Social Science and the Problem of Interpretation: A Pragmatic Dual(ist) Approach

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Abstract:

In *Power Without Knowledge*, Jeffrey Friedman contends that ideational complexity can stymie social-scientific understanding and prevent the reliable predictive knowledge required of a well-functioning technocracy. However, even this somewhat pessimistic outlook may understate the problem of complexity. Ideational complexity is a problem with both cognitive and phenomenal dimensions and each of these dimensions poses unique problems. Further, due to its methodological individualism, Friedman's vision may neglect emergent layers of knowledge produced through social interaction, creating yet another source of known unknowns. Once these are taken into account, I argue that social science should embrace a pluralism regarding levels of analysis. This would recognize the multifaceted limitations on social-science knowledge production, furthering epistemic humility about their potential role in technocratic policymaking.

Keywords: epistemological individualism, ideational determinism, ideational heterogeneity, qualia, technocracy

Why don't social scientists know what they don't know?

Though related to the basic epistemological question of how researchers know what they know, the condition of not knowing can involve distinct issues related to the complexity of the systems under investigation (Friedman 2012a and 2012b; Jervis 1998; Lerner 2020a). To address this question, it is helpful to begin with Charles Manski's (2013, 11) simplification of the scientific process of knowledge attainment:

$$assumptions + data \rightarrow conclusions$$

In periods of "normal" science (Kuhn [1962] 2009)—for instance, physics operating entirely within longstanding Newtonian or Einsteinian paradigms—researchers hold the "assumptions" variable constant, such that variations in conclusions stem entirely from variations in data. During such research periods, discoveries are taken to be either "findings" or as spurs to collect data that will generate new findings. Accordingly, not-knowing stems entirely from insufficient data. Of course, in Kuhn's model scientific revolutions augur paradigm shifts that can undermine or complicate previously well-established "knowledge." But such revolutions are rare, and the majority of research in the natural sciences is grounded in the assumption of unquestioned laws.

Despite considerable efforts to "normalize" the social sciences, their paradigmatic background assumptions remain considerably more contested and contestable than those in the natural sciences. For this reason, not-knowing in the social sciences is a commensurately more complex condition. Not-knowing in the social sciences can stem not only from inadequacies in data collection, but also from contestation over human actors' background assumptions and, perhaps most importantly, from the oftentimes problematic system effects produced by inaccurate provisional assumptions and the data collected in their shadow. Background assumptions vary considerably, depending not only on researchers and their

subjects' philosophical wagers (see Jackson 2011), but also on the historical and cultural milieu within which concepts and theories are formulated and applied. As social scientists conduct research, their assumptions often infect their research subjects and pervert data through experimenter effects and related biases. Further, the social systems they study are often complex adaptive systems, with parameters and frameworks shifting over time in unexpected ways (Bousquet and Curtis 2011; Kavalski 2007). Taken together, these complications can hinder the progressive accumulation of universalistic knowledge in social sciences. While some research communities come to intersubjective agreement about baseline assumptions, a birds'-eye view of the social sciences reveals irreconcilable, foundational debates that inhibit widespread consensus on baseline facts, let alone policy solutions.

This added complexity implicit in social sciences' unknowns, and the conundrums it creates for policy makers is at the heart of Jeffrey Friedman's lucid new book *Power Without Knowledge* (Oxford University Press, 2019). Friedman argues that a particular type of complexity—ideational complexity—may make social scientists unable to comprehend the behaviour of those whom they study, let alone predict this behavior, as they must do when they act as technocrats. Unknowns stemming from the complexity of the ideational world may leave technocrats unable to design policies that both decisively address social ills and account for the seemingly endless universe of possible unintended consequences that stem from governing individual behavior.

Although in his preface, Friedman questions his book's suitability to the current political moment, *Power Without Knowledge* sheds enormous insight on one potent source of frustration with elites that has fueled the rise of Donald Trump. In this view, complexity and the not-knowing it produces are not simply byproducts of science's slow and oftentimes uneven accumulation of knowledge. Rather, not-knowing can be seen as inherent, to some degree, in social life. The intractability of not-knowing in social science can have enormous policy consequences. If the social world is defined by its partial unknowability—and if, as Friedman contends, it is in the nature of this unknowability that its contours are irregular and thus cannot easily be predicted—citizens have good reason to lose faith in elites who profess an uncanny (yet oftentimes opaque) ability to predict and control behavior.[1]

In this brief essay, I delve deeper into what Friedman identifies as the roots of this complexity—ideational heterogeneity. Drawing on insights from philosophy of mind, I argue that Friedman's discussion of complexity runs together two types of unknowns—the cognitive and the phenomenal—each of which presents distinct problems for social scientists. Although these two variants collapse into one larger realm under certain materialist ontologies of consciousness, their division proves useful not only given the limitations of current science, but also in elucidating new contours of the challenges Friedman identifies. In the final section, I build on this more complete vision of complexity to problematize Friedman's epistemological individualism. Although Friedman favors privileging individuals as the loci of ideational heterogeneity and, thus, as the source of the complexity that hinders social science analysis, this individualism may neglect further variants of complexity and resultant unknowns found in system-level emergent properties. Much of this problematization is suggestive and does not undermine the potency of Friedman's critique. Nevertheless, it does reveal the depth of the complexity problem Friedman identifies, as well as new avenues for its analysis.

