Bertalanffy talked about the organization of a biological system he emphasized the organization of the internal processes rather than the organization of the physical matter—in fact, he held that the former determined the latter. In Bertalanffy’s (1968, p. 27) own words: “In the last resort, structure (i.e., order of parts) and function (order of processes) may be the very same thing: in the

physical world matter dissolves into a play of energies, and in the biological world structures are the expression of a flow of processes.” Rosen’s (1991, pp. 119-120) short statement of his approach to understanding biological systems was “throw away the matter and keep the underlying organization ... The organization of a natural system ... is at least as much a part of its material reality as the specific particles that constitute it at a given time, perhaps indeed more so.”

- 25 To summarize Rosen’s picture of anticipatory systems, a system is anticipatory if it contains a predictive model of itself and of its environment which allows it to change state on account of the model’s predictions as to a future situation. This ability to develop plans for possible futures, to form expectations of the future based on an internal model, allows for modification of the system’s current state in the course of implementing these plans or predictions and may result in output to the environment conditioned by that modification. And the system’s input from the environment may be processed within the system to confront, and perhaps modify, the model—for the model to be useful for anticipation, the system must be capable of learning, i.e., adjusting its model to reflect experience of reactions from the environment, especially in situations where prior expectations were not met.
- 26 For market systems, the “items” constructed are goods and services; the “learning” processes are the repeated exchanges as goods and services are bought and sold under conditions of scarcity; the “model” is the price structure (a complex structure of the prices and reputations of both consumer and capital goods and services); the “anticipation” is the activity of entrepreneurs in imagining new or improved goods and services; and the “resolution” process selects those projects that can attract sufficient capital to proceed. For science systems, the “items” constructed are papers presenting theoretical constructions or the results of empirical studies; the “learning” process involves the engagement of scientists with each other in assessing, criticizing, adapting, and incorporating in their own work the ideas presented, conditioned by a norm of correspondence with observation; the “model” is the body of provisional scientific knowledge; the “anticipation” is the activity of scientific entrepreneurs in imagining new hypotheses or methods; and the “resolution” process selects those hypotheses considered worthy of investigation.
- 27 Martin & Thomas (2013, p. 23), citing a large literature in political science and public choice economics on political entrepreneurship, describe a political entrepreneur as an “individual who plays a key role in identifying policy problems, mobilizing supporting coalitions, and implementing policy change”. This is a mixture of political entrepreneurship as described here (which focuses on ideas for legislative initiatives) and opportunistic behavior in the context of engagement with other legislators and lobbyists. They also describe another aspect of political entrepreneurship as being “directed at altering the institutional context within which entrepreneurship occurs”. This is certainly an important phenomenon, and it merits more attention than is given here. It definitely qualifies as entrepreneurship in a general sense, and it is a characteristic also of other social arrangements, including markets and science. It results in the slow but sure evolutionary changes within the system—it is the force behind the size and complexity of the rules and precedents that Riddick’s (1992) compilation documents.
- 28 Political advertising can run the gamut between sincere expressions of intent and misleading and diversionary oratory. On the latter, Scheall (2020, p. 154) points out, “policymakers can often accrue the same benefits by merely pretending to pursue a policy goal as they can by actually pursuing it. ... However, in the modern age of 24-hour news, overtly biased journalism, politicians with sizable media budgets, and deranged social media bombardments, it is perhaps easier than ever for those in positions of power to manipulate constituents into mistakenly thinking their interests are being pursued.” Either way, political advertising coming from individual legislators or their surrogates is intended to influence constituent preferences.
- 29 This is a major difference between biological systems and social systems—in social systems, the efficient causes all have as their basis the purposeful action of the participants in the system. There is not “closure to efficient causation” in the same sense of the biological requirement for closure that the elements that act as efficient causes be generated within the system.
- 30 A legislative system is, in effect, being described here as a self-organizing and self-maintaining Popperian system in that its adaptive apparatus consists of a process for developing conjectures based on existing knowledge, a process for implementing these conjectures so that they may be confronted by the environment, and a “refutation” or

- “error elimination” process through which failures and successes of this confrontation are learned from and the systemic knowledge updated. See Popper (1963).
- 31 In the case of legislatures, this is obvious; the legislative edicts are imposed on the population as a whole and are backed up by legalized force.
- 32 Devins et al. (2015, p. 624) give a very compatible description of the legal system: “Laws are set in motion and catapulted into an ever-evolving dance between the legal system and the entities it regulates. In turn, this dance creates ever-new ‘opportunities’ in an ever-changing but unintended adjacent possible [i.e., unrealized but realizable system states] into which the legal system evolves and creates yet further adjacent possible opportunities. Laws are ‘used’ for purposes not intended or envisioned by those creating the laws. Often without intent or foresight, this evolution creates its own future possibilities and then expands into them. Rather like jazz or improvisational comedy, the system enables that which it becomes.”
- 33 In the extreme, as Hobbes (1668, p. 68) put it, “the power of the mighty hath no foundation but in the opinion and belief of the people”.
- 34 The subject of constitutional constraints on legislation is a huge one, far beyond the range of this paper. It is worth pointing out, however, that a constitution becomes less of a binding constraint over time than it may appear. According to Devins et al. (2015, p. 629): “We assert that the history of the United States Constitution, and its gradual failure, provides a compelling demonstration that design does not work. Power structures, institutions, and people will find ways to subvert the initial intent behind institutions in furtherance of their own interests.”
- 35 As Bastiat (1848, p. 140) put it: “The unfortunate state, like Figaro, knows neither to whom to listen nor where to turn. The hundred thousand tongues of press and rostrum all cry out to it at once: ‘Organize labor and the workers.’ ‘Root out selfishness.’ ‘Repress the insolence and tyranny of capital.’ ...”
- 36 See Wohlgemuth (1999).
- 37 Professional lobbyists can be much less attentive to voter preferences than can legislators, and this may well be a significant factor in accounting for the bias in legislation toward influential interest groups, a hallmark of “crony capitalism”.
- 38 There is more than a sliver of truth in the quip (usually ascribed to H. L. Mencken) that a politician is an animal which can sit on a fence and yet keep both ears to the ground.
- 39 Constituent preferences for such (abstract) goals as “economic equality”, “economic justice”, “a level playing field”, and “keeping undesirables out of the country” are loudly and unambiguously expressed, and do not constitute much of a problem for legislators to know them. And constituents, lacking (like most everyone else, including legislators) any coherent theory of society, think that they know the seemingly obvious concrete goals to pursue in order to realize these overarching goals: tax the rich, increase welfare, set minimum wages, subsidize local industry, impose tariffs, build a wall. And there is no big problem for legislators to know that constituents want these sub-goals pursued; indeed, they often agree that these are valid sub-goals for achieving the more abstract goals. What the constituents (chronically) do not know is that the obvious-seeming sub-goals are rarely, if ever, effective steps toward realizing the overarching goals. And not only do the sub-goals not work well, they in addition tend to have unintended consequences that can make things worse for some of those demanding constituents. According to Martin (2010, p. 236): “Politicians of all sorts *are* subject to popular control. But that control itself is exercised by those who have *no greater knowledge* of the conditions of the extended order than do the politicians.”
- 40 Martin (2010, p. 240) correctly points out that “the extended order, by default, does not offer tight feedback [to policy-makers]”, given that what he means by “tight feedback” is real effects such as scarcities. He does insist, however, on the importance of ideology in politics (p. 237): “The mental models that people have about society determine what sorts of arguments are valid or invalid when discussing policy options.”
- 41 At any time there may be, and often is, more than one dominant ideology (or at least family of ideologies); currently there are two major ones, “the right” and “the left”. These have different ideas concerning which areas legislation should address and the extent to which legislation should intrude into private life, but both are in general agreement that legislation of some sort is an appropriate way to address perceived social problems.
- 42 As Higgs (1991, p. 12) points out, “The world of 1901 differed in many pertinent ways from the world of 1989. Among other differences, people at the two dates had quite different ideas about what they wanted government to

- do. In the United States in 1901 many people still thought in terms of a variant of classical liberal ideology. ... In 1989, in contrast, most Americans had relatively inflated ideas about the range of social and economic 'problems' they wanted the government to 'solve'."
- 43 There is no suggestion here of a deterministic relation between ideology and legislation. As Letwin (1965, p. 54) notes, a legislature "is not a factory that mechanically converts opinion into statutes". The effect of any particular external ideology (which legislators themselves may share) is but one input (although a significant one) alongside the personal preferences of legislators and lobbyists into the systemic processes which produce legislation.
- 44 Higgs (1987, pp. 71-72) describes post-crisis ideological change as follows: "Suppose, for example, that in a great social crisis a command-and-control system displaces the free market. Experience under the new regime will generate learning of several kinds. To some extent government planners and bureaucrats will improve their means of manipulating the economy ... These improvements make the controls less obnoxious to aggrieved parties ... Citizens also learn that some of their prior beliefs about the impossibilities or dangers of governmental control now appear groundless ... Many of the conservatives' stock warnings about the prospective horrors of one thing leading to another are perceived by the masses as well as the elites as overdrawn ... Conceivably, then, ideological learning makes a discrete leap as a result of social crisis and the attendant expansion toward Big Government."
- 45 There is a large literature on what is called "pork-barrel politics" and "special-interest politics" which examines the stratagems by which legislators and lobbyists can maneuver and lobby to have inserted into legislative packages legislation benefiting targeted parties. See, for example, Buchanan & Tullock (1962), Ferejohn (1974), Stockman (1975), Shepsle & Weingast (1981), and Evans (1994). Such legislation, once in effect, creates a constituency for its continuance which has a strong incentive to resist any efforts at repeal. Tullock (1975) has labelled this phenomenon "the transitional gains trap". Selectorate theory addresses similar issues from a wider perspective in terms of the maintenance of winning coalitions, where, especially in democracies where the winning coalition is a relatively large portion of the electorate, the maintenance of a winning coalition requires a significant provision of so-called public goods in addition to private goods distributed to elites and insiders. See Shirk (1993) and Bueno de Mesquita et al. (2003).
- 46 This is not to say that survival and growth are assured. It is possible, in crisis situations, that the dominant ideological belief in the legitimacy of the system can change rapidly, such that the system cannot adapt (or cannot adapt quickly enough) to its new environment. See Linz (1978) for an extended discussion of the breakdown of democratic systems.
- 47 In their words, (p. 131): "knowledge generated in the political context may enable individuals to survive in the competitive environment of politics, but it does not lead them to exploit the opportunities for gains from economically beneficial trades and eradicate economic inefficiencies ... The persistence of economically inefficient policy is not an illusion because it is possible for politically efficient policies to be economically inefficient. Whereas within a market system technologically possible projects are subjected to the economic test of profit and loss, the economic test of profit and loss is not employed in assessing political choices."
- 48 I am grateful to Bill Butos, Adam Martin, Brian Gladish, Scott Scheall, Mark Thornton, Richard Sprague, and Robert Marks for helpful comments, to a very thoughtful reviewer who made several excellent suggestions for improvement, and to Donna McQuade for editing assistance.

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Modeling the Spread of COVID-19 Using a Novel Threat Surface

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Abstract: Classical models of epidemic spreading based on making contact within a susceptible population assume a constant infection rate and uniform mixing. As such, they cannot account for surges and waves which have been observed in practice. This paper describes the spreading as a byproduct of interacting with a threat surface $S(x, y)$ containing susceptible populations at location (x, y) in a 2D grid. The discretized grid acts as a transmission vector for COVID-19 and may explain why COVID-19 spreading exhibits surges rather than obey a smooth logistics curve. Furthermore, the strong correlation between infection cases and population indicates that population and distribution of population over a 2D area may explain most of why infection cases surge and waves form. It is impossible to obtain an accurate prediction of the extent of spreading without taking public sentiment, spatial separation, and size of populations into account. The best predictor of the ultimate spread of COVID-19 considers population as well as infection rate.

We find that a terrain-based model is capable of modeling surges and waves of epidemics in most countries and regions where public sentiment is mild. In other cases where public sentiment is opposed to social distancing, wearing masks, and generally against public health policy, a two or three phase approach is necessary, whereby each phase is fit with different parameters, suggesting that public sentiment has a bigger influence on contagion spreading than population. We validate our results through simulation of outbreaks in a diverse set of countries and regions, e.g., a country in the US, Bahrain, Israel, United Kingdom, Germany, South Korea, and Italy.

Keywords: COVID-19, simulation and modeling of epidemics, threat surface, public sentiment, non-uniform mixing, infectious disease, size of epidemic.

1.0 MOTIVATION

Classical models grounded in SIR models (Susceptible—Infected—Recovered/Removed) like the logistics growth model and the Kermack-McKendrick model, assume constant infection rate, uniform mixing, and constant removal rate. None of these factors exist in the real world, whereby populations exhibit radically uneven mixing, variable infection and recovery rates, and variable population sizes. For example, COVID-19 exhibits a spreading pattern where-

by future daily infections are based on previous daily infections, changing reproduction number R_0 and changing recovery rate.

Spreading depends on public sentiment and public health policy as much as the virus itself. Public health policy in the form of social distancing, wearing a mask, and hand-washing hygiene is often at odds with public sentiment which may be politically or socially opposed (or accepting) of official public health policy. In other words, human behavior is responsible for spreading in addition to population size. Spatial isolation is the most effective way to limit spreading, regardless of population size [3, 4, 5, 6, 7, 8].

This paper proposes a novel alternative approach to modeling epidemic spreading. Instead of a constant infection rate and one monolithic susceptible population we introduce a threat surface $S(x, y)$ defined over a 2D area with number of susceptible individuals and variable infection rate at each coordinate (x, y) on the surface. In other words, we propose to break a geographical region into discrete parts—cells—and solve for number of infections in each cell and then sum them for the entire region. Spreading occurs locally, i.e., through contact with 8 adjacent cells: NW, N, NE, W, E, SW, S, SE. The magnitude of infection rate at each coordinate (x, y) depends on the number of infected individuals at a previous time, called the *delay*. The number of infected cases at each coordinate depends on the number during the previous time step (days), spreading rate, and variable infection rate. Infection rate is computed using a feedback mechanisms whereby previous infections at time $(t-\text{delay})$ influence infection rate at time t .

Essentially, this model breaks the Kermack-McKendrick SIR model into discretized local models over a surface $S(x, y)$. At each cell (x, y) , a modified SIR model is applied using the local susceptible population, local infected cases, and a variable infection rate. The number of infected cases is then the sum over all local cells, which is plotted as a curve versus time. As it turns out, this approach exposes waves in the infection curve caused by non-uniformity of susceptible population and variations in the infection rate.

Classical models assume a uniformly distributed population with the same levels of immunity or susceptibility to infection, and a relatively immobile population. On the contrary, the modern world violates all of these conditions: populations are clustered, people of different age and economic conditions have different susceptibilities to disease, public opinion as to the dangers of a contagion shift over time, and modern people are extremely mobile thus making frequent contacts with one another. This makes modeling COVID-19 extremely complicated and multi-faceted.

Of particular interest in this paper is the incidence of subsequent waves of COVID-19 infection that have been observed nearly in every region of the world. After an initial rise that is fairly predictable using standard models, there follows a brief period of decline, and then one or more subsequent surges, often exceeding the initial peak infection. Waves are observed in COVID-19 and were observed in the Spanish Flu pandemic of 1918. What causes these surges and how can we predict them? Our hypothesis is that this observed effect is a combination of public sentiment and local population clusters.