[1] Despite my sympathy for the general public's distrust of policymaking elites' confidence, I am still unable to fathom how this loss of faith could possibly lead so many to support the candidacy of Donald Trump. See Friedman 2020.

I. IDEATIONAL HETEROGENEITY

The first chapter of *Power Without Knowledge* clears the ground for Friedman's analysis by pointing out that the truth about the scope and severity of public problems, and about the efficacy and costs of solutions, is not self-evident. The question of technocratic knowing or not-knowing, then, must be answered through some sort of empirical attempt to test our initial impressions. In Chapter 2, Friedman draws on Walter Lippmann's writings from the 1920s to suggest that these empirical attempts will constitute *interpretations*, and in Chapter 3 he argues that they are interpretations of the interpretations produced by the human agents who cause social and economic problems. *Heterogeneity* between the technocrats' interpretations of how agents are likely to behave in response to a technocratic initiative and the agents' own interpretations of how they should behave can cause technocrats' behavioral predictions to go awry. This is because, under modern conditions, no two people are likely to have identical webs of belief. Thus, technocrats' webs of belief may differ from agents' webs of belief significantly enough that the former incorrectly predict the responses of the latter.

Despite frequent assumptions to the contrary, Friedman argues that ideational heterogeneity is not random, so we have little reason to believe that it will average out as sample sizes increase. People's interpretations of how to behave stem from "non-random but opaquely determined" webs of belief that are logical but built upon unobservable, and, to some extent, heterogeneous inputs. These inputs stem from interpersonal communication from a variety of sources, taking place over the course of people's lives (144). While on a local scale, among friends and colleagues, or diligent intellectual historians analyzing research subjects, ideas can be somewhat reliably understood and anticipated,[2] on a macro level ideational heterogeneity leads to complexities that defy simplistic behavioral models. This is because the modeler, or the technocrat, is attempting to predict the behavior, and thus the ideas, of masses of people whose webs of belief are somewhat opaque; unlike friends and colleagues, after all, the modeler/technocrat has never even met the people whose behavior is being modeled/predicted. Friedman does not claim, however, to know *how much* of a problem this will pose, as this will vary from case to case (317-19).

Most positivist social scientists would agree that some realms of human behavior—falling in love, enjoying a work of art—involve such a complex web of prior beliefs and preferences that they are opaque to the non-intrusive methods available to most researchers. Nevertheless, they would argue that such factors as "homogenizing norms" (147), incentives, and biases lead to behavioral patterns that are significant and reliable enough to guide large-scale policymaking. Friedman agrees, in principle, and he grants, too, that the psychological processing behind ideational heterogeneity may be nomological, but he suggests that the ideational inputs into nomological processes may be so diverse that the resulting interpretations are too complex for social scientists to reasonably model in a given case (139). In a long section on the failures of neoclassical economics, he elucidates the fact that ideational heterogeneity can undermine predictions even in an arena—the marketplace—where many social scientists fallaciously assume that the single, unidimensional goal of wealth accumulation ensures individuals' predictability. Friedman argues that the requirement that individuals interpret their circumstances before acting may render even this rational realm too complex for reliable, durable predictions (183-95). This conclusion does not, however, entirely preclude effective policymaking. Friedman maintains that there may be homogenizing factors that suppress ideational heterogeneity, or that preserve it but suppress the idiosyncratic behavior to which it would otherwise lead. This leaves room for a

[2] For my own efforts at precisely this type of localized intellectual history, see Lerner 2018 and 2019a.

"judicious technocracy" that crafts public policy by investigating the balance of heterogenizing ideas and homogenizing forces, case by case (171-73). Thus, he does not deny the possibility of reliably predicting mass human behavior, and in fact he calls more than once for a "cultural revolution" against such anti-ideational assumptions as those found in positivist social science and neoclassical economics (314, 342, 352)—such that future technocrats would produce more accurate, judicious predictions. The larger message of *Power Without Knowledge*, then, is that we should recognize our ideational differences, leading to humility, tolerance, and a more humane society (343-45). Its narrower point about technocracy is that behavioral predictions could be improved if technocrats did not tend to ignore heterogeneous ideas.

However, along with Friedman's own epistemic humility goes an inability to predict *how much* a social science would improve technocratic prediction, and thus how much of a problem would remain—or, for that matter, how much of a problem idiosyncratic ideas can be expected to pose in the first place (317-19). Friedman rejects not only neoclassical apriorism, but social-scientific positivism, on the grounds that it attributes lawfulness to human behavior to the neglect of the possibility that future individuals, with different webs of belief from past individuals, will behave differently too (196-228). This, however, puts serious limits on his own predictive capacities: he does not think it makes sense to assume that even if he could adduce data about the degree to which technocratic predictions have backfired in the past—which he does not think he can do—these data would allow him to predict the future. In the future, different technocrats than those in the past will be trying to predict different populations' different behaviors (ibid.).