There are many explanations for these surges or waves, which defy mathematical modeling by traditional models [1]. For example, the *SIS*—*susceptible-infected-susceptible* model is completely inadequate to explain these waves. The traditional Kermack-McKendrick (KM) model, and more recently, network-based models, cannot represent these recurrent outbreaks because they assume that infections rise and fall one time, only. Models based on smoothly rising curves cannot approximate reality that is far messier, involving humans and governments. In reality, epidemics such as COVID-19 go through one or more wave-like behaviors whereby the daily infections rise and fall many times, largely due to a variety of factors such as public sentiment and population densities.

2.0 MODEL FORMULATION

The crux of our model is a variable infection rate that depends on how many people are infected at location (x, y) . Thus, infection rate increases/decreases depending on the variation in population terrain. We assume all information needed to predict the state of a contagion is contained in a *threat surface* $S(x, y)$ defined as a function or data at each coordinate (x, y) in two dimensions. If the geometry of this surface is similar to

the real world and the dynamics describes what happens when individuals come into contact with the surface, then spreading will occur as observed regardless of non-uniform mixing. We use model similitude to explain the spread of COVID-19.³

We develop an entirely new model based on a parameterized differential-difference equation. Our model has four parameters to be determined by fitting a curve produced by simulation with observed measurements (counts or cases):

N : Mean number of susceptible people in a cell.

α : Spreading rate from coordinate-to-adjacent-coordinate in $S(x, y)$

β_0 : Mean infection rate

t_0 : Mean time delay.

Let $M(t)$ be the cumulative number of new cases on day t . Then the Kermack-McKendrick value for each coordinate $S(x, y)$ is given by the solution to:

$$\frac{dM(t)}{dt} = (\beta_0 - \beta(t - t_0))[M(t)(N - M(t))] \quad (1)$$

Or in discrete time:

$$\Delta M(t) = (\beta_0 - \beta(t - t_0))[M(t)(N - M(t))] \quad (2)$$

Where,

$\frac{dM(t)}{dt}$ is a model of the number of daily infections and $M(t)$ is the discrete analog representing daily change in total number infected cases. $\Delta M(t)/M(t)$ is a suitable measure of public sentiment either pro or con public health recommendations like social distancing. Thus, $\beta(t - t_0)$ is the variable infection rate that depends on the number of daily infections in the past—with lag time of t_0 . For mild waves and surges, we use:

$$\beta(t - t_0) = \beta_0 - \frac{\Delta M(t - t_0)}{M(t - t_0)} > 0 \quad (3)$$

Infection rate varies with the time rate of daily cases reported t_0 days in the past. That is, future infection rate lags by t_0 days, approximating human behavior—the rate declines when the number of infections in the past rise; and increases when the number of infections in the past declines. We argue people get overconfident when the rate of infection declines, and fearful when the rate climbs. This contributes to minor waves of infections in the spreading curve, but it is only one influence. A more suitable model that addresses extreme surges and waves is presented in section 3.2.

2.1 The Threat Surface/Terrain Model

A terrain or threat surface is a 3D “map” of a geographical region where COVID-19 spreading is due to the presence of a susceptible population that “fuels” spreading. We know that spreading increases in intensity and speed where the population is large, and less spreading occurs where the population is sparse. There are multiple reasons for this, such as crowding and more frequent contact.

We define $S(x, y)$ as a 3D Excel spreadsheet with n rows and m columns in two dimensions, and population in the third dimension. Each cell is created by overlaying the spreadsheet on top of a map of the region to be studied and assigned the population number at that cell/geographical location. For example, in Figure 1, the population ranges from 1 to 40,000 for a total of over 513,000 people within Monterey county, California. Most of the county is empty, while small regions are highly populated. Salinas, for example, has over 150,000 people, while Monterey has approximately 45,000.

Spreading rate α determines the speed of the advancing COVID-19 virus and must be estimated by trial-and-error to scale to the dimensions of $S(x, y)$. An infected cell at (x, y) transmits the infection to adjacent neighbors with probability α . Higher values mean more rapid transmission. This is separate from the person-to-person rate, $\beta(t-t_0)$ that determines number of susceptible people that contract the disease upon spreading.

Simulating the spread of COVID-19 is simply a process of planting a seed (first infection) at some location (x, y) , and allowing it to spread from cell to adjacent cell with probability α . The number of individuals infected at each time step, t , is governed by solving equation (2) and (3) at each t . This produces a curve for $M(t)$ and daily infections, $\Delta M(t)$ versus t as shown in Figure 2.

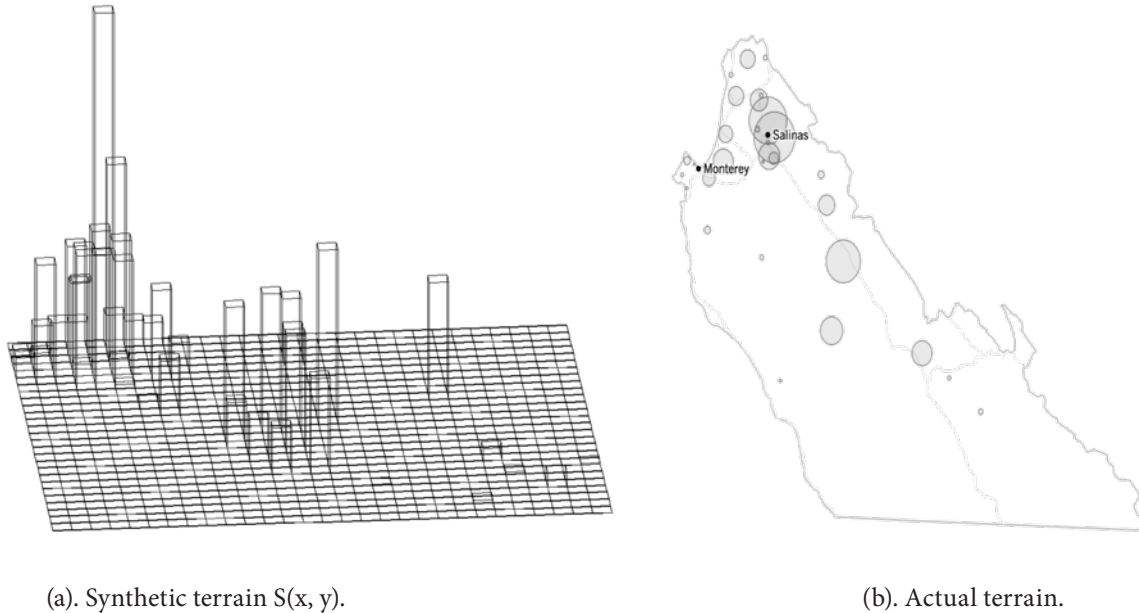


Figure 1. (a). Terrain model of Monterey County, California with $n = 29$ rows and $m = 27$ columns representing the approximate population at each cell. **(b).** Actual terrain of Monterey County with COVID-19 outbreaks is indicated by circular regions.

2.2 PandemiX

PandemiX is a computer program developed by the authors that takes parameters for (2) and terrain model $S(x, y)$ as input and produces infection curves for $M(t)$ and daily infections, $\Delta M(t)$ versus t , as outputs, see Figure 2. The animated spreading propagates from input coordinates (x_0, y_0) , and eventually reaches the entire terrain.

The algorithm is very simple, and depends on $S(x, y)$ and four parameters N , α , β_0 , and t_0 .

Algorithm 1. PandemiX Simulation

1. Plant an infection at location (x_0, y_0) in $S(x, y)$.
2. Repeat until no further infections ($t \gg 0$):
 - a. For every (x, y) in S :
 - b. For each neighbor of (x, y) let $r = \text{random number in } (0, 1)$.
 - i. If $(r \leq \alpha)$ calculate:
 1. $\beta(t-t_0)$, and apply to ...
 2. ... $\Delta M(t)$ and $M(t)$ at (x, y) .
 - c. Total over all (x, y) to get number of cases at time t .

- d. Increment t .
3. End

The 8 nearest neighbors are the adjacent cells NW, N, NE, W, E, SW, S, SE for each cell shown in Figure 3. At each time step and location (x, y) , each of the 8 adjacent cells are infected with probability α . This is repeated for $t = 1, 2, 3, \dots$ until no further infections occur.

Each cell has a susceptible population as shown graphically in Figure 1. Each time an infected cell is visited, it increases the adjacent infected cells by an amount given by equation (2) and (3). Infected cells exhibit diminishing returns, because $[N-M(t)]$ steadily decreases until reaching zero and further infections stop. Placement of the initial infection is very important, however, in most cases the exact location of the initial infection is not known. Accordingly, we default to a relatively unpopulated area as initial infection coordinates (x_0, y_0) .

This model conspicuously does not account for mobility or the impact of human movement. Mobility is considered in a network-based model by the authors published earlier [1]. Essentially, flows into and out of connected regions can be modeled as epidemics on a network surface. It is beyond the scope of this paper.

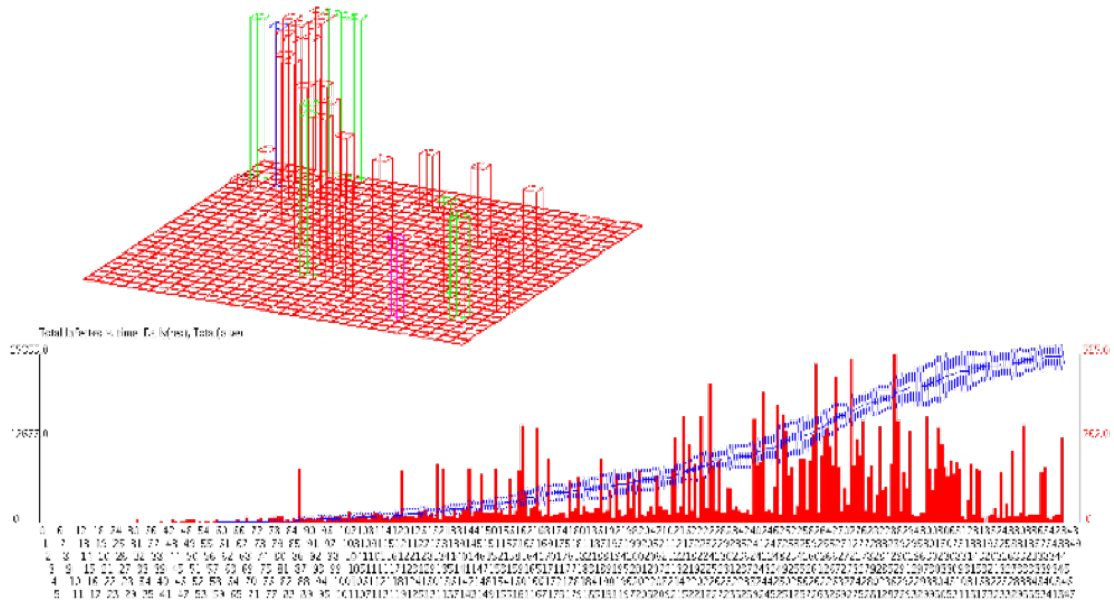


Figure 2. PandemiX displays the averages of numerous trials, and the animated terrain as the infection spreads. Red bars are the average daily infections; the central blue line is the average total infections, and the other blue lines are upper and lower bounds obtained by also computing the sampling error assuming a two-tailed confidence level of 97.5%.

NW	N	NE
W	x, y	E
SW	S	SE

Figure 3. Nearest neighbors with number of susceptible individuals $[N-M(t)]$, are infected with probability α each time the cell is visited. The number of cases rise over time according to equation (2).

3.0 APPLYING MODEL SIMILITUDE

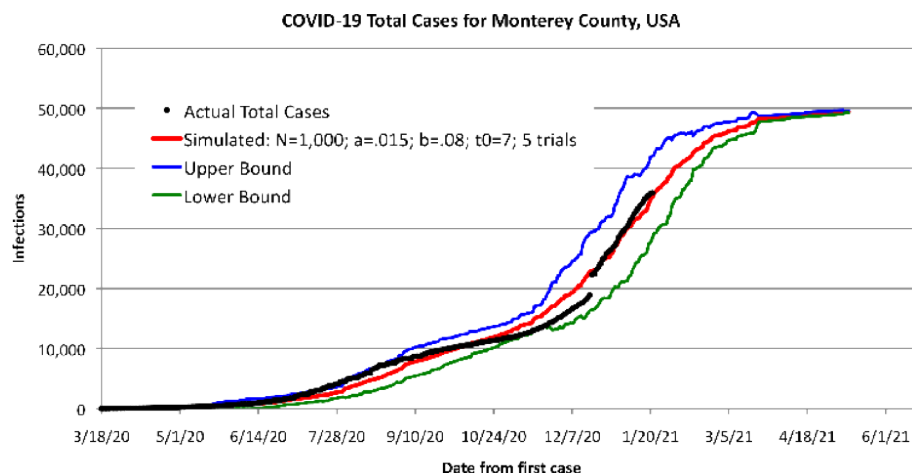
Figure 4 shows the results of applying the model to COVID-19 data for Monterey county, USA and Bahrain. Monterey county has over 513,000 residents and over 30,000 infected cases as of January 10, 2021. Bahrain has over 1.7 million residents with over 90,000 infected cases. Numerous simulations were required to find the best fit of $\Delta M(t)$ and $M(t)$ to empirical data, with the final result for Monterey county:

N: 1,000
 α : 0.015 (Speed)
 β_0 : 0.08 (virality)
 t_0 : 7 (delay)

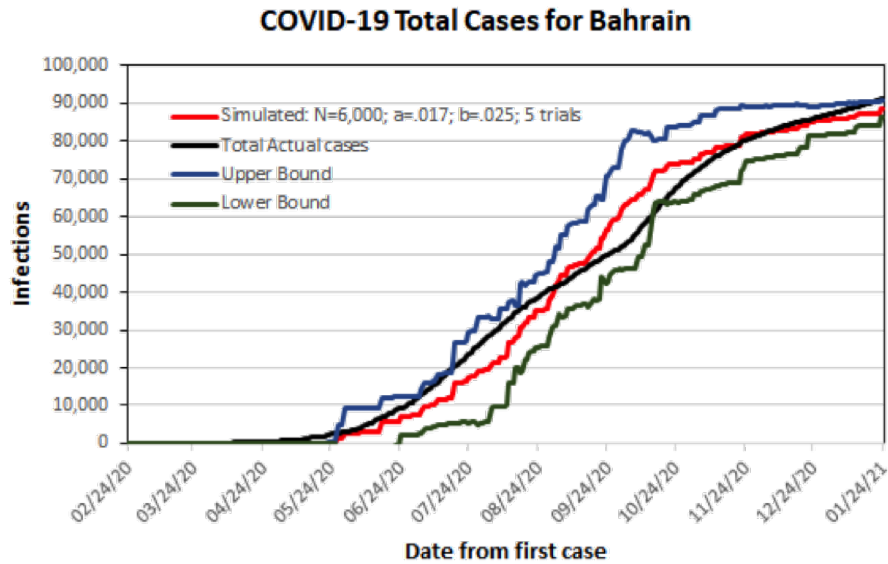
Five trials were averaged to obtain the red curve in Figure 4, along with an error of plus-or-minus blue and green lines. The red line is a very good fit to the actual recorded cases (black dotted line).

The results show an initial slow rise in COVID-19 followed by a rapid rise, then a second slowing followed by a second surge in cases. The model predicts a third decline in cases after the second surge, with the epidemic predicted to peak at roughly 50,000 cases by June 2021.

Subsequent simulations of other regions of the world give similar results. Table 1 summarizes them and shows that parameters differ for different parts of the world and different population sizes. Interestingly, nearly all simulations showed the best results for a time delay of 5-7 days. The largest difference is in N, which varies widely, but is somewhat correlated with total population of the country or region. In all cases, the infection curve is more accurate for the terrain model than KM or KM-derived models based on logistic growth.



(a). Monterey county, USA with over 500,00 population.



(b). Bahrain with over 1.7 million population.

Figure 4. Actual and simulated data for number of infections versus time for two different regions of the world. The actual data falls within the error bounds of the simulated data. Monterey data predicts future infections, as the number of infections decline.

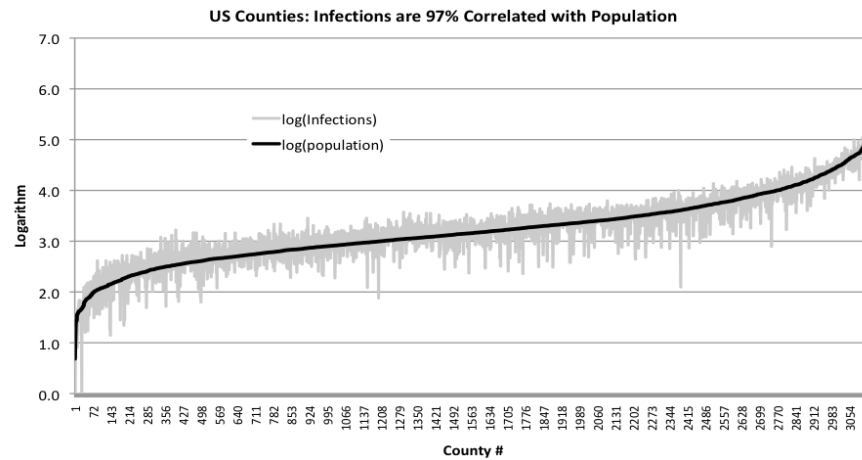


Figure 5. Infections and population are strongly correlated (0.97) as shown by the number of infection cases in the counties of the US as of 1/3/21.

Table I. Simulation parameters for various terrains throughout the world.

Region	#trials	N	α	β_0	t_0
Monterey	5	1,000	.015	.08	7
Bahrain	5	6,000	.017	.025	7
UK	5	1,000,000	.010	.017	20
S. Korea	5	25,000	.012	.018	5
Israel	5	150,000	.009	.060	5

3.1 An Oscillation Model

Villalobos-Arias [2] propose a wave model of an epidemic containing surges by overlaying multiple logistics curves. The model fits the COVID-19 epidemic very well but does not reveal underlying causes or enable forecasting of future infections. Indeed, epidemics within epidemics fit logistic curves as long as the end of one surge and the beginning of another can be detected in the data. This amounts to identifying oscillations in the time series while maintaining a constant infection rate. It assumes a constant infection rate, which may not hold, especially when human nature is involved.

We assume a varying infection rate that depends on public sentiment and public health policy. In particular, sentiment increases risk taking when the rate of infection declines and the reverse when the rate of infection increases. This, and variations in the terrain, creates oscillations in the daily time series. It is our considered opinion that population generally plays a bigger role in surges than public sentiment. When all 3141 counties in the USA were analyzed versus population, the observed correlation with population was very strong, see Figure 5. Both size of infection and population obeyed a power law and the two are correlated.

Surges and waves are a direct result of public sentiment (minor effect) and spatial separation of populations, and size of population. It is impossible to obtain an accurate prediction of the extent of spreading without taking public sentiment and spatial separation of populations into account. And, when public sentiment becomes extreme, as it has in some countries, the simple terrain model breaks down and a piecemeal model is required.

3.2 Extreme Waves

COVID-19 spread slowly in Germany until the summer of 2020, when anti-mask and anti-social-distancing protests broke out across the country. On August 29, 38,000 protesters gathered in Berlin to demonstrate against wearing masks, social distancing, and closing businesses. The massive protest continued through the Christmas holidays. As a result, a second wave, many times larger than the first under lockdown conditions, surged. Figure 6 shows the dramatic results.

Our model does not allow sufficient feedback to adjust infection rate β to match the rapid rise of the pandemic in Germany. Instead, a “two epidemics” model is required: one model of each mega-surge in infections. The parameters for both waves are given in Table 2 along with results for other regions with more than one major wave. In the case of South Korea, note the difference between the one-wave simulation and a three-wave simulation: the infection rate of the three-wave simulation straddles the one-wave infection rate. This suggests shifts in public sentiment directly affects the number of infection cases.

4.0 DISCUSSION

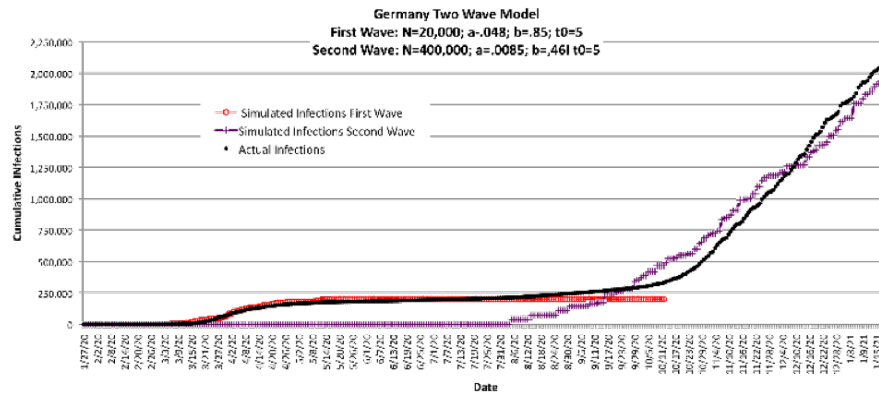
Using a population terrain as a means of epidemic spreading is a new idea in mathematical modeling of epidemics. It appears to provide deeper understanding of the spreading dynamics. However, it is not the complete answer. It has several weaknesses:

- The method lacks predictive power. The number of infections going forward in time are based on the time delay and therefore are only accurate for t_0 days ahead.
- Simulations are noisy. We had to average over 5 trials to obtain reasonable results. Even so, the confidence interval was quite large. Averaging in more trials tends to smooth out the curves too much.
- Our results depend on high fidelity terrains which are difficult to obtain. We used very course-grained population counts due to the time and effort needed to build high resolution models.

- Terrains are even more difficult to obtain for large countries like the US, India, and China. Our results have been verified for relatively small regions and may not hold for large regions.



(a). Two waves are apparent in Germany.



(b). The dual wave model treats each wave as independent “mini epidemics.”

Figure 6. (a). Daily infections peaked early in the COVID-19 pandemic, then took off again after August 29. (b). A two-wave model of the spread due to civil disobedience following the August 29 protests.

Table II. Simulation parameters for extreme waves.

Region	#trials	N	α	β_0	t_0
Germany Wave 1	5	20,000	.048	.85	5
German Wave 2	5	400,000	.0085	.461	5
Italy Wave 1	5	60,000	.015	2.0	5
Italy Wave 2	5	400,000	.015	.0003	5
S. Korea Wave 1	5	5,000	.085	.0938	5
S. Korea Wave 2	5	15,000	.015	.026	5
S. Korea Wave 3	5	25,000	.015	.00025	5

NOTES

- 1 Ted G. Lewis is an author, speaker, and consultant with expertise in applied complexity theory, homeland security, infrastructure systems, and early-stage startup strategies. He has served in both government, industry, and academe over a long career, including, Executive Director and Professor of Computer Science, Center for Homeland Defense and Security, Naval Postgraduate School; Senior Vice President of Eastman Kodak, President and CEO of DaimlerChrysler Research and Technology, North America, Inc., and Professor of Computer Science at Oregon State University, Corvallis. In addition, he has served as the Editor-in-Chief of a number of periodicals: IEEE Computer Magazine, IEEE Software Magazine as a member of the IEEE Computer Society Board of Governors and is currently Advisory Board Member of ACM Ubiquity and *Cosmos + Taxis*. He has published more than 35 books, most recently *The Signal: A History of Signal Processing*, *Book of Extremes: The Complexity of Everyday Things*, *Bak's Sand Pile: Strategies for a Catastrophic World*, *Network Science: Theory and Practice*, and *Critical Infrastructure Protection in Homeland Security: Defending a Networked Nation*. Lewis has authored or co-authored numerous scholarly articles in cross-disciplinary journals such as *Cognitive Systems Research*, *Homeland Security Affairs Journal*, *Journal of Risk Finance*, *Journal of Information Warfare*, *IEEE Parallel & Distributed Technology*, *Communications of the ACM*, and *American Scientist*.
- 2 Waleed I. Al Mannai served for 37 years in the Bahrain Ministry of Defence, retiring as a colonel with extensive experience in military aviation and operations, and teaching. He received his PhD in Modeling, Virtual Environments, and Simulation from the Naval Postgraduate School (NPS); his MSc in Aeronautical Engineering, also from the NPS and his BSc in Aerospace Engineering from Northrop University. His areas of research interest include Modeling and Simulation, Critical Infrastructure Protection (CIP), network risk and data analysis, and managerial decision analysis.
- 3 Similitude is a concept applicable to the testing of engineering models. A model is said to have similitude with the real world if the two share geometric similarity, kinematic similarity and dynamic similarity. [https://en.wikipedia.org/wiki/Similitude_\(model\)](https://en.wikipedia.org/wiki/Similitude_(model))

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An informal introduction to Michael Oakeshott's vision of a free, civilized and affirmative life.¹

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Michael Oakeshott's life spanned the twentieth century (from 1901 to 1990) and confronted him with all the main problems which still face us today. The problems were partly general philosophical ones concerning the meaning of life and partly political ones concerning the nature of the liberal democracy in which we live. But before I say more about Oakeshott's response to these problems, I would like to mention that I encountered him personally when I was an undergraduate at the LSE, where he was a professor.

What I especially remember is the talk Oakeshott gave to first year students like myself in which he offered a short account of the purpose of a university education that is still the best I have heard. He said that we should think of university as an interlude in life. During that interlude, he explained, books and libraries are quite important, but they are not the real point of being at a university. The real point is to make a start on the main task of life, which is to get rid of the readymade, off the peg identity with which we all begin life and to begin constructing a unique self of our own instead. Part of what this meant is that you should not waste money looking for a guru who will help you find yourself, or discover yourself, because you have not got one to find or discover: you only have one to invent. I might add that Oakeshott fully realized that this is of course often a messy and quite painful business. He hoped, though, that the university interlude would make it a more imaginative and interesting process than it would otherwise be.

One vital way in which university would do this, Oakeshott maintained, was by making us aware that we not only have the ready-made or off-the-peg identity with which we grow up and do not need to go to university to find out about. We have, in addition, what may be called an 'historic' identity of which we are not conscious until education has made us aware of it. This historic identity consists of key assumptions we make about our daily life which are inherited from ancient Greece, the Roman Empire, and Christianity. From ancient Greece we inherit our instinctive tendency to place reason above an appeal to authority when we argue or want something explained. From Rome we inherit the conception of law as the basis of our conception of citizenship in a liberal-democratic state. From Christianity we inherit our belief in the equality of all human beings. Seen in this light, the purpose of Oakeshott's famous lecture course on the history of political thought was not just to interest his students in notable Western thinkers from Plato onwards. Its deeper purpose was to make us aware of our historic identity.

Much later in life, and still on a personal note: I remember a postgraduate party Oakeshott was attending where I

noticed a very alienated goth dressed in black from head to toe and complete with chains and a Mohawk hairstyle. Although the goth kept his head down all evening and didn't speak to anyone, towards the end he suddenly got up and button-holed Oakeshott. I happened to be standing nearby and heard the goth say just one thing, which was to ask Oakeshott why he never discussed the most important problem in life. Oakeshott looked intrigued by this and asked him what that problem was. The goth replied, despair. Oakeshott smiled for a moment and then replied: 'I think you will find you gradually get used to that.'

I am glad to add immediately that Oakeshott has a great deal more to say of a more cheerful kind about the despair theme than this since a primary concern of his philosophy was to reject the mood of pessimism which dominated much twentieth century literature, due partly to the decline of religion but also due to the rise of Nazism, Fascism and Soviet Communism. You may know some of the main works reflecting this pessimism—works like Beckett's play '*Waiting for Godot*', which is a vision of life as pointless waiting, and T. S. Eliot's poem '*The Wasteland*', of which the title speaks for itself. The first novel of Sartre, the best-known French existentialist philosopher, was called *Nausea*, which crystallized his own experience of life, and another French thinker, Albert Camus, began one of his books (*The Myth of Sisyphus*) by saying that the only serious problem worth talking about today is the problem of suicide. One of the best-known twentieth century German philosophers, Martin Heidegger, described our age as a condition of total spiritual alienation since we have gradually lost contact with the real world because we have tried to dominate it, instead of treating it as our home.

I do not think the twentieth century mood of pessimism has disappeared in our day: all that has happened is that it has been plastered over by the social media, electronic games and anti-depressant pills, along with other devices which take our minds off ourselves. From this point of view, the unusual thing about Oakeshott's philosophy is that it embodies a fundamentally affirmative view of life. What I want to do now is consider how Oakeshott arrived at this affirmative or positive view. I suggest that for Oakeshott, it involves three things. The first is the need for a much more modest way of thinking about ourselves and our relation to the world than has characterized Western culture during the past two and a half thousand years. A central characteristic of Western culture for all that time has been what is called anthropocentrism, which is the belief that human beings occupy a special position at the centre of the universe. Anthropocentrism is a feature of Christianity in particular, which holds that God has made the universe for man's enjoyment and has a special interest in the salvation of every individual.

Someone once said that if you go out into the garden you would question whether God was really so concerned about human beings because you would see all around you that his main interest seemed to be in insects. That view would be reinforced by the David Attenborough nature programmes. The main problem with anthropocentrism, however, is that it has created unrealistic expectations about happiness which have been disastrous partly for our attitude towards the environment and partly for political life. The biggest political disaster was twentieth century totalitarianism, which was produced by utopian dreams of an ideal society from which all politics would be eliminated and in which complete harmony would exist. Although Nazism, Fascism and Soviet Communism had different visions of utopia, this is what the utopias had in common—that is, the end of politics and the triumph of perfect harmony. The trouble is that attempts to implement utopian visions of heaven on earth always lead to repression of all opposition, which is seen as destroying the perfect harmony of utopia.

The first message of Oakeshott's philosophy, then, is that we need in effect to pull in our horns and adopt a more modest view of ourselves and our relation to the world. This involves above all a sense of being continuous with nature, rather than being masters of the universe through science and technology. In politics, it means coming to terms with human differences and defects, and accepting the inescapable existence of politics and power, instead of trying to eliminate them completely in a perfect society.

Oakeshott's second condition for an affirmative view of life reinforced his conception of philosophical modesty in another way. In this case it concerns the deep-seated Western belief in the power of reason to provide absolute knowledge of reality. In the ancient world, the Greeks believed metaphysics could do this. In the modern world, many have believed that science provides an absolute knowledge of reality. A central

theme of Oakeshott's philosophy is that reason can only ever provide a restricted or conditional knowledge of reality, never an absolute one. This is because we always think from a particular perspective or context and can never step outside it into an absolute or pure reality, so to speak. For Oakeshott, indeed, we cannot even conceive of what an 'absolute' reality we could hope to step into might look like. I should emphasize that Oakeshott did not believe that the conditional nature of knowledge, which is now the starting point for Western thought, leads to relativism or subjectivism: it only meant that truth takes different forms in different contexts, according to whether we are looking at the world scientifically, morally, aesthetically, or historically, and so on. In each of these cases, there are always objective criteria implicit in what we think or say that save us from relativism.