The Limits of Judiciousness

That said, Friedman may still be too optimistic about a judicious technocracy. Identifying reliable pockets of homogeneity in a sea of ideational heterogeneity would involve deciphering a level of complexity that seems liable to remain beyond the purview of social scientists. How can technocrats who are unable to access the opaque webs of belief in others' minds reliably predict which of the behavioral patterns they identify are stable and suitable for long-term policy making (with minimal unintended consequences) and which ones are simply spurious correlations liable to change over time? If these questions cannot be answered, then a judicious technocracy may be a mirage.

In his final chapter, Friedman attempts to avoid such questions by constructing an ideal type of a technocratic regime founded on the principle of voluntary exit (an "exitocracy"). Such a regime would take advantage of the fact that people's knowledge of their own dissatisfaction with a given set of circumstances is likely to be relatively reliable. This is especially the case when compared to the knowledge anyone is likely to have of the webs of beliefs of the millions of "anonymous others" who are the targets of technocratic behavior-modification programs. Insofar as personal, experiential knowledge is more reliable than predictive knowledge of anonymous others, Friedman argues, exit is epistemically preferable to "ordinary" technocracy, although exit mechanisms are themselves technocratic, such that an exitocracy counts as an "extraordinary" type of technocracy (322). An exitocracy, then, is a technocracy that engages in limited, targeted, and preferably judicious technocratic policymaking to ensure that individuals have the means and ability to exit, but refrains from the injudicious technocratic ambitions that, according to Friedman, characterize much of contemporary politics and government. Exit would relieve some of the problems that might be caused by the attempt to predict and then voice theories about others' anonymous behavior, even though Friedman does not pretend to know how bad those problems might be or how much relief an exitocracy could offer. And even though there would be many areas of

policy making left over where exit is not possible, this approach would leave the judicious "ordinary" provision of public goods as a path to relief (343)—if that is not itself impossible.

II. BEYOND COGNITIVE COMPLEXITY

Friedman's critique of social scientists' lofty ambitions, as well as his rejection of behaviorism in favor of a focus on ideas and (to whatever extent possible) a massified version of intellectual history, in which the ideas of the people whose behaviour technocrats try to control become the topic of social science, will be a balm for post-positivists frustrated by the encroachment of scientism and technologically driven methods into their fields. Such methods oftentimes downplay agency and dehumanize policymaking processes, with varying negative results. Further, his call for epistemic humility in the face of the social world's complexity proves vital, especially considering the so-called digital humanities' assault on the funding and prestige of traditional humanistic work (Da 2019).

Nevertheless, the opacity he identifies in our webs of belief is (ironically) a more complex phenomenon than Friedman outlines. Complexity à la Friedman (140) stems from the heterogeneity of ideas, a category in which he includes "'perceptions,' 'beliefs,' and 'interpretations,' along with hypotheses, theories, strokes of inspiration, and assumptions, implicit and explicit." This is perhaps an overly broad concept, covering multiple types of mental processes (including the psychological and phenomenal) that, in many ways, present distinct epistemological challenges.

In this section, I draw on the distinction David Chalmers (1995) draws between the easy problems of consciousness—those that can be explained functionally via cognitive models—and the hard problem of consciousness relating to phenomenal experience to distinguish between the potentially irreconcilable cognitive and phenomenal roots of complexity. Cognitive aspects of consciousness relate to functionalist variants of mental processing that can be modeled 'objectively,' as if the brain were purely an electrochemical computer. This maps loosely onto the cognitive products discussed by Friedman (137), for the most part, when he refers to "ideas": these include "inputs" into our webs of belief that are received from the variable streams of communication to which we are all exposed, which can combine to produce interpretive outputs. By contrast, phenomenal consciousness relates to the qualia of purely subjective experience: the fact that there is something that it is *like* to be a phenomenally conscious being (Chalmers 1997; Nagel 1974). "Qualia" refer to the phenomenal aspect of human experience—what it is like to see the color red, feel sandpaper, or confront the frustrations of bureaucracy at the Department of Motor Vehicles (DMV). Though the ontological status of qualia is hotly contested in philosophy of mind (Tye 2018), they are intuitively distinguishable from cognitive knowledge[3] or "thoughts," and their unapproachability for traditional social science methods poses an epistemological conundrum for researchers (Lerner 2020b). For this reason, even as scientists and philosophers debate whether qualia are illusions potentially explicable in conventional physical terms or whether explaining qualia requires the discovery of a new property or substance (Bennett 2005; Wendt 2015), a recognition of the division between thoughts and qualia can prove potent in epistemological critiques of conventional approaches to agency. Understanding how and why the DMV bureaucracy produces long, boring waits is substantively different from *experiencing* these waits oneself, and social scientists must recognize how these two forms of knowledge can differentially affect webs of belief and contribute to differing behaviors.

[3] This division, though often invoked in different terms, appears regularly in important theorizations across the social sciences. For example, in his seminal typology of memory, psychologist Endel Tulving (1972) made a distinction between what he referred to as the objective, factual realm of semantic memory and the subjective, experiential realm of episodic memory.

Although many philosophers and neuroscientists believe that these two aspects of consciousness are indistinct and that phenomenal experience is ultimately an illusion created by material forces (see Frankish 2017), current science has no means of linking the two, nor any widely accepted theory of how they could possibly be linked. For this reason, maintaining the dualism, without committing to it metaphysically, can prove pragmatic for scholars in the social sciences seeking to mobilize philosophy of mind's insights for their analysis (Lerner 2020). Instead of the catchall term *ideas* that Friedman employs to describe the units of both cognitive processing and phenomenal consciousness, then, I will refer to the simplest possible units of the former as "thoughts" and of the latter as "qualia." This division reveals two deeply intertwined yet distinguishable aspects of complexity that hinder technocratic understanding.

Cognitive Complexity due to Thoughts

Although Friedman refers at times to "experience" in ways that implicate qualia (ibid., 145), the diversity of agents' cognitive thoughts—their representations of the outside world that combine to form thoughts about how an agent should *act* in a given situation—is the chief source of epistemic complexity with which Friedman is concerned. Thus, different individuals are likely to receive somewhat heterogeneous inputs into their webs of belief, rendering their thoughts about the circumstances in which they must act somewhat opaque to those, such as social scientists and technocrats, who are trying to understand their ideas sufficiently to predict their behavior (ibid., 144-46). This does seem to pose quite a problem, although Friedman is careful to point out that the very nature of the problem prevents him from predicting precisely how significant it is likely to be (ibid., 146). That is, the degree of heterogeneity across various individuals' webs, based on the specific differences in the ideational inputs into those webs, is unobservable and thus, as a pragmatic matter, unpredictable for technocrats and political theorists alike. Granting this caveat about the magnitude of the resulting problem for technocracy, Friedman may nevertheless be too optimistic about its susceptibility to a "judicious" solution—not only, as previously indicated, because of the difficulty of the judicious technocrat's position vis-à-vis thoughts, but because of the added need to take account of qualia.

To predict people's behavior, judicious social scientists must not simply understand the component parts of their webs of belief, but also how these component parts interact depending on timing, emphasis, emotional regulation, and a host of other factors. Moreover, focusing solely on the complexity inherent in the construction of individuals' webs of belief can neglect how responding and reacting to these webs may beget further layers of complexity—a point especially relevant to policy making. Even social and economic policy initiatives that judiciously recognize the ideational roots of behavior are liable to create second- and third-order complications as individuals react to their incentive structures. Policy makers, in response, face incentives to respond to individuals' reactions, potentially creating cycles shaped by unintended consequences (see Hoffmann and Riley 2002). This dynamic describes, for example, why policy initiatives designed to crack down on the flow of drugs across borders tend to fail. As policymakers respond to smugglers' tactics, smugglers interpret policy makers' methods and adjust, leading to a seemingly endless game of cat-and-mouse (Nixon 2017). These cycles of policymaking and response create second- and third-order complications distinct from the second-order complexity that Friedman thinks will face a judicious technocracy. And even acknowledging all of these different layers of complexity, social scientists must further consider how they may interact with various contexts—another source of complexity.

Given this situation, it should be no surprise that many social scientists have come to view webs to belief and qualia alike as red herrings. In this sense, behaviorism—focusing on individuals' actions rather than their ideas—is a natural approach for pragmatists wary that policies that account for slippery thoughts and feelings will only lead to adaptation beyond their control, as well as for defeatists resigned to finding broad historical trends, at best, rather than accurately predicting future changes. Nevertheless, despite the rabbit holes to which both thoughts and qualia may lead, Friedman is right to point out that they are vital to policy making and cannot simply be ignored. In key cases, for example, buried in them may be the reasons why an individual either chooses to reject violence, offer sympathy to violent actors online, join an extremist group, or even organize a violent attack. For a society concerned about predicting such future events rather than simply recognizing broad historical trends liable to change alongside shifting cultural mores, behaviorism will prove utterly insufficient.

Phenomenal Complexity due to Qualia

The addition of qualia to this picture, however, reveals such local comprehensibility can be a mirage, belied by an added layer of potentially incomprehensible policy-relevant *phenomenal* complexity.

In making this argument, I recognize that introducing phenomenal consciousness into debates about policy making might inspire skepticism. Indeed, some who accept an intuitive division between thoughts and qualia might still object that qualia do not constitute *policy-relevant* knowledge. Qualia, after all, must be translated into thoughts before they can affect the physical world by motivating actions. According to this line of thinking, while qualia constitute a form of knowledge, they are not policy-relevant knowledge until they are intellectualized in some way and transformed into a cognitive disposition or thought. In other words, what it is like to be thirsty is not relevant to policy making; it is only relevant if this becomes a thought that could potentially shape language or action.

However, such a quick dismissal of the role of qualia in policy making can be problematic. Indeed, this rejection of the subjective realm is, in many ways, an extension of the anti-agentic behaviorism that Friedman criticizes for neglecting individuals' mostly inaccessible, sometimes mystifying, yet behaviorally determinative webs of belief. No matter one's ontological disposition regarding consciousness, all philosophers of mind would agree that qualia (even if they are, ultimately, a sophisticated illusion) are deeply linked to the material world. These links are multifaceted and opaque, yet they allow the physical world to shape experience and experience to shape thoughts and behavior. Many intellectualized thoughts woven into an individual's web of beliefs can remain either silent or salient in memory due to their experiential corollaries (qualia), and oftentimes qualia lead to instinctual behaviors that are only intellectualized as thoughts after they are performed. For example, as anyone would attest, the abstract thought that hot things burn the skin is made all the more memorable when learning it is accompanied by the qualia of excruciating pain. Without reference to the qualia of pain, researchers lose a crucial insight into what makes the abstract thought meaningful for individuals and what behaviors become more or less likely to arise if they do not heed this meaning.