The overall result of Oakeshott's rejection of absolute knowledge is a vision of the highest achievement of civilized intellectual life as an open-ended conversation, rather than the pursuit of absolute truth. In this conversation, all the different perspectives have an equal right to be heard, and no perspective is entitled to dominate the others.

The second dimension of Oakeshott's philosophical modesty was especially important for his political thought, which rejected ideologies of every kind. He rejected them because they assumed that abstract reason can provide a plan for the good society which we can use for reconstructing existing political reality. Abstract reason, Oakeshott maintains, can never provide a plan because it can only ever come up with a highly diluted extract from the existing social and political order. Oakeshott called the ideological approach to politics 'rationalism' and gave some simple examples of why rationalism gets the role of reason in life wrong.

One example concerned the Victorian designers of bloomers, which was what women wore when they wanted to use the new invention of the bicycle. So that women could cycle in public, the designers came up with idea of bloomers. What they claimed they were doing in designing bloomers was using pure reason alone to construct a logical match between the bicycle and the form of the female body. Oakeshott said this claim was absurd because what really gave rise to the design of bloomers was Victorian ideas about female modesty when women were cycling in public places like parks where respectable Victorian families were relaxing.

In politics, Oakeshott gave another simple example of what rationalism gets wrong about the use of reason. This was the example of the American Founding Fathers, who thought they had drafted an ideal political constitution by using pure reason alone. What actually happened was that they had simply adopted many features of the English constitution while failing to realize this.

The conclusion Oakeshott draws from his critique of ideological or rationalist politics is not the reactionary view that all political change is bad, but just that political action must not begin from an abstract plan, but from a detailed knowledge of the existing order. Just rejecting it out of hand because it doesn't conform to a utopian plan of some kind is likely to be a formula for jumping out of the frying pan into the fire.

Oakeshott's third condition for an affirmative view of life is that it requires a sense of personal responsibility. He believed, however, that the Western tradition has tended to undermine this in two ways. The first way in which the tradition has undermined personal responsibility is by tending to think of human beings as made up of two parts—one material part (the body) and the other a mental or rational or spiritual part. Unless we get rid of this divided conception of the self, Oakeshott maintains, we cannot appreciate that freedom permeates us all the way through, and not just a mental bit of us. Only if we realize this can we accept full responsibility for our lives and for shaping them ourselves, as I said we have to do at the beginning.

The second way in which the Western tradition has undermined personal responsibility is characteristic of the modern period and is through widespread acceptance of a new theory of evil which appeared in the eighteenth century. According to the old theory, evil is intrinsic to the human condition and therefore cannot be eliminated. This is the idea behind ancient tragedy, for example, and also behind the medieval Christian doctrine of Original Sin. According to the new theory, which is particularly associated with Rousseau, evil is not intrinsic to the human condition but comes from the social order we live in. Human

beings, in other words, are naturally good, and the main task is to identify the aspect of society which makes them evil. Ever since this new concept of evil appeared, the main difference between radical ideologies concerns the aspect of society they believe is destroying human goodness. Marxism is one, radical feminism is another, and contemporary 'woke' culture is a third. All of these ideologies, then, are theories of victimhood. Oakeshott's view is not that we should put up with social injustice, but that we should avoid the abstract conception of social 'structures' because it destroys the concept of individual freedom.

Oakeshott's third condition for an affirmative view of life, then, is a sense of responsibility based on awareness of freedom. But he knew that this is a difficult achievement since human beings like to avoid responsibility, and in the modern world he believed they are constantly tempted to do so by endless opportunities created by the new theory of evil to think of ourselves as victims—the attraction of victimhood being that it lets you off the hook.

I now want to say a little more about Oakeshott's political philosophy, but before I do that, I should add that Oakeshott did not assume that an affirmative conception of life automatically brings happiness. What it brings is three things. One is clarity or lucidity about life, in place of delusions about ourselves, society and the world. The second is what may be described as openness to life, instead of closing it off by trying to achieve complete control of it. This openness is what permits conversation, which is impossible so long as anyone aspires to silence others. The third, as I mentioned, is responsibility. Oakeshott believed that a life that combines lucidity, openness and responsibility is preferable to one based on fantasies and superstitions, drugs, and a quest for endless diversions.

Turning to Oakeshott's political thought, this can be seen as a sustained attempt to clarify the nature of a free society such as the one we live in. There have been many attempts to do this since the Second World War, but in Oakeshott's view they have all been unsatisfactory. Some of the ones he rejects include:

- Friedrich Hayek's claim that a free society is mainly characterized by a free market economy. Hayek, as is well known, was the thinker who impressed Mrs. Thatcher.
- Karl Popper, another influential thinker, claimed that a free society is an Open Society but left the concept of 'Open' somewhat vague.
- An even more influential American philosopher, John Rawls, claimed that the essence of a free society is a commitment to rational principles of distributive justice.
- For Robert Nozick, another American philosopher, the essence of a free society is a minimal state which does not interfere with natural rights.
- On the continent, the Czech philosopher Vaclav Havel held that what characterizes the free state is that it fights against social isolation by promoting spiritual integration.

Oakeshott had two main reasons for rejecting these different views of liberal democracy. Since these take us to the core of his political philosophy they are worth pondering. The first is that all the views mentioned fail to realize that the entire tradition of modern British political thought since the seventeenth century is inescapably *ambiguous*, since every political word we use, including words like freedom and democracy, can quite properly be interpreted in two different ways. These two different ways arise, Oakeshott says, because there are two quite different and ultimately incompatible conceptions of politics itself. One interpretation of politics is based on what Oakeshott calls 'civil association', for which the rule of law is of intrinsic value. This is the conception of politics which Oakeshott regards as the essence of a liberal democratic state.

What characterizes civil association is that it is not held together by an ideology, or agreement about the good life, or by religion or ethnicity of any kind. What holds it together is that citizens agree to accept a political constitution which provides a framework of rules which do not restrict freedom because the rules do not command anyone to do anything in particular: all they do is modify the *way* in which we do anything. In our country, for example, the laws relating to road usage do not tell you where to go if you drive, or even that you must own a car or any other kind of transport. The rules only require you to keep to the

left and to observe speed limits if you do go on the road. In this sense, the rules do not limit your freedom of choice in any way because they are simply formal or procedural rules. This, Oakeshott says, is what characterizes the nature of laws in civil association: because they are purely formal or procedural ones, they do not affect the choices you make but only concern the way you put the choices into practice.

Another simple example is what happens when you get a cup of coffee. You think you are only doing one action, which is getting a cup of coffee. But in fact you are doing something else at the same time, which is observing the laws of England. You do this by paying for the coffee rather than getting it by holding a knife at the cashier's throat. As I say, you do not consciously think about this second action—unless you are a thief, of course—because it does not affect your choice to get a cup of coffee but only relates to how you get the coffee.

The second interpretation of politics is quite different from the civil one because it treats politics as having a specific aim or purpose, which is the creation of a particular kind of society. This is why Oakeshott calls it a 'purposive' conception of politics. The purpose may be a nice one of the kind we associate with the social democratic welfare state, or it may be a nasty one, of the kind we associate with Nazism. But in both cases, what is taken for granted is that the state is an essentially purposive organization of citizens which can make laws that compel you to do whatever is necessary for creating the particular conception of the good society the government is pursuing. In this purposive conception of politics you won't have a problem as long as you agree with the government's aims, but if you disagree with the government, your freedom to disagree won't be protected in a purposive state. Think of the position of Navalny in Russia.

Oakeshott's first point, then, is that there is no way of avoiding the two different ways in which politics can be interpreted—that is, the civil and the purposive. Each way gives rise to a different interpretation of every word in our political vocabulary. His second point is that the only way of deciding between these two different conceptions of politics is by making a choice. Which choice you make, Oakeshott says, depends on what your personal values are. If your main value is individual freedom—which simply means the ability to live a life that is self-chosen—then you will adopt the ideal of civil association and the formal conception of the rule of law that goes with it. But if you are committed to promoting an ideology or religion or a particular conception of the good life, you will adopt a version of what Oakeshott calls a purposive state.

Oakeshott's own commitment, needless to say, is to the ideal of civil association. I should add that this does not mean that the state does not have any purposes, such as welfare commitments and improving the environment. Every state inevitably has purposes of some kind. What it means is that these purposes must not dominate to such an extent that they transform a civil association into a purposive state. Similarly, civil association does not mean that you cannot promote a religion or ideology or conception of justice of some kind: what it means is that you cannot use government to implement those ideals.

At this point it is necessary to consider more closely the overall vision of life which underpinned Oakeshott's thought as a whole. This vision was briefly referred to above as one which culminated in conversation as the ideal achievement of civilized living, but it is illuminating to locate it within modern European thought at large. In this broad perspective, which Oakeshott scholars have only recently begun to explore in depth, Oakeshott's vision displays a marked kinship with that of Nietzsche, although the idiom in which Oakeshott presents it is altogether less extravagant. The fact that Oakeshott read Nietzsche very carefully is evident from his extensive footnote references to many of Nietzsche's works in his *Notebooks*. Oakeshott himself studied in Germany during 1923/4, and his familiarity with contemporary German philosophy is clear in his review, for example, of Werner Brock's *Introduction to Contemporary German Philosophy* in *The Cambridge Review* in 1936 (Oakeshott 1936, p. 195). There, Oakeshott remarked that 'the German tradition is distinguished by the presence of two writers—Nietzsche and Kierkegaard—who have no counterpart in English thought; profound philosophical thinkers, yet writers whose . . . natural voice is that of the prophet rather than that of the philosopher'. If we disregard Oakeshott's transformation of Kierkegaard from a Dane into a German, then what may be noted in passing is that Oakeshott himself was of course by

no means reluctant to speak at times in the voice of the prophet, although in somewhat more muted tones than Nietzsche.

Twelve years later, Oakeshott returned to Nietzsche in an extremely sympathetic review of a study devoted entirely to his thought. The book was *Nietzsche: An Approach*, by Janko Lavrin (1948). The great mistake of both many Nietzsche enthusiasts and their opponents alike, Oakeshott wrote, was to have attended only to the least important part of Nietzsche's work, which is the part concerned with remedies for the ills of European society such as a New Aristocracy that would defend the strong against the mediocre masses (Oakeshott 1948). Fortunately, Oakeshott continued,

those who are now beginning to make themselves heard recognized in his writings, not remedies, but a profound and imaginative diagnosis of a crisis in European culture. He sounded an alarm: for the world in which Nietzsche detected the crisis was as insensible of its predicament as we are of the speed at which the earth is whirling through space (Ibid.).

Nor, Oakeshott continued, did Nietzsche

merely reveal the crisis at the heart of the [contemporary] trance and diagnose its character in the general terms of 'nihilism', 'irreligion' and 'weakness'; he elaborated his diagnosis in detail with untiring insight into every field of human activity . . . in phrases . . . which have the power of opening up vistas of reflection and setting the imagination on fire. . . If we are to understand [him], we must understand him as, in this sense, an artist (Ibid.).

I cannot think of any other thinkers, except perhaps Montaigne, Hobbes and Hegel, whom Oakeshott praised so highly. It is a little strange, however, that Oakeshott's review fails to mention Lavrin's principal thesis, which is that much of the diagnosis by Nietzsche of the malaise of contemporary culture that Oakeshott admired was inspired by a fundamentally religious temperament reminiscent, Lavrin remarks, of 'a self-tormented Pascal, or even a St. Paul' (Lavrin 1948, p. 66). As a result, Lavrin maintains, the heart of Nietzsche's own thought never escaped from the quest for moral absolutes he berated in the European tradition. 'On the contrary', Lavrin wrote, 'his own "biological" standard of moral values demanded a discipline the strictness of which would have frightened the majority of so-called Christians' (Lavrin 1948, p. 78). For Lavrin, indeed, Nietzsche's violently anti-Christian sentiments merely expressed the inverted Christianity of 'a latent Christian of the highest order attacking his own secret inclinations' (Lavrin 1948, pp. 65-66). In short, 'the passion with which [Nietzsche] defied the very idea of God betrayed his repressed longing for him' (Lavrin 1948, p. 75). Whether Oakeshott failed to mention this dimension of Lavrin's analysis of Nietzsche's thought because he himself shared some of the intense moralism which inspired Nietzsche is not a matter I shall pursue here. What matter in the present context are the words about Nietzsche with which Oakeshott concluded his review of Lavrin's book. 'The most valuable sort of book on Nietzsche', he wrote, 'is not one about Nietzsche, but one which passes on what has been fired by Nietzsche in the writer's imagination' (Ibid). These words are relevant because they indicate the nature of the relationship I want to explore between Oakeshott and Nietzsche—one based, that is, on an overlapping diagnosis of the ills of European modernity which led both thinkers to an increasing convergence on one theme in particular, which is the central place they both assigned to myth as the form ultimately taken by any comprehensive attempt to give meaning to the human condition.¹

Myth in this context, it should perhaps be added, is used in the very broad sense of a vision of life as a whole, rather than in the narrower sense with which Oakeshott was concerned when he examined the part played by myth in, for example, specifically political contexts such as Roman political thought. It is with this narrower sense that Natalie Riendeau is concerned in her illuminating book on the place of myth and legend in Oakeshott's political thought (Riendeau 2014). In the broader sense of myth, Oakeshott's convergence with Nietzsche in his later thought reflected in particular his sympathy for Nietzsche's profound dis-

illusion with the all-pervasive rationalism and instrumentalism of modern Western culture. Western culture since Socrates, Nietzsche maintained, has been dominated by a series of destructive attempts to escape from myth into an entirely objective reality which it was foolishly believed could be discovered by philosophy or theology or, more recently, by science. It is this indictment which is echoed by Oakeshott in a radio broadcast in 1947 in which he observed that if we ever actually succeeded in escaping from myth, we would not discover objective reality but would suffer instead from world alienation. We would, as Oakeshott put it, not only 'find ourselves awake in a profound darkness, but [would find that] a dreadful insomnia would settle upon mankind, not less intolerable for being only a nightmare' (Oakeshott 1975, p. 151). Since it was in this broadcast that Oakeshott first developed his own concept of myth it will be instructive to recall what he said about it.

Every civilization, Oakeshott maintained, takes the form of a myth which gives expression to a collective dream. By myth, he emphasized, he did not simply mean a flight of fancy but 'an imaginative interpretation of human existence' which offers an interpretation of 'the mystery of human life', but no solution to the problems of the human condition (Ibid., p. 150). What then does Oakeshott consider to be the myth inspiring our own civilization? It is, he said, mainly inherited from medieval Christianity, and was shaped in particular by Augustine. The myth contains three principal elements.

- (a) The first is belief in an original **human perfection**, based on the belief that the human race was originally created by God in a condition of perfection like God's own.
- (b) The second is belief that man was subsequently corrupted by **the original sin of Pride**. Belief in the fall of man, in other words, is a vital part of the myth.
- (c) The third is a no less vital belief in the possibility of **an ultimate salvation** which will restore man to his original perfection (Ibid., pp. 151-2).