Thus, the thought that hot things burn the skin is likely to be present in a great number of individuals' webs of belief. A recognition of this simple fact contributes to numerous policy decisions, including regulations surrounding infrastructure and even the permissibility of such activities as public barbeques. Oftentimes policymakers assume—perhaps because of their past experiences—that people will know not to perform difficult, vigorous dance numbers adjacent to active barbeques, and thus they fail to legislate against such activity, choosing only to intervene in less obvious scenarios. But the abstract thought must contend

with an array of others in any given web of belief, such that people do occasionally burn themselves on barbeques during lapses of judgment. Once in a while, a relaxing Sunday in the park can lead to a hospital visit.

In this sort of situation, qualia can play a vital role in determining the topography of individuals' webs of belief, as different thoughts become more or less prominent due to past experiences. Because having felt the qualia of burning oneself on a barbeque is likely to make the thought that "hot things burn the skin" far more salient in an individual's web of belief, policymakers cannot neglect the potential role of the traces of this experience in determining how people will behave and, ultimately, the policy responses necessary to govern this behavior. Were someone to graze a lit barbeque but miraculously escape without the qualia of pain (perhaps by virtue of insulated clothing or toughened skin), it is likely that the dangers of hot things would be less prominent in her web of belief than had the accident occurred and caused considerable pain—even though the same thought might be in this person's mind as well as the mind of one who had been burned. Thus, qualia can make otherwise banal factual knowledge (thoughts) come alive for individuals, shaping the topography of ideas in their webs of belief even in cases where the cognitive thought content does not change. Given the limitations of science in understanding the roots and shape of qualia, however, as well as the enormous difficulty scientists have in gaining access to the subjective residue of experience, epistemologists should, pragmatically speaking, consider qualia both a form of knowledge and yet another inaccessible locus of complexity and unknowability (Lerner 2020a). To the extent that this source of complexity shapes the topography of webs of belief, which, in turn, shape behavior, it too should be incorporated into policy analysis.

Unfortunately, those inclined to recognize the importance of qualia to people's policy-relevant webs of belief cannot cordon them off as a single variable that can be controlled for in the usual ways. Rather, qualia must be understood as producing a further layer of phenomenal complexity, complete with its own system effects as it integrates into heterogeneous webs of belief. This layer stems from the complex and opaque linkages between qualia and objective material facts. Qualia do not predictably and evenly align with various physical realities, but rather heterogeneously associate with them. For example, while most people would find burning themselves on a barbeque painful, they would likely do so to different degrees that do not correlate linearly with the severity of the burn's material damage. Some people will feel the same barbeque burn and find the pain mild, while others will find it excruciating. Indeed, some masochists may even endure the exact same physical experience and material damage to skin, but associate the burn instead with the qualia of pleasure. The non-random, adaptive, and opaquely determined connections between qualia and the objective facts that determine them multiply the already complex picture painted by cognitive complexity, creating further inaccessible policy-relevant complications.

While the example of barbeques may seem risibly simplistic and distant from social scientific inquiry, qualia-induced complexity has been at the heart of the recent debate over "trigger warnings" on college campuses, as well as the relevant policy making that should govern them at the university, state and federal levels (Manne 2015; Robbins 2016). The premise of a trigger warning is that some content produces unpleasant, sometimes horrific qualia in certain people, despite no presence of *physical* danger. Oftentimes, these qualia stem from associations between content and past traumatic experience, but such connections are rarely systematic or, for that matter, easily discernible. Some trauma sufferers do not desire trigger warnings, some do, and some may request them at certain points but not others. Other people who have not themselves experienced trauma may nonetheless desire trigger warnings as the content brings up unpleasant feelings due to vicarious learning or associations. In this sense, just as with the interpretive diversity highlighted by Friedman, the

qualia produced by certain academic material is not reducible to its intellectual, explicit cognitive thought content—it is interwoven in webs that include both thoughts *and* qualia.

III. THE PROBLEM WITH EPISTEMOLOGICAL INDIVIDUALISM

The distinction between qualia and thoughts outlined in the previous section helps elucidate just how complex ideational complexity really is. It poses a variety of epistemological challenges, including the opaque interactions of thoughts and qualia in individuals' webs of belief, the problematic accessibility of thoughts and qualia to the methods of current science, and the multiplicity of possible interactions of individuals in social settings that will shape decision-making. In addition, the complex interactions of thoughts, qualia and the external world that produces webs of belief *within* individuals also suggests that Friedman's epistemological individualism may neglect yet further layers of complexity created *between* individuals. Indeed, the complex interactions of individuals' webs of belief can produce emergent logics and knowledge that are irreducible to individuals.

Taking these emergent properties into analysis problematizes Friedman's decision to regard individuals as the sole "creators and loci" of ideational complexity (149) and suggests the need for pluralism regarding levels of analysis. In this section, I outline how this emergent knowledge can problematize Friedman's parsimonious epistemological individualism. I further outline how pluralism regarding levels of analysis might prove pragmatic, as it shelves thorny ontological questions in favor of more tractable epistemological ones.

Friedman's argument for epistemological individualism stems from his belief that individuals are the sole source of novel, fallible ideas that are communicated from person to person in social life. This belief implies that attributing behavioral patterns to the logic of groups of individuals, rather than of the individuals themselves, ignores the need for such logics to be interpreted by individuals if they are to result in actions. When groups of individuals "are treated as unitary actors infallibly following the logic of their situations, as if the situations did not have to be interpreted by someone," Friedman argues, scholarship overlooks the fact that "only individuals can produce such interpretations (or any other interpretations)." Ultimately, Friedman argues that we need to attend to individuals' interpretations because "individuals are the biological loci of the webs of belief that give rise to interpretation." Though interactions within groups can homogenize interpretations, individuals also produce the ideational heterogeneity that frustrates social science's predictive capacity. Thus, according to Friedman, the move from individual-level to group-level analysis effaces the possibility of erroneous homogenized interpretations of the environment (e.g., conveyed to the masses by the news media) and heterogeneous interpretations among individuals, in both cases leading to behavior we would not predict from the environment alone.

This line of thinking benefits from Friedman's critique of Charles Taylor's assertion, in "Interpretation and the Sciences of Man," that "intersubjective social reality" has an ontological status independent of its individual members (Taylor 1971, 29). Taylor's approach, Friedman argues, reifies collective metaphors such as "culture," "society," and "the state." According to Friedman, this approach neglects the fact that social, cultural, and political realities are entirely reducible to actions taken by individuals, because of ideas developed and interpersonally communicated by individuals (149). Taylor's view, in contrast, lends itself to an uncritical functionalism whereby individuals' ideas are homogeneous reactions to societal truths (159). Therefore, Friedman contends, an ideationally sensitive (that is, "judicious") social science would reject such holistic analysis as providing false comfort to technocrats seeking to simplify large numbers of research subjects' heterogeneity. A judicious approach would necessarily model itself not after sociology or economics, which

so often ignore or explain away ideas at, respectively, the societal and individual levels. Rather, it would veer towards intellectual history, broadly conceived to include analyses of public opinion, so as to interrogate the ideational sources, differences, tacit assumptions, inconsistencies, and errors in people's webs of belief—which shape the social world through the actions to which they lead (160-64).

While I am sympathetic to Friedman's ontological critique Taylor's holism, as political epistemology it may prove equally problematic for two main reasons. The first is simply practical, regarding the impossibility of meaningfully reducing certain forms of social knowledge, such as language or culture, to the actions of individuals. Friedman rejects Taylor's assertion of the reality of intersubjective realms on the basis that all presumably shared understandings between individuals can be traced back to individuals' interpretations and communicative actions. Borrowing Alasdair MacIntyre's example of the sport of hockey, which rests on "collective expectations" about rules and strategy, Friedman argues that uncritically reifying these expectations neglects the role of individuals in hockey's intellectual history. "If we could investigate with perfect hindsight the history of hockey, we would surely find that the game was originated by individuals, either deliberately or through the evolution of forms of play over time brought about by individual innovations, deliberate or accidental" (153).

Yet, even in the case of a single sport, played primarily by Westerners in the nineteenth and twentieth centuries, such a complete intellectual history may not be possible. In the case of more complex forms of collective knowledge, such as language and culture, with more opaque historical origins, this is almost surely the case impossible. If the goal of political epistemology is to produce knowledge of political life, then surely an approach that favors unravelling every thread of every social sweater is counterproductive. For this reason, accepting social knowledge as a methodological tool may be vital to the sort of intellectual history Friedman favors, so long as it does not entail uncritically reifying such social knowledge ontologically. Indeed, this is exactly the move that Friedman favors regarding "the individual," which he regards as a useful "methodological construct" due to the brain's role in editing and housing webs of belief, despite individuals' reducibility to subsystems like the frontal lobe (156). Pragmatism, in this case, may dictate setting aside thorny ontological questions in favor of a more tractable debate about which social and political entities are worth positing as useful methodological constructs in the interests of knowledge production. Taylor's uncritically reified collective forces may not make the cut, but surely other supra-individual constructs would.

Friedman agrees that we should treat certain supra-individual entities as potentially useful placeholder "metaphors" or "methodological constructs" for reasons of emphasis (149). Yet, Friedman's methodological individualism may raise a second potential set of epistemological issues relating to the emergent properties of social groups. These emergent properties may create forms of knowledge that are poorly captured by treating collectivities as mere metaphors for collections of individuals' beliefs and actions.Just as brains can integrate billions of firing neurons to produce thoughts and qualia over and above the scope of any discrete neuronal firing patterns, socio-political groups can integrate individuals' webs of belief to create logics and knowledge that cannot necessarily be reduced to individuals and their communication.