Seen from this point of view, Oakeshott's thought may be interpreted as an elaborate attempt to refashion the inherited myth in a way that would make it more viable in the modern world. The main revisions Oakeshott undertook have already been considered: they consist of the conditions he considers necessary in order to lead an affirmative and responsible life. With these in mind, he gave credit to Hobbes in particular for eliminating the story of the Fall of Man from the myth, along with the accompanying idea of the possible recovery of human perfection, and for substituting instead a profoundly sceptical view of human nature that emphasized man's 'littleness, his imperfection [and] his mortality, while at the same time recogniz[ing] his importance to himself' (Oakeshott, 1975, p. 154).

Although Oakeshott gave credit to Nietzsche for emphasizing that the most rewarding human activity consists of creative imagination expressed not only in art but in the conduct of life, it is worth recalling two crucial distinctions between Oakeshott and Nietzsche in the kind of myth they favoured. The first is that Oakeshott's myth assigns a central place to civil association and the rule of law as the essence of civilized life, whereas Nietzsche believed that a primary division of human beings into the noble and the base is so fundamental to civilization that civil equality is impossible, not least because we now live in what he termed the age of 'the last man', for whom equal treatment would simply mean the final triumph of mass mediocrity. The second characteristic which distinguishes Oakeshott's version of myth from Nietzsche's is the central place in it assigned by Oakeshott to love and friendship. Both thinkers share a sympathy for Schopenhauer's belief that life is doomed in the end to disappoint us, and both also reject Schopenhauer's consequential retreat into the consolations of music and quasi-Buddhist contemplation. However, whereas Nietzsche turns for consolation to the more or less wild Dionysiac ideal of spiritual heroism displayed by the *Übermensch* (Superman), Oakeshott places his faith in love and, like Spinoza, in friendship. 'We must love and desire', he wrote in the notebook for 1931, 'but we must conquer desire not by denying it and withdrawing from it as much as possible, but by admitting its inevitable unsatisfactoriness' (Oakeshott 2014, p. 247).

The final and perhaps most striking feature of a revised modern myth that can confer meaning on life which is shared by Oakeshott with Nietzsche is the belief that the comic vision is in the end the only positive way of coming to terms with the human condition. As Oakeshott observed in his notebook for 1931, neither philosophy nor aesthetic provides a completely satisfactory horizon for life but only laughter. 'Humour', he wrote, 'is the attitude which a full realization of mortality induces, and which is the only answer to mortality. Humour', Oakeshott added, is 'the maturity of sentiment', without which the experience of age is 'impossible' (Oakeshott 2014, pp. 246-247).

There is, I think, more than an echo in Oakeshott's praise of humour in the 'Critical backward glance' Nietzsche wrote as an introduction to a late (1886) edition of his first book, *The Birth of Tragedy*, which had originally appeared in 1872. In it, Nietzsche explained that his project was nothing less than to teach his readers what he termed 'the art of terrestrial comfort'. This did not mean, he wrote, teaching them a new philosophy: what it meant was, rather, teaching them to laugh at the Western search for a 'foundational' morality—including, by implication, the kind often pursued by British Idealist philosophers prior to Oakeshott. By teaching his readers to laugh, Nietzsche added, he hoped to teach them to 'send all metaphysical palliatives packing' with a 'peal of laughter'. I have placed, he concluded, 'the rose-chaplet crown' of laughter on my head and declared laughter to be blessed. 'You who aspire to greatness,' he ended, should learn how to laugh!' (Nietzsche 1956, p. 15).

If it is asked why only the comic vision offers an escape from nihilism, an eloquent formulation of the position shared by Nietzsche and Oakeshott has recently been provided by the Slovenian philosopher, Alenka Zupancic. The tragic vision, she writes, is based on a search for absolute meaning, combined with a simultaneous disappointed realization that none is to be found. It is the void created by this disappointment which opens the door to nihilism. The comic vision, in contrast, laughs at the very idea of absolutes of any kind and instead embraces life's limitations positively (Zupancic 2008).

I will end there. I have tried to say a bit about Oakeshott's belief that the affirmative life is easiest to live if it is a modest and responsible one lived in the freedom of a civil association. I have also mentioned Oakeshott's view that the aim of all education, in philosophy and every other subject, is not to discover a final truth but to prepare us to join in an unending conversation which began in the ancient world, continues at the present day, and will continue into the future if we remain civilized enough to take part in it. As Oakeshott's sympathy for Nietzsche suggests, however, we will only remain sufficiently civilized to do so if we can sustain a vision of the world which combines a rejection of the quest for absolutes, on the one hand, with a project of self-creation imbued with a sense of humour and an aesthetic awareness, on the other.

NOTES

- 1 An early version of this paper was read to undergraduates at a British university who were unfamiliar with Oakeshott's work. I have retained the personal note I struck in the hope of making Oakeshott more accessible to them without misrepresenting him.
- 2 There are short but valuable discussions of Oakeshott's view of myth, as well as comparisons of his view of myth with that of Carl Schmitt. See, Bhuta 'The mystery of the state concept, state theory and state making in Schmitt and Oakeshott'; Boucher, 'Schmitt, Oakeshott and the Hobbesian legacy in the crisis of our times'; Dyzenhaus, 'Dreaming the rule of law'—all in Dyzenhaus and Poole 2015, pp. 10-37, 123-152 and 234-260 respectively.

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REVIEW

*Hayek's Market
Republicanism:
The Limits of Liberty*

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Hayek's Market Republicanism: The Limits of Liberty by
Sean Irving, London: Routledge, 2020.

In the roughly two decades since his passing, the works of Friedrich Hayek retain a significant impression upon the social sciences. There are intellectual histories dealing with Hayek's career and its legacies. In addition, studies apply conceptual and methodological premises, as enunciated by Hayek, in several novel ways. Indeed, "Hayekian" insights have been devoted to an impressive range of economic, political, and social questions. A good example of the depth and versatility of engagement with Hayek's work is the *Cosmos + Taxis* (vol. 7: 5 + 6) symposium on Peter Boettke's book, *F. A. Hayek: Economics, Political Philosophy and Social Philosophy*.¹

A great share of literature concerning Hayek's own efforts, and the intellectual variations represented as Hayekian thought, have been written by scholars inspired by classical liberal commitments and insights that Hayek himself propounded. There are, of course, numerous critics of differing ideological and philosophical persuasions, actively producing research which problematise Hayek's postures on economics, epistemology, law, philosophy, or political science. A recent example of critical reception to certain aspects of Hayek scholarship is the recent title, *Hayek's Market Republicanism: The Limits of Liberty*, written by intellectual historian and philosopher Sean Irving, of the University of Essex.

The central objective of Irving's work is to encourage those with an interest in Hayek to reappraise his status as a classical liberal. The proposition is that Hayek's scholarly endeavours were more subtle than projecting the desire to minimise interference against the voluntary projects of individuals. Irving discerns a reliance by Hayek upon another tradition, tracing as far back to Roman-era political philosophy. It is here we find freedom grounded not in the non-interference condition of negative liberty but, rather, upon relational *non-domination* between individuals and groups. Building upon the Roman heritage, the strand of freedom attributed to Hayek, by Irving, is labelled as "neo-republicanism."²

I briefly digress at this point to describe the central tenets of neo-republicanism for those unacquainted with this philosophical system. For Philip Pettit and other neo-republican scholars, freedom consists in the secure enjoyment of conditions of non-domination. Non-domination, in turn, is attributed to an absence of arbitrary or unrestrained

power (Lovett 2018). Although much of the neo-republican literature focuses upon guaranteeing non-domination politically, such as through celebrating and promoting widespread democratic participation, the desire to eliminate domineering relationships extends to non-political actors and their diverse situations. The refusal to accept arbitrary power as a normative standard of freedom extends to, for example, contemporary workplaces (e.g., González-Ricoy 2014; O'Shea 2019). Social scientists have adopted, or refined, neo-republican insights to ruminate upon cultural-social concerns such as the treatment of women (e.g., Costa 2013; Halldenius 2015) and minorities (e.g., Fine 2014; Costa 2019).

What is the difference between neo-republican freedom and notions of freedom more familiar with classical liberals, such as negative liberty? An illustration of the distinction can be made in respect of relationships between masters and slaves, which, incidentally, Hayek explored in *The Constitution of Liberty*. Consider the case of a “kindly” master of a slave, who abstains from ordering the slave to work, meting out physical punishment, imposing curfews and other limits upon movement, disallowing personal relationships, and similar restrictions upon agency and choice. Under this hypothetical scenario the question arises: is the slave still unfree?

Slavery is a particularly odious case of unfreedom for both classical liberal proponents of negative liberty and neo-republican proponents of liberty as non-domination. However, in the case of the “kindly” master scenario, the master is not directly interfering with the slave. Thus, it might be claimed that under the negative liberty criteria of non-interference, the slave is, for all intents and purposes, free. For Pettit and other neo-republicans, however, non-interference is an insufficient indication of freedom—the slave remains in a state of relational vulnerability, to be arbitrarily subjected to the whims of the master. Under this scenario, “[t]he master has the power and right to arbitrarily interfere with the slave at will and may do so with impunity. ... the slave remains unfree because the master has this power and right. So Pettit claims that to be free requires that a person not be subject to such domination” (J. Brennan 2021).

No doctrine is exempt from scrutiny, and neo-republicanism has proven controversial. Certain critics have accused the neo-republicans of effectively endorsing a degree of policy paternalism. Such paternalism not only connotes significant interferences with the lives of others, but appears to sit most uneasily with the neo-republican aversion toward domineering relations. In their defense of the non-interference dimension of freedom, Geoffrey Brennan and Loren Lomasky (2006) argue that “[t]o downplay the negative moral significance of interference with people’s preferences is to countenance interference for the sake of other values, including people’s own good.” Sean Irving acknowledges this critique when stating that a “difference between the negative conception of freedom as non-interference and the republican insistence on non-domination is that the latter does not regard all interference as contrary to individual liberty” (p. 70). This argumentative pivot is not a new one, having also been deployed in defending negative liberty against paternalistic interferences in the name of positive liberty—the latter viewed as a form of “self-mastery” cultivated by individuals acting of their own free will (Berlin 1969).

Other critics of neo-republicanism have argued that domination is not a fitting criterion for understanding freedom. Dowding (2011) contends that neo-republican freedom lacks practicability because there would always be a coalitional set of persons seeking to dominate over any one of us, at any given time and in any given context. The presence of coalitions that may dominate others implies that no one can ever be free in the neo-republican sense. Similarly, Simpson (2017) questions the political coherence of neo-republican freedom. If other citizen-voters possess the power—by dint of voting, protest, civil disobedience, or even revolution—to contain the dominance of political actors, the same-said citizen-voters must also have powers, at least potentially, to dominate other types of actors.

Certain classical liberals have also critically engaged with neo-republicanism on the economic front. Gerald Gaus reckons that neo-republican thinking is antithetical to market processes, insofar as they entail interferences leading to the effective domination of some economic agents. Pettit (1997) observes that to deliberately undercut prices offered by market rivals counts as coercive interference (even if not morally wrongful). Gaus claims neo-republicans also regard this as a form of domination. To wit, “[u]nless checked, Pettit alleges, differential success at accumulating resources always involves domination. The wealthy al-

ways *could* use their resources to interfere with others. ... The market is much closer to a realm of domination than it is one of freedom” (Gaus 2003, p. 68). The underlying Pettitian desire for economic “security from interference,” as described by Gaus (*ibid.*), is also critiqued by Geoffrey Brennan (2018), the latter suggesting that interferences, which may result in losses experienced by a given agent, need not qualify as harms in an interdependent economic order.

Notwithstanding debates surrounding the philosophical credibility of neo-republican thought, Sean Irving suggests Friedrich Hayek actively engaged with the insight that liberty is non-domination. For readers of this journal, the contributions of market process and economic coordination toward Hayek’s system of thought is well understood. The institutional underpinnings of the competitive and open market domain incentivises heterogeneous agents to draw upon their localised, and oft-tacit, economic knowledge in a mutually beneficial manner. Indeed, the market process is crucial in apprehending discoveries concerning methods of production and exchange. The benefits of productive coordination and material prosperity arising from the market defies those who fall for the “synoptic delusion” that, somehow, it is possible to holistically alter or reconstruct the economic means to fit some preconceived criteria (e.g., equality of outcomes).

Irving considers that Hayek’s economic view is shaped by a neo-republican concern against relations of domination and subjection. In this context, “Hayek adopts non-domination because it complements his epistemic economics, according to which the existence of arbitrary power alone compromises economic coordination and exerts a deleterious effect on the use of knowledge.” (p. 61). What is interesting about Irving’s interpretation is that he supposes that Hayek’s commitment to non-domination was subordinated to a foundational project dedicated to promoting market-oriented economic freedom. The view that “liberty is realised or frustrated in the market, rather than in the rest of economic life, led Hayek to frame his writing on liberty with reference, almost exclusively, to threats to market freedom, rather than more broadly conceived economic freedom” (p. 4). Expressing the key issue more bluntly, “the market is the arena in which liberty is realised. Market freedom is freedom” (p. 67).

Framing Hayek’s thought in this way can readily explain his decades-long focus upon the institutional architecture of public governance. Consistent with the neo-republican commitment that “individual freedom requires a legal status that shields them from the arbitrary, and thus dominating, power of others” (p. 61), Hayek made a compelling case for the rule of law. This stance arguably finds its most elaborate treatment in Hayek’s 1960 tract, *The Constitution of Liberty*, as well as in his three-volume 1970s project, *Law, Legislation and Liberty*. Irving helpfully reminds us that Hayek’s concern with the rule of law—with its necessity of abstractly and generically applied law to prevent arbitrary, and discriminatory, political conduct—was a longstanding one (also S. Ealy 2010). For example, a BBC radio broadcast in 1956 finds Hayek indicating that the rationale for the rule of law rests in the desire “to prevent arbitrary coercion. After all, a man is free if he need not obey the arbitrary will of any other person” (p. 68).

As Hayek stated, a key problem underlining coercion is that the coerced are effectively reduced to being a tool in the hands of the coercers (Hayek [1960] 2011). A policy implication of this stance—undoubtedly informed by the quest to limit “patternless projections of authority” (Ratnapala 2003, p. 16)—is the need to control fiscal, legislative, and regulatory conduct on the part of political agents. It should be recognised that Hayek’s perspectives are a component of the age-old liberal sensitivity toward the functional working rules for political life. As Irving lays out in his book, the need to maintain the rule of law also resonated with *ordo-liberals* such as Walter Eucken and Franz Böhm. Key *ordo-liberals* were associates, and intellectual fellow-travelers, of Hayek. Hayek’s legal-political philosophy also inspired the subsequent development of constitutional political economy, as starkly testified by Buchanan and Congleton’s ([1998] 2003) project to embed “generality norms” in constitutional formulation.

In a paper forthcoming in *Public Choice*, Jan Schnellenbach (2021) correctly suggests there are costs associated with discretionary policymaking. Those costs include the heightened risks of some privileged actors dominating others within the economic environment. Consistent with the market republicanism of Robert Taylor (2017), entry barriers and other market closures prevent the competition deemed necessary to constrain exploitation on the part of dominant economic actors. Contrasting Pettit’s views about

competition, as summarised previously, competitive and open markets are *necessary* conditions to uphold freedom as non-domination. As a prominent ordo-liberal figure once said, competition is “the greatest and most ingenious instrument of disempowerment in history” (Böhm 1961, p. 22). Irving states such observations appear to resonate with Hayek’s theoretical understandings: “the efficient use of knowledge requires that plans can be formulated under stable conditions. This is undermined when there is uncertainty regarding the possibility of interference by another party, for Hayek primarily the state” (p. 69).