The clearest recent example of epistemologically irreducible emergent knowledge comes from Christian List and Philip Pettit's work on group agency, which outlines how organized groups of individuals can become agents, developing distinct beliefs and desires from those of their individual members (List and Pettit 2006, 2010, and 2011). Deborah Tollefsen (2015, 60–62; see also Fleming 2017) illustrates this thinking with the simplified example of a three-person admissions committee considering new potential Ph.D. candidates

on four grounds: test scores, grades, reference letters, and writing samples. To gain admission, each applicant must pass muster on all four. For a single candidate A, the committee members vote as follows:

	Test scores	Grades	Reference Letters	Writing Samples	Accept
Committee Member 1	Yes	No	Yes	No	No
Committee Member 2	No	Yes	Yes	Yes	No
Committee Member 3	Yes	Yes	No	Yes	No
Committee Majority	Yes	Yes	Yes	Yes	Yes

TABLE 1. Admissions committee members' votes for candidate A.
(*Source: Tollefson 2015, 61.)*

This scenario presents a dilemma for the committee. Individually, each member believes that candidate A should not be accepted, as each committee member believes that at least one aspect of the application is lacking. Yet if the committee were to vote on each of the four aspects of the application, a majority would support the application by concluding that the candidate has sufficient test scores, grades, letters, and writing samples. Thus, if voting were to take place on each aspect, rather than on the candidate's entire application, he or she would gain admission.

In order for the committee as a whole to become a rational, consistent actor, ensuring that its decisions form a coherent whole over time, List and Pettit (2011) demonstrate that it must often adopt the premise-based approach that admits the candidate. Otherwise, the group's actions will be inconsistent with its stated intention—in this case, admitting candidates with what are widely accepted to be sufficient grades, test scores, reference letters, and writing samples (see Tollefsen 2015, 62–63). What this means in practice is that the committee members have an incentive to establish the admissions committee as a group agent—one with properties that supervene on those of members, making them irreducible to individuals. This is even more the case in complex groups such as political institutions and states, where decision-making is far more complex than simple voting and individuals may not be privy to complex decision-making structures. Further, in many cases group procedures will remain the same even as membership changes, leading to scenarios in which individual members do not understand the group's formation or the basis for its collectivized methods of rationalization, but accept its procedures for making decisions *as a group.* Whatever the ontological status of the group as a social agent, in such scenarios it produces desires and intentions (knowledge) that cannot be fully explained by reduction to individuals. No member of the group may desire candidate A's admittance, even as the group as a whole does. Without reference to the group, knowledge of the committee's decisions will suffer.

The examples employed here are stylized and simplistic, leaving them open to the counterargument that individuals within groups may construct a metaphorical group agent to regulate their social behavior. But reducing the group to a metaphor neglects the fact that knowledge about its intentions and desires is plainly not reducible to the knowledge of individuals. This conundrum becomes more apparent as groups and the decisions they face become more complex, and their ability to produce intentions and desires even more distant

from those of group members increases. This distance is further magnified when group membership changes, but procedures remain in place for collectivizing rationality, as is so often the case in political institutions. For this reason, states are efficient mechanisms for organizing group-level emotions and consciousness, irreducible to the individuals within them, much in the way that brains are efficient organizational hubs for creating similar properties out of neurological subsystems (Lerner 2020b). To be sure, this does not imply endowing groups with any particular ontological status. Rather, it simply demonstrates that continual reduction to individuals and their communication threatens to dissolve the group-level logics and knowledges that are so vital to macro-level political analysis.

Acknowledging the possibility of epistemically irreducible knowledge creates issues for the methodological individualism Friedman favors. It highlights that continual emphasis on reduction will not only make social science needlessly complicated, but will also neglect very real logics, knowledge, and properties that emerge at the group-level. My solution here is thus simple and pragmatic. Rather than engaging in intractable debates about social ontology and its potential for reduction to individual ontology, scholarship should embrace a pragmatic pluralism regarding levels of analysis. To a degree, this implies treating all social entities as methodological constructs that may indeed, potentially, be ontologically reducible—from societies down to individuals, neurons, molecules, atoms, and quarks. Yet it also entails accepting that these constructs exist, because at dense levels of organization they can produce emergent properties irreducible to their component parts. Thus, scholarship should select which agents and forces to include in analysis based on their utility in explaining phenomena in question. This approach would recognize multiple possible levels of organization as loci of knowing and not-knowing, not just the level of dense neuronal organization within the individual's brain.

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In spite of my critiques of Friedman's treatment of ideas, as well as my disagreement with his individualism, *Power Without Knowledge* is an immense achievement—one that is worthy of significant debate. Friedman has identified significant pathologies across the social sciences that should worry researchers in virtually all disciplines. His arguments should rightfully bring scrutiny to the self-proclaimed scientific status of many social-science research programs and also fundamentally reshape social scientists' place in the policy-making process. While I have little hope that this book will stymy disciplinary trends (especially present in political science) towards fetishizing methods, and away from more substantive concerns about methodology and epistemology, Friedman has written a potent call for intellectual humility among social scientists and, thus, epistocrats, as well as citizen-technocrats.

In an era dominated by populist movements and fake news that relativize knowledge at every level, Friedman has accurately diagnosed a crisis facing academic knowledge production. Although his prescription is not an easy pill to swallow, it does help reframe the way academics see their potential role in policy debates, as well as the limitations of their expertise.