Liberals would regard the insights described above to be as relevant as ever. Modern political systems are practically becoming rife with discriminatory treatments, contributing to the abrogation of freedoms and rights felt by citizen-voters. This trend has been fueled by the provision of differential policy concessions by legislators and bureaucrats, which, in turn, reduces the relative costs of rent-seeking behaviour by sectional interests. Many of the political activities alluded to here are rhetorically supported by a range of “non-logical” justifications (Wagner 2016) referring to distributional imperatives, national prestige prerogatives, public safety concerns, and so on.

In *Hayek’s Market Republicanism*, Irving indicates that Hayek valorised limitations upon political action by presenting the dangers associated with so-called “unlimited democracy.” The concept of unlimited democracy may be described as one in which constitutional and related conditions carry limited, if any, political weight, and thus the only effective restraint upon governmental activity is located in the political interpretation of concerns harboured by the majority of citizen-voters. Irving not only points out that, for Hayek, unlimited democracy “was the very essence of *imperium*” (p. 83), but that the desire for rule-ordered approaches increasingly led Hayek toward a stridently antiseptic disposition toward political discretion. In Irving’s view this is reflected in Hayek’s (1976) proposal for the “denationalisation of money” through privately-issued currencies, as well as his advocacy for a “model constitution” separating law- and legislation-making functions of government (Hayek 1979). The spectre of Hayek’s engagement with the authoritarian Portuguese, Indonesian, and Chilean regimes of Salazar, Suharto, and Pinochet, respectively, also loom large in Irving’s treatment of the political issues.

The project of impugning unseemly, even ugly, motives behind intellectual concerns appears to have assumed growing popularity in recent years. Some of the great figures of classical liberal scholarship have been among those targeted by such ventures in the “hermeneutics of suspicion” (Boettke 2019). Even accounting for historical circumstances, such as the Cold War-era desire to prevent additional nation-state “dominoes” falling under the spell of communism, it is my view that dalliances with political authoritarians are fundamental missteps for any liberal to make. The loss of life and liberty under authoritarian regimes (including restraints upon public assembly, protest, and speech), and the *non-robustness* of promised transitions from authoritarian to liberal-democratic political regimes, stand as key rationales to reject this obnoxious form of political authority.

Hayek’s distinction between law and legislation is important, and I agree that the concepts are conflated on an all-too-regular basis in political discourse and rule-making. To appreciate the qualitative contrast between law and legislation is to appreciate, as many liberals do, that political actors enact legislation which routinely embeds discrimination within the fiscal, regulatory, and similarly enforced relations between citizen and state. Accordingly, reform suggestions to help clarify the distinction in the context of political operations remain useful. Furthermore, it should be said it is not inherently anti-democratic to outline reforms aimed at suppressing political domination—appreciating, of course, that any given proposal feeds into the “informational set” of democratic discussion amongst all interested parties.

A proponent of Hayek’s model constitution may submit that his reform may be at least theoretically feasible, say in political jurisdictions with existing bicameral parliamentary arrangements. This reflects a political assumption that one of the two chambers is already conceived as a “house of review,” vetting governmental legislation. Implementing the Hayek model would necessitate converting this review function into one focused upon enacting laws regulating the conduct and performance of government. As for the specifics of Hayek’s reform proposal, it has some major problems (Müller 2015). Age restrictions upon the

membership of Hayek's law-making chamber (the Legislative Assembly)—as well as age-related franchise restrictions on the part of those who may elect representatives to the chamber—would be an unwarranted step in key respects. Implementation of this proposal would spell a reversal of the modern trend toward democratisation. Furthermore, the precedence of age-related fiscal and regulatory policy discrimination in actually-existing, and ageing, societies may not necessarily augur well for the idea that the restrictive election of mature persons safeguards freedom as non-domination. Constitutional reform must avoid disenfranchisement if it is to have any hope of implementation, let alone preventing a backdoor to new and egregious forms of arbitrariness contrary to the underlying aims of the reform.

Hayek's own arguments *for* liberal democracy are often forgotten. A key benefit of democratic political action is that general elections facilitate the peaceful turnover of legislators, and potentially governments, an occurrence far from assured under an authoritarian regime: “[d]emocracy is the only method of peaceful change that man has yet discovered” (Hayek [1960] 2011, p. 172). Associated with the prospect of peaceful change in the occupation of political offices is that liberal democracies generate a vast repository of political information, chiefly by enabling democratic participation to foster the formulation and registration of public opinion. As similarly emphasised by Buchanan (1954), changes in political preferences may aptly reflect dynamic choices made under majoritarian voting systems, with the turnover of political candidates and parties serving as an additional hedge against persistent domination. The arguments outlined here may be largely cast in an instrumentalist, rather than moralist, light. Nonetheless, these claims do underline key facets of the democratic process which warrant support amongst liberal adherents. Indeed, for Hayek ([1960] 2011, p. 525) himself, “the advantages of democracy as a method of peaceful change and of political education seem to be so great compared with those of any other system that I can have no sympathy with the anti-democratic strain.”

It is possible to adopt Hayekian premises to further the affirmative case for democracy. The reason of liberal-democratic rules is to harness spontaneous ordering processes wherein discussion and engagement amongst multiple persons reveals opinions over aspects of public interest (diZerega 1989). But it cannot be presumed that the preferences of a numerical, yet temporal, *majority* of citizen-voters would necessarily equate with that of *all* citizen-voters. “Any democracy must balance responsiveness to the will of the majority against protection for fundamental rights of individuals,” say Munger and Munger (2015, p. 38). Rules are seen as necessary to help protect minorities from domination, and to provide them with a realistic opportunity to engage with majorities as well as conducting peaceful inter-group political persuasion. From a Hayekian perspective, a democracy with appropriate checks and balances is seen as a constituent feature of economic, political, and social freedom as non-domination.

What is underappreciated by the critics of liberalism is that the rules of economic-sociopolitical order are not necessarily fixed. As indicated by Schnellenbach (2021) the specification of rules still leaves much open for democratic discussion, and interpretation, amongst dignified equals regarding how we are to politically live together. The space for ongoing democratic input into rule specification is not only informed by uncertainties regarding the potential effects of rules, as Schellenbach indicates. The availability of non-voting avenues for expression will also shape democratic rule-craft. An extensive model of democracy provides scope for multiple individual and group engagements with respect to collective problems, and their potential solutions, through local townhall meetings, media engagement, and social movement activism, alongside voting and political representation (Lavoie 1993; Novak 2021a).

Sean Irving contends that Hayek's scholarship centres upon the primacy of freedom within the market sphere. Political activity is to be instrumentally subordinated to the imperative of economic prosperity within the market, necessitating a rules-based order to minimise the possibility of governmental domination over economic affairs. In other words, “[i]ndividuals would be able to plan their actions in the market, making use of their own personal knowledge, in a stable legal environment assured that the state would not step in and frustrate their efforts” (p. 7). For neo-republicans, both public *and* private powers “are consistently recognised as potential sources of domination that can threaten personal independence. There is an appreciation that arbitrary rule of a more immediate, even intimate, type than that which we associate with

the power of the state can manifest itself horizontally in the relationships between individuals in society as well as vertically between the individual and the representatives of state power” (p. 74). However, Irving alleges that Hayek prioritises political domination over all other forms: “[i]n Hayek’s work, however, there is little concern for the danger of *dominium*” (Ibid.).

If the Irving claim concerning Hayek’s priority of *imperium*, to the exclusion of *dominium*, is true, the implications are significant. It would leave a significant gap with regard to understanding how private sector corporations and other non-state collectives, as well as individuals outside of their political capacities, come to relationally dominate others. Indeed, it is suggested in *Hayek’s Market Republicanism* that “Hayek was quite happy to allow commands to prevail throughout the productive sectors of the economy, most overtly within the private firm, as he did not regard this as compromising the epistemic functioning of the market” (Ibid.). Although one might agree that Hayek accorded significant attention to political strains of domination—given his academic background and the totalitarian troubles of the era in which he lived—he did not neglect private power.

Consider the potential for commercial, for-profit enterprises to dominate economic settings, which has been expressed as a concern amongst certain liberal and “liberal-adjacent” scholars alike (e.g., Ellerman 1990, 2020; Cornuelle 1991; Anderson 2017). As conceded by Irving in several passages of his book, Hayek’s earlier career was particularly noted for his animosity toward private monopolies, as well as the ruinous impacts of various restraints of trade upon competition (e.g., Hayek 1948). These inclinations aligned closely with the *ordo-liberal* position favouring competition policy, which in turn is aimed at preventing abuses of market power by private sector actors. Whilst it is true that he later expressed doubts over the effectiveness of competition policy, Hayek continued to say that eliminating policy-induced economic discriminations (for example, in the field of intellectual property and taxation) were justifiable as anti-monopoly measures (Hayek [1960] 2011, pp. 381–382).

An intriguing aspect of Hayek’s engagement with the implications of corporate activity is his concern over class estrangement between employees and entrepreneurs, and other agents who operate independently in the market domain. In Hayek’s own words, “[t]he dominant conceptions will be those of the great majority, who are members of hierarchic organizations and who are largely unaware of the kind of problems and views that determine the relations between the separate units within which they work (Ibid., p. 187). A lack of awareness or concern about the issues affecting independent operators is seen to likely translate into public policies wherein the perspectives of the independent are dominated by those engaged in formal employment relations. The concerns levelled by Hayek might be said to add to Adam Smith’s ([1776] 1999) concern that task repetition, associated with a finely-grained division of labour, encourages a sense of mental torpor, or inactivity, affecting individual character and judgement.

Hayek also had occasion to consider the position of civil societal organisations, which dedicate much of their time to provide assistance (financially, or in kind) to people in need of care and support. Specifically, he raised the prospect of civil society as a viable alternative to governmental service provision and financial aid. In reference to the work of Richard Cornuelle, Hayek stated: “[t]o develop this independent sector and its capacities is in many fields the only way to ward off the danger of complete *domination* of social life by government” (Hayek 1979, p. 51, emphasis added). Whilst some have indicated Hayek could have delved into the relevant issues with greater detail (e.g., Garnett 2011), subsequent generations of liberal scholars have adopted *Hayekian* insights to deepen our understanding of critical issues affecting the health of civil society (e.g., L. Ealy 2005; Boettke and Coyne 2008; Storr et al. 2015; Novak 2021b). Those insights may be called upon to reinforce the significance of organisational diversity, together with the need for enhanced capacities for self-governance, within civil society, with each posing as counterpoints to governmental encroachment over the more personal, and intimate, aspects of our lives.

In his book Irving reflects, and with some detail, Hayek’s concerns about “para-governmental” bodies maintaining a relatively tight degree of entanglement with governmental authorities. In addition to referencing trade associations and professional organisations, Hayek increasingly waxed lyrical about the legis-

lative and economic policy privileges attained by labour unions. The influence of unions upon inflationary pressures was concerning enough for Hayek, although he also criticised the terms and conditions of legislative edicts which, *inter alia*, compel union membership as a condition of employment within certain industries. Whilst it may be argued that Hayek's "identification of *dominium* to the unions was his own political choice" (p. 76), it is, nevertheless, another example of Hayek's concern with forms of dominating non-public power.

The continuing interest in and, indeed, relevance of Hayek's work to the social sciences rests, in no small measure, upon his efforts as a combinatorial scholar. By this, I mean that Hayek adventurously drew upon insights from several disciplines—such as economics, law, political science, philosophy, and psychology—to reframe and reorient liberalism during a tumultuous twentieth century. A reflection of that intellectual versatility comes in the shape of Sean Irving's assessment of Hayek as a serious thinker about conceptions of liberty as non-domination—even if, as Irving recognises, Hayek never formally embraced the neo-republican term. In this context, others have found similar traces of neo-republican thinking in Hayek's vast *oeuvre* (e.g., Trantidis and Cowen 2020; Zwolinski 2020).

Irving pays a significant degree of attention to Hayek's concerns about the effects of unlimited democracy. Critics of Hayek, and of modern liberalism more generally, have made great mileage from Hayek's engagements with authoritarian figures, as well as some of the strident speeches and opinion editorials which especially appeared in his later years. However, in recognition of liberalism as a living, and evolving, doctrine of ideological, moral, political, and philosophical dispositions, it cannot be said the words of any given individual, in times past, are sacrosanct and, thus, immune from scrutiny. *Hayekian* scholars, and I count myself as among that sizeable group, can build upon Hayek's core insights—such as the interpretation, and desirability, of competitive markets, and constitutional government, as institutional instantiations of non-domination—and, where necessary, revise them. As my previous remarks suggest, I consider it eminently possible to apply Hayek's ideas in presenting an affirmative account of democracy, an inherently *liberal* proposition for public governance.

Hayek studied law as a young man, so it is unsurprising that he would spend a fair amount of time reflecting upon the relationships between law, legislation, and liberty. A certain focus upon questions of *imperium* also fits with Hayek's concerns over growth in the scale and scope of governmental activity during the twentieth century. I would heartily agree that we need, in Irving's words, to "develop Hayek's concept of liberty to its full and proper extent, paying proper attention to *dominium* as well as *imperium*" (p. 78). I would add a counter to the effect that Hayek's scholarship, and the ingenious ideas he laid out, do not preclude the development of a more extensive narrative trained upon the baleful effects of non-market, non-state domination in our lives. Again, this is another arena for research for Hayekian scholars to engage, and one which I anticipate would generate significant intellectual dividends.

Having achieved so much over the past few centuries to transition the underlying logics of our economies, politics, and societies from status to contract, liberals fear that the tide has been turning out on freedom in recent years. This vexing situation demands intellectual projects and advocacy initiatives that embrace a recalibration and reinvigoration of key commitments and thought processes. Whilst Sean Irving's *Hayek's Market Republicanism* does not hit every note about Hayek sweetly, understanding the neo-republican basis of Friedrich Hayek's scholarly range potentially provides crucial guidance for the revival of liberalism in times ahead.

NOTES

- 1 Disclaimer: I was the guest editor for that special issue.
- 2 Unless otherwise specified, I will refer to the doctrine of freedom-as-non-domination as neo-republicanism throughout this review. Present-day exponents of this strand of philosophical thought include Philip Pettit, Quentin Skinner, and Frank Lovett.

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REVIEW

*Hans Kelsen's Writings
1920-1921*

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Hans Kelsen is often regarded as one of the most contentious legal philosophers of the twentieth century. For an example, Robert Schuett begins his review of Thomas Olechowski's recent (and massive) biography of Kelsen with the sentence: "Few figures divide opinion like Hans Kelsen." Schuett goes on to explain that his adherents admired Kelsen for his fearless pursuit of the truth while his critics condemned him as a failed rebel (Schuett 2020, p. 11). However, both Kelsen's admirers and his critics have tended to focus on his mature legal and political writings and mostly ignore his earlier works. Volumes Six and Eight of the *Hans Kelsen Werke* contain some of his earlier writings. These are from only three years—1920 to 1922—but they contain many important works, both small and large. Volume Eight is a large work of almost 650 pages and constitutional scholars will welcome it because it contains the complete commentary on the Austrian constitution. That constitution was originally drafted by Kelsen in 1920 and is still largely in effect in Austria today (Kelsen 2020b). Volume Six is even larger at close to 1,000 pages, but it differs from Volume Six in that it contains eighteen writings on a number of different topics. These range from Kelsen's draft of the constitution and other constitutional issues, a book review, an official birthday note, and several brief articles focusing on the economic hardships of the Viennese professors. Most of these writings will probably appeal only to small groups with different interests; however, there are three sets of works which will be of interest to any one concerned with the concept of the state, the value of democracy, and the inherent problems of Marxism. These three areas will be the focus of this review essay.