REFERENCES

Avramides, Anita. 2019. "Other Minds" ed. Edward N. Zalta. *The Stanford Encyclopedia of Philosophy*. https://plato.stanford.edu/archives/sum2019/entries/other-minds/.

Bennett, Karen. 2005. “Why I Am Not a Dualist.” http://www.nyu.edu/gsas/dept/philo/courses/consciousness05/BennettDualist.pdf (January 20, 2020).

Bousquet, Antoine, and Simon Curtis. 2011. “Beyond Models and Metaphors: Complexity Theory, Systems Thinking and International Relations.” *Cambridge Review of International Affairs* 24(1): 43–62.

Chalmers, David J. 1995. “Facing up to the Problem of Consciousness.” *Journal of consciousness studies* 2(3): 200–219.

Chalmers, David John. 1997. *The Conscious Mind: In Search of a Fundamental Theory*. New York: Oxford University Press.

Da, Nan Z. 2019. “The Digital Humanities Debacle.” *The Chronicle of Higher Education*. https://www.chronicle.com/article/The-Digital-Humanities-Debacle/245986 (January 16, 2020).

Fleming, Sean. 2017. “Artificial Persons and Attributed Actions: How to Interpret Action-Sentences about States.” *European Journal of International Relations* 23(4): 930–50.

Frankish, Keith. 2017. *Illusionism: As a Theory of Consciousness.* Luton, Bedfordshire: Andrews UK. https://apps.uqo.ca/LoginSigparb/LoginPourRessources.aspx?url=http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&AN=1735703 (January 17, 2020).

Friedman, Jeffrey, ed. 2012a. “Symposium: Robert Jervis’s System Effects After 15 Years.” *Critical Review* 24(3): 291–312.

———. 2012b. “System Effects and the Problem of Prediction.” *Critical Review* 24(3): 291–312.

———. 2019. *Power without Knowledge: A Critique of Technocracy*. New York: Oxford University Press.

Hoffmann, Matthew J., and John Riley. 2002. “The Science of Political Science: Linearity or Complexity in Designing Social Inquiry.” *New Political Science* 24(2): 303–20.

Jackson, Patrick Thaddeus. 2011. *The Conduct of Inquiry in International Relations: Philosophy of Science and Its Implications for the Study of World Politics*. London: Routledge.

Jervis, Robert. 1998. *System Effects: Complexity in Political and Social Life*. Princeton, NJ: Princeton University Press.

Kavalski, Emilian. 2007. “The Fifth Debate and the Emergence of Complex International Relations Theory: Notes on the Application of Complexity Theory to the Study of International Life.” *Cambridge Review of International Affairs* 20(3): 435–54.

Kuhn, Thomas S. 2009. *The Structure of Scientific Revolutions*. 3. ed., [Nachdr.]. Chicago: Univ. of Chicago Press.

Lerner, Adam B. 2018. “Political Neo-Malthusianism and the Progression of India’s Green Revolution.” *Journal of Contemporary Asia* 48(3): 485–507.

———. 2019. “Collective Trauma and the Evolution of Nehru’s Worldview: Uncovering the Roots of Nehruvian Non-Alignment.” *The International History Review* 41(6): 1276–1300.

———. 2020a. “Theorizing Unpredictability in International Politics: A Postfoundational Approach to Trump and His Doctrine.”

———. 2020b. “What’s It like to Be a State? An Argument for State Consciousness.” *International Theory*: 1–27.

List, Christian, and Philip Pettit. 2006. “Group Agency and Supervenience.” *The Southern Journal of Philosophy* 44(S1): 85–105.

———. 2011. *Group Agency: The Possibility, Design, and Status of Corporate Agents*. Oxford ; New York: Oxford University Press.

Manne, Kate. 2015. “Why I Use Trigger Warnings.” *The New York Times*.

Manski, Charles F. 2013. *Public Policy in an Uncertain World: Analysis and Decisions*. Cambridge, MA: Harvard University Press.

Nagel, Thomas. 1974. “What Is It Like to Be a Bat?” *The Philosophical Review* 83(4): 435.

Nixon, Ron. 2017. “By Land, Sea or Catapult: How Smugglers Get Drugs Across the Border.” *The New York Times*. https://www.nytimes.com/2017/07/25/us/drugs-border-wall.html (January 23, 2020).

Pettit, Philip. 2010. “Groups with Minds of Their Own.” In *Social Epistemology: Essential Readings*, eds. Alvin Goldman and Dennis Whitcomb. Oxford: Oxford University Press.

Robbins, Susan P. 2016. “From the Editor—Sticks and Stones: Trigger Warnings, Microaggressions, and Political Correctness.” *Journal of Social Work Education* 52(1): 1–5.

Tollefsen, Deborah. 2015. *Groups as Agents*. Malden, MA: Polity.

Tulving, Endel. 1972. “Episodic and Semantic Memory.” In *Organization of Memory*, eds. Endel Tulving and Wayne Donaldson. Academic Press. https://books.google.co.uk/books?id=jGpKAAAAMAAJ.

Tye, Michael. 2018. “Qualia.” In *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta. Metaphysics Research Lab, Stanford University. https://plato.stanford.edu/archives/sum2018/entries/qualia/ (January 20, 2020).

Wendt, Alexander. 