THE STATE

There are two essays in Volume Six which focus on the state. They were not independent articles but were two chapters that would appear in Kelsen's *Der Soziologische und der Juristische Staatsbegriff* (Kelsen 1922). As Kelsen wrote in the introduction to the book, the question regarding the concept of the state is necessarily connected to the question concerning the conceptual relation between state and law. In order to clarify this connection Kelsen believed it necessary to investigate such legal concepts as norms and such sociological notions as organizations (Kelsen 1922, pp. 1-3). In Volume Six, the article "Der Staatsbegriff der 'verstehende Soziologie'" comes later than "Das Verhältnis vom Staat und Recht im Lichte der Erkenntniskritik"; however,

the latter will be examined before the former because in the book the latter is §27 and the former includes §33-45 (Kelsen 1922, pp. 156-171, 205-251).

The two articles differ not only in length but especially in focus. The inclusion of “*verstehende Soziologie*” is an explicit reference to Max Weber and his posthumously published *Wirtschaft und Gesellschaft* (1921). But Kelsen did not discuss the entire book but concentrated on the first chapter which contained Weber’s basic sociological concepts (“*Soziologische Grundbegriffe*”). Despite Max Weber’s claim that the chapter is on basic concepts, that chapter is notoriously difficult to understand. It is to Kelsen’s credit that he made the attempt. He followed Weber’s notion of an ideal type and he applauded Weber for employing it in discussing different social groupings. And, he seemed to have praise for Weber’s insistence on using “understanding sociology” to help explain actual social interactions. This is a reference to Weber’s insistence that we attribute meaning to other’s actions and then interpret those meanings. That is, they possess “significance” (“*Deutung*”) (Kelsen 2020a, pp. 238-241). Kelsen then turned to the concept of the state and he again follows Weber’s claim that the state is an “order.” In this, both Weber and Kelsen reject the idea that a state is some kind of entity or organism. Instead, for both it is a formal abstraction and one that is founded upon the sense of duty and the need for norms (Kelsen 2020a, pp. 243-245). In other words, it is a particular type of organization; one that is in the possession of the power to compel—either by the use of force or even by the mere threat to use it (Kelsen 2020a, pp. 248-250). Kelsen’s emphasis on Weber’s definition of the state as the order which has the monopoly on force underscores the decisive indication that the state is an order that is fundamentally concerned with judicial norms—that is—the sovereignty of the state (Kelsen 2020a, pp. 251-252).

“*Der Staatsbegriff der ‘verstehende Soziologie’*” was focused on just one scholar, but in contrast “*Das Verhältnis vom Staat und Recht im Lichte der Erkenntniskritik*” was devoted to examining a significant number of thinkers. There are also two differences between the article and the part in the book. One is that the article is divided into numbered sections whereas the book has titles for them. Second, Kelsen adds an introduction to the article which provides a context that otherwise would have been missing. He indicated that this is the concluding part of the book and that the overall intent of it was to delineate the differences between the juridical concept of the state and the sociological one. The main difference is that the latter is devoted to the state as an organization whereas the former is focused on law. However, the latter tends to lead one to believe that the state is some kind of entity like a church and that is because both the state and the church appear to believe in absolutes. As Kelsen will later clarify, God is the absolute in the church, whereas the state is regarded as an absolute because of the issue of sovereignty (Kelsen 2020a, pp. 168-171).

Kelsen invokes the philosopher Hans Vaihinger. Vaihinger was best known for being a Kantian scholar: he wrote a massive two-volume commentary on Kant’s *Critique of Pure Reason*. It covered the first fifty pages and was left uncompleted; he also started the journal *Kant-Studien*. But he was one of the first philosophers in Germany to take Nietzsche seriously, and helped lead him to his philosophy of “as-if” and the role of fictions. Kelsen appropriates Vaihinger’s notion of fiction and applies it to the claim that the state is like a person. It is not, he argues, a substance but a power; just as force is a power in nature, law is the power in the state (Kelsen 2020a, pp. 171-177). Thus, law is a function and not a substance and he noted that it was Ernst Cassirer who, in his “brilliant” work, distinguished the real differences between the concept of substance and the concept of function (Kelsen 2020a, pp. 178-182).

In the second section Kelsen returns to the notion of the state as absolute in its relationship to God as the absolute in the church—both are invoked as the personification of will—God’s and the state’s (Kelsen 2020a, pp. 193-209). In the third section Kelsen noted that scholars often contend that there is not only a logical parallel between “God” and the “State” but there is a real relationship. Kelsen clarifies this more in his *Logos* essay on “Gott und Staat” (Kelsen 1922/1923) but here he explains that thinkers believe that the state is the human incarnation of the Kingdom of God and that God rules in both (Kelsen 2020a, pp. 217-220). But there is a dualism between God and nature and it leads to a pure natural science. In the same way there is a dualism between politics and positive law which can also lead to a pure theory. This is an indication of Kelsen’s later pure theory of law upon which his fame largely rests. But Kelsen’s concern here is with the

doctrine of natural law, but one which is not based on nature but on God. And, he concluded with the observation that there is no dualism between state and law because “every state is a legal state.”

DEMOCRACY

Prior to 1921, Kelsen had been preoccupied with the concepts of democracy and the issue of sovereignty. The latter issue was dealt with in a slim volume from 1919 which was entitled *Das Problem der Souveränität und die Theorie des Völkerrechts*. This work is reprinted in Volume Four of *Hans Kelsen Werke* and would be of interest to any one concerned about sovereignty and peoples’ rights. However, this volume is not under review here so that is irrelevant. However, this volume contained Kelsen’s November 1919 speech on the essence and value of democracy. In fact, it has both a shorter version and a lengthier one and both are important here because they are briefer versions of the work that was published in the *Archiv für Sozialwissenschaft und Sozialpolitik*. This was the journal that Edgar Jaffé purchased in 1903 and brought in Werner Sombart and Max Weber as co-editors. Within a very short time it had established itself as one of the leading socio-political journals. Kelsen published “Vom Wesen und Wert der Demokratie” in that journal and the publishing firm J. C. B. Mohr (Paul Siebeck) also printed it as a separate volume. Finally, Kelsen published a second edition in 1929; accordingly, there are many differences among the five variations. The two lectures from 1919 which are found in Volume Four differ in length and in focus; the two versions which were published in 1920 are mostly the same, while the second edition was expanded from roughly 35 pages to 119. The focus here is on the 1920 version of “Vom Wesen und Wert der Demokratie” which was published in the *Archiv* and as a separate pamphlet.

As the title indicates, Kelsen has two concerns: one is the essence or nature of democracy while the other is its value. Kelsen noted that the revolutions of 1789 and 1848 brought forth the democratic ideal and throughout the rest of the nineteenth century the term democracy became a slogan. But with many slogans, the word has lost its specific meaning. Kelsen’s attempt to define it began by noting its twin pillars: freedom and equality. However, he noted that the idea of freedom is a negative one—freedom from rather than freedom to do. The same is true regarding equality in the sense that if someone is a human just like me, then we are equal. Because he and I are equal, then how can he have the right to dominate me (Kelsen 2020a, pp. 124-126). But another feature of democracy is the principle of majority rules. Kelsen reminds us of Rousseau’s notion of the majority as an expression of the general will—thus, the people have sovereignty over themselves. This led to the problem of protecting the minority against the tyranny of the majority. But Kelsen argued that the essence of democratic politics is the compromise (Kelsen 2020a, pp. 132-133). The problem with communism as with any absolute, is the unwillingness to compromise. That lies in part in the communist belief that the state is like a business and that its primary function is to organize and control (Kelsen 2020a, pp. 135-136, 142). Thus, there is a tension between the anarchist’s insistence on eliminating the state and the state taking control over every aspect of life; that is, a tension between an idealistic theory and its concrete application (Kelsen 2020a, pp. 145-146). There is also tension regarding the claim about the “unity of the people” (“Einheit des Volkes”) and the idea that the “people” can rule. Kelsen invoked Nietzsche’s observation about the lie: “I, the state, am the people” (“Ich, der Staat, bin des Volkes”) and he reminded us of another of Nietzsche’s remarks about the state being the coldest of all monstrosities (Kelsen 2020a, pp. 147-148). Kelsen then turned to the idea that democracy is the best political association to be able to select the leader. In fact, democracy has always maintained the ideal of not needing a leader (“Führerlosigkeit”) (Kelsen 2020a, pp. 149). That is because of the democratic principle of equality that was best represented by Rousseau. The opposite is the monarch or the dictator because both represent the belief in absolutes, thereby revealing the highest value of democracy—relativism. Because all are equal, opinions are relative. Since there is no absolute, compromise is possible. Kelsen is realistic and he recognized that the people’s opinion is not always right. He concluded by invoking the story of Jesus before Pontus Pilate who famously asked “What is truth?” Seeing that Jesus had done nothing wrong he asked the people. But the

people wanted the Son of God put to death and the robber set free. And, Kelsen thought that just might be an argument against the essence and the value of democracy (Kelsen 2020a, pp. 155-157).

MARXISM

Volume Six also contains two of Kelsen's writings on Marxism. "Die ökonomische und politische Theorie des Marxismus" is only six pages and it briefly treats Marxism as an economic and a political theory. In contrast, "Sozialismus und Staat. Eine Untersuchung der politischen Theorie des Marxismus" is actually a book of almost 170 pages. In effect, Kelsen wrote an entire history of communism, beginning with an introduction to the problem and methods of historical materialism. The second chapter is devoted to the *Communist Manifesto* and the idea of a stateless community. The third chapter is on the writings of Marx and Engels while the fourth chapter is an examination of the party doctrines as outlined by Karl Kaustky, August Bebel, and other German political thinkers. The fifth chapter is on Russian "Neo-Kommunismus" and Kelsen notes the shift from Marx's early stateless communism to the Neo-Communist takeover of the state. Instead of Lenin's belief that the state would die out, the communists transformed the political state into an administrative state of control (Kelsen 2020a, pp. 472-475). And, while the Communists claimed to believe in the twin principles of democracy—freedom and equality—they actually reject democracy in favor of the dictatorship of the proletariat (Kelsen 2020a, pp. 478, 488-492). Freedom and equality are sacrificed in the name of political domination and economic control.

CONCLUDING COMMENTS

These three areas regarding the nature of the state, the value of democracy, and the critique of Marxism, demonstrate Kelsen's belief in the democratic principles of freedom and equality and the need for law and liberalism. The years 1920 to 1923 were among the most problematic for Austria but even more so for Germany. That is because Carl Schmitt was strenuously attacking democracy and was promoting dictatorships in his belief that democracy and parliamentarism were undermining Germany's position in the world (Adair-Toteff 2020, pp. 25-46). While Schmitt's writings may have helped Hitler's rise to power in 1932, the Allies defeated Nazism in 1945. For most of the remaining years of his life, Schmitt would occasionally receive visitors in his home in Plettenberg. In contrast, Kelsen was welcomed by thousands of people on several continents. And, at least four different scholarly journals dedicated special issues to him in honor of his 80th birthday (Olechowski 2020, pp. 886-892). Whether Kelsen should really be regarded as the "Jurist of the twentieth century" ("Jurist des zwanzigsten Jahrhunderts") (Métall 1969, III) may be debatable. What is not debatable is the importance of these two volumes of the *Hans Kelsen Werke*. What makes them especially important is that they contain Kelsen's early efforts in vigorously defending both democracy and law.

NOTES

- 1 "jeder Staat Rechts-Staat ist" (Kelsen 2020a, pp. 222-223). Kelsen repeats this final paragraph as part of the final paragraph of "Gott und Staat", including "jeder Staat Rechtsstaat ist" (Kelsen 1922/1923, p. 284).
- 2 Volume Six has a valuable 300-page explanatory section written by Rodrigo Cadore while Volume Eight has a helpful 170-page explanation also written by Cadore (Kelsen 2020a, pp. 533-847; Kelsen 2020b, pp. 505-673).

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REVIEW

*The Seen, the Unseen,
and the Unrealized*FERNANDO A. MONTEIRO
C. D'ANDREASpears School of Business,
Oklahoma State UniversityReview of *The Seen, the Unseen, and the Unrealized* by Per L. Bylund, Lexington Books, 2016.

The Seen, the Unseen and the Unrealized: How Regulations Affect Our Everyday Lives promises to advance the understandings initially offered by the 19th century French classical-liberal economist Frédéric Bastiat. Bylund especially promises to advance the understanding of the consequences of what has become widely known as the “broken window fallacy” (Bastiat 2007). In the original text, Bastiat demonstrates that not only what is seen should be considered in the analysis of the consequences of economic actions, but also what is *not* seen.

As a consequence, this 10-chapter monograph sets a high bar for itself. Bylund’s analysis builds upon Bastiat’s work and provides additional layers of reasoning to the pure-economic analysis of regulation, though not without a few flaws, that leaves the sense that some potential has been left unexplored.

The book follows uses Mises’s (1998) and Rothbard’s (2004) approach to economic understanding and analysis. Starting from a few characters with simple economic roles, Bylund builds thought experiments that start with very simple and straightforward societal and market settings. Little by little the situations gain in complexity to allow for more advanced understanding of the market process. The situations are analyzed using economic reasoning looking to understand the consequences, particularly the unintended and mutually dependent consequences, of the economic choices made by the actors in the hypothetical small-scale society. From this basis, the whole theoretical development and the analysis of the consequences of economic actions, from the simple to more complex ones, are derived.

In chapter 1, Bylund sets the stage in a concise introduction to economics and the economic way of thinking. The central questions here are, ‘what is the market?’ and ‘does it work?’ He differentiates between power-based and voluntary relations and posits that only this second type constitutes what we should understand as the market process. This is important because the rest of the book deals only with this kind of transaction in a pure-economic analysis. As for the question of the market working or not, the author explains that the market is not perfect, there will be errors all over the place, all the time. Because of the inherent imperfection, comparing the market as it is in reality with an ideal, theoretical, state is a fallacy. In other words, yes, the market works, however, not without imperfections in-

cluding the fact that some individuals will be worse-off as the process continuously unfolds. Newly successful producers satisfy a need that is higher in the consumer's value scale when compared to the old producers. The resources in the hands of the producers that are expelled from the market will be freed to be used in the production process of products that occupy a higher position in the consumers' value scale. This constant process of substitution of some producers by others, even with its problems, is a feature of the market, not a bug. A consequence of the discussion is that entrepreneurial production occurs because entrepreneurs foresee greater consumption possibilities in the future. Production occurs because it is capable of generating future consumption possibilities.

Chapters 2 and 3 deal with prices. In chapter 2 the concept of money is introduced. Chapter 3 explains how prices of all goods in the production process are formed based on entrepreneurs' expectations of the valuation of the final product. The reasoning in this chapter is far from trivial and full of complex ideas such as capital goods, entrepreneurs bidding for prices and choosing costs, prices conveying knowledge, the need for production to allow for consumption etc. In spite of this, Bylund is able to convey these complex ideas to the interested reader in a fairly short space.

Chapter 4 goes back to the discussion of markets and uses three of the most influential minds in economics to do so. The theories of Smith, Ricardo and Schumpeter are blended to explain how production takes place and what mechanisms are capable of supporting or undermining it. Once again complex issues such as the extent of the market, division of labor and innovation – that allows for the economic and social development – are discussed fairly and concisely. Here the reader needs to pay extra attention, a lot of information and theoretical background is discussed and it might be difficult to follow for the ones without some background in economics.

Chapters 5 and 6 deal with the core of Bastiat's story, "that which is seen and that which is not seen". Bylund stresses that the future is unknowable, but not unimaginable. It is the entrepreneur's role to rely on what he believes to be his most wanted and productive skills to imagine and produce the future by organizing the production processes. This is where the author explains how changes in a specific part of the market will bring about a series of other changes, and that many of those modifications will occur in areas of the market that are not directly connected to the one in which change first happened. This is where Bylund explains how something unexpected, the broken window or a natural disaster, will have usually unexpected ripple effects. This is, in particular, where Bylund makes sharp methodological criticisms to the current state of economics. By explaining that the statistics of the past, no matter how accurate they might be, do not necessarily predict the future and by mentioning the fallacious 'multiplier effects', he puts on the forefront two of the biggest flaws in contemporaneous economic reasoning: the widespread use of statistical methods and correlations and a pretense ability of policy makers to direct the market by tweaking legislation. Chapter 4 is also where Bylund, for the first time in the book, briefly deals with regulation. Chapter 5 expands the discussion to natural disasters and their much broader consequences for the market process. In specific, natural disasters modify the value scale of many individuals in a society at the same time. A broken window has this same modification, but for one single individual in a society, because of this, the ripple effects of the broken window are much smaller than the natural disaster ones. In the case of a disaster, the individuals abruptly rearrange their value scale in pursuit of the basic: food and shelter, leaving the least urgent needs temporarily aside. The market mechanism, if left to work properly and without interventions, responds by realigning the resources through prices. People will get what they most need before anything else. For example, instead of stakes and wine, retailers will focus on noodles and bottled water because this would be mostly needed when there is no reliable power to store food and drinks.

Chapter 7 focuses on discussing regulation. The discussion uses what has been explained in the initial chapters to guide the reader through the seen and the unseen consequences of regulation. Most importantly, this is where the concept of the unrealized is developed and explained. Bylund starts by saying that ineffective regulation is not interesting and focus, instead, on the type that does affect the market interactions. He divides those in incentive and disincentive types and discusses their differences. Bylund introduces a character, Luke, something like a benevolent and very rich policy maker, almost like a good-king, who

wants to solve the societal problems by imposing regulations that would, in his mind, improve the living standards of society as a whole. This character, weirdly, does not impose taxation, but instead uses his own money (and his political power) to direct the market in the direction he believes is the most beneficial to the society. One debatable point is in page 105 when Bylund suggests that subsidies must follow regulation. For the reader more acquainted with how the political process usually works, this would clearly be seen as a mistake. In Bylund's system this reasoning makes sense, but the author fails to make it clear and to the lay reader this will most likely lead to confusion.

One very important theoretical insight from the book is seen in chapter 7. It is the explanation of how regulations are worse than disasters for the market. This is so because regulation stops development from happening, while destruction 'simply' takes the market, abruptly, back to a least developed stage (p. 114). This insight effectively provides reasoning to discuss policy, of any kind, from a perspective that is substantially different from what is currently used. This has the potential to be developed in a long-range research agenda.

Chapter 8 goes deep in using the thought experiment based on a micro-society to providing examples of the effects of regulation, especially when trying to improve the functioning of the market process. The discussion on the minimum wage is particularly relevant because it demonstrates how a well-intended interference in the market prejudices the ones that it supposed to help the most.

In chapter 9, the author reminds us that human wants are endless and that this is what makes economics a science worth studying. In a world with no scarcity, economics is unnecessary. However, as wants are endless and means are scarce, economics tries to understand what should be done to take the greatest possible satisfaction out of the limited existing resources. This is the most theoretical chapter in the book and ties up the discussion made in the initial chapters. Bylund is clear in stating that the consumers do not look for efficiency, they look for better ways of satisfying wants that are higher in their value scale. They look for efficacy in solving their needs and wants. This is also where he discusses some hard pills, especially connected to the ability of people to consume and the relationship between economics and charity. For some readers, the direct way Bylund deals with such sensitive topics might be problematic.

Particularly relevant in the last chapters is the way the author brings to the forefront the unrealized; in other words, what ends up not happening because (usually well-intended) coercion has substituted free exchange in the market. This is the most important theoretical insight in the book, particularly in Chapter 10. Also in this chapter, discussion of the opportunity costs takes the centre stage. By choosing to do A, the individual is, necessarily, leaving all other options behind and the cost of what was not chosen is the actual true cost of A. One flaw in the explanation here can be found when Bylund discusses the decision to go to college. He focuses on the financial reward and on the comparison of what will happen with what could have happened if the individual would have chosen otherwise. Bylund, however, seems to fall into the *homo-economicus* trap and does not mention directly, nor explains, that subjective value might be playing a major role in this decision. In other words, the choice of going to college (as any other choice in life) might be almost unrelated to the financial reward and could be based solely on the willingness to pursue a given career, regardless of the financial benefits and costs associated with it. For the reader acquainted with the literature, this is implicit – and almost obvious in Bylund's reasoning – but it could be misunderstood by someone that does not have this kind of background.

The Seen, the Unseen and the Unrealized is an introduction to the economic way of thinking for people that have had some previous contact with the matter. The goal of the book is to modify – or at least provide an additional point of view – the perspective of public-policy analysis. The first six chapters would be an interesting read for students with some knowledge in mainstream economics and interested in deepening their understanding by relying on sharp logic and creative thought experiments. The focus on regulation comes to the forefront of the discussion in the second part of the book and is more of an illustration of the central concept topic: the working of the market process and how trying to direct it will have negative consequences. Bylund willingly (?) refrains from taking his analysis to more complex settings in which poli-

ticians and pressure groups would be acting. It would be interesting to see how his analytical framework would play out closer to real-life environments.

In all, this book cannot be considered an introductory economics book. It is not a traditional economic policy book either. In spite of the shortness, Bylund does a good job in bringing the economic way of thinking to the forefront of the policy discussion and in presenting the (almost never obvious) problems that will occur when free-exchange is substituted by coercion. Bylund's step-by-step thought experiment development helps the reader to further understand the market. At the same time, it opens one's eyes to the perils of the use of power over voluntary action to dictate the directions of the market process. People in academia, especially in public-policy, would gain from reading it and incorporating, or at least discussing the implications of Bylund's points. Entrepreneurs, politicians and citizens interested in understanding how to ferment economic and social development, and why it does not happen very often, should definitely take the time to read it.

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POSTSCRIPT

A Weak Case Against
Open Borders:
A Critique of JoshiDANNY FREDERICK
AND MARK FRIEDMAN

The moral status of national borders and the purported right of foreigners to cross them at will has recently drawn intense interest from libertarian and classical liberal theorists. We have contributed to the discussion ourselves (Frederick and Friedman 2020). Hrishikesh Joshi (forthcoming) is a useful introduction to the myriad of claims and supporting theories advanced by proponents of open or nearly open borders, and the counter-arguments asserted by those defending the right of liberal states to impose more extensive immigration controls. It does, however, have one striking and apparently culpable defect, namely, it fails to consider the strongest argument in favour of immigration control. That argument was propounded by us.

We argued (2020, pp. 29-31) that there are some societies, such as those in which Islamic fundamentalism is endemic, that resemble what Karl Popper (1945, pp. 173-175, 190) called 'closed societies,' in that they are intolerant, enforcing closed-mindedness and repressive norms by violence or threats of violence. People formed in such a culture often have difficulty adapting to western mores; in fact, they are often violently opposed to them. When they migrate to western liberal countries they tend to cluster together, which makes them less liable to assimilate and to shed their closed-society attitudes and behaviours. A consequence is that they sometimes commit acts of violence against people who conform to the western mores that the Islamists detest, such as people who are transgender or openly homosexual or women who dress in typical western style. Often, when they refrain from violence, they still engage in intimidation. The consequence for people in the host country is not just that they are subjected to violence and intimidation but also that they often curtail or modify their own behaviour to avoid being victims. They thereby suffer substantial inroads into their freedom. We argued that the prime obligation of a liberal state, or the libertarian's minimal state, is to safeguard the freedom of the persons within its jurisdiction. It is obligated to defend the freedom of those living outside its borders only to 'the extent that this is consistent with fulfilling its duty to secure the maximum equal freedom of the persons within its territory' (2020, pp. 26-27). To discharge its primary duty, it may need to control, but not necessarily eliminate, immigration from societies that strongly resemble closed societies.

We cited a number of academic studies, polls, and news accounts that strongly suggest that a majority (or in other cases, a substantial plurality) of the populations of major Muslim-majority states hold extremely illiberal attitudes, and that many migrants from such states to Germany, France, and the U.K. have carried this religiously-rooted be-

lief system with them (2020, pp. 29-30 and end notes 31-39). Therefore, we conjecture (2020, p. 30) that ‘a large and rapid influx of migrants from societies that resemble closed societies can lead to the development within a more-or-less liberal society of illiberal and intolerant enclaves.’ We conclude that ‘if our hypothesis survives testing by social-science research’ (2020, p. 31), liberal states should consider various options, consistent with their underlying principles, for immigration control.

What is perplexing about Joshi’s neglect of our paper is that he examines in some detail a couple of weaker arguments for immigration control which raise similar concerns for liberal societies. The first of those contends that an increase in immigration from some countries would cause an increase in crime. He says, first, that one’s conclusion will depend on the strength one attaches to a state’s obligations to its own citizens, as well as how much weight one puts on the supposed right to free movement; and, second, that blanket prohibitions of movement would seem to punish the many for the actions of a few, which grates against most plausible conceptions of justice (forthcoming, section 2). But, contra Joshi, it is not a matter of trading off the state’s obligations to its own citizens against immigrants’ supposed rights to free movement; it is a matter of a liberal state fulfilling its primary function. It is also misleading for Joshi to say that severely limiting the numbers of immigrants from societies that closely resemble closed societies punish the many for the actions of a few. There is no punishment; there is refusal to confer a benefit; and it is hardly the actions of just a few that are in question. In short, Joshi’s dismissal of the argument concerning an increase in crime, by neglecting to consider the strongest form of the argument, refuses to take the argument seriously.

The second argument for immigration control which Joshi considers that raises similar concerns to our argument, focuses on the degradation of a liberal state’s culture, broadly construed to encompass its ‘basic norms, values, and level of social trust.’ Joshi considers what response a liberal state is entitled to make if faced with large-scale influxes from countries ‘where policies like the death penalty for apostasy, the stoning of adulterers, mandatory clothing restrictions for women, etc. enjoy popular support?’ He worries that inaction under such circumstances would render liberalism ‘self-undermining,’ and that those taking an absolutist stance about freedom of movement are ‘committed to welcoming [liberalism’s] own eventual destruction’ (forthcoming, section 3). He cites his earlier paper, where he provided a more elaborate version of this argument, defending liberal societies as both intrinsically valuable, ‘given the relationships between coresidents that they embody,’ and instrumentally valuable, because the various freedoms guaranteed in liberal societies ‘promote certain kinds of cultural and scientific achievements’ (2018, p. 264). Furthermore, he argues that the goal ‘of maintaining and promoting the existence of liberal polities is a liberty-based aim’ (2018, p. 264), and is thus of sufficient gravity to override the right of free movement claimed by (illiberal) migrants.

We noted that, to the extent that Joshi’s defence of liberalism is based on the value of personal relationships, scientific achievements and the like, it is not ‘a strictly liberal defense of substantive immigration controls’ (2020, p. 34). That is, it is not grounded in the inherent value of freedom, which Joshi accepts as an overarching priority for purposes of his analysis. While the second prong of his argument does appeal to liberty itself, he does not link this, as we do, to the characteristic duties of a liberal state, but rather contends that the rights protected by liberal states in effect trump the freedom of would-be migrants. We observed that this argument, if successful, would at best constitute an ‘alternative way of showing that liberalism is compatible with substantive immigration controls’ (2020, p. 34).

It is worth noting that Joshi’s discussion of the threat to liberalism posed by migration from deeply illiberal populations in both his forthcoming and his 2018 is purely theoretical. In his 2018 paper he contemplates (pp. 262-263) the effect of large-scale migration from the nation of ‘Theocracy’ (characterized by blasphemy laws, the subjugation of women, and so on) to the country of ‘Liberal Democracy’ (which instantiates generally tolerant norms). In his subsequent work he worries about the same set of regressive, pre-Enlightenment beliefs referenced in his earlier paper, without assigning them to an imaginary country. In neither piece does he explicitly refer to political Islam or Muslim immigration, and he provides no empirical data regarding the nature and extent of this danger.

In contrast, our argument does not involve navigating what appear to be indeterminate trade-offs between the freedoms the liberal state confers on its residents and the supposed right of free movement. If the primary duty of a liberal state is, as we argue, to safeguard the freedom of the persons under its jurisdiction, and if it turns out that unrestricted inflows from deeply illiberal states imperil these liberties, then such facts seem to provide good reason for immigration control. We are open to the possibility that there are serious, even fatal flaws in our argument, but these would only be revealed by engaging with it.

Thus, while Joshi considers a number of arguments against open borders and considers how libertarians may respond to them, his paper is notably weak because he does not consider the strongest argument against open borders, namely, the argument that we develop in our 2020. Popper advised that, 'There is no point in discussing or criticizing a theory unless we try all the time to put it in its strongest form, and to argue against it only in that form' (1973, p. 266). Why does Joshi, in contravention of Popper's advice, state the case against open borders without considering the strongest form of the argument?

It seems unlikely that Joshi was simply unaware of our work. It was published in *Cosmos + Taxos*, in early April, 2020, a full eight months prior to the dissemination of Joshi's draft under discussion (dated December 2020); it was posted in draft form on the Academia.edu site (which is where we discovered Joshi's forthcoming chapter) for more than six months prior to being published; and that draft was discussed by the journalist Sam Kiss in his 2019. Joshi is an accomplished academic philosopher, so we must assume that he conscientiously searched the literature for relevant scholarship, especially any research that discussed his own writings, prior to submitting his final draft to the editors of this anthology. It seems that he made a deliberate decision to ignore our article. The effect is not just that his readers will be deprived of the opportunity to consider what we regard as a stronger, liberty-based argument for immigration control, but that they will also be deprived of data enabling them to make a more informed judgment regarding the imminence of the threat to liberal democracies posed by open borders. There are now major political parties pushing for restrictions on Muslim immigration across Europe, including in France ('National Rally'), Germany ('Alternative for Germany'), Italy ('Northern League'), Denmark ('Danish People's Party'), and Sweden ('Sweden Democrats'), among many others. As evidenced by the support President Trump received for his so-called 'Muslim Ban,' this sentiment is also present in the US. In short, this is one of those relatively rare instances where academic theorising has direct, real world implications.

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Editorial Information

AIMS AND SCOPE

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COSMOS + TAXIS offers a forum to those concerned that the central presuppositions of the liberal tradition have been severely corroded, neglected, or misappropriated by overly rationalistic and constructivist approaches. The hardest-won achievements of the liberal tradition has been the wrestling of epistemic independence from overwhelming concentrations of power, monopolies and capricious zealotries. The very precondition of knowledge is the exploitation of the *epistemic* virtues accorded by society's *situated* and *distributed* manifold of spontaneous orders, the DNA of the modern civil condition.

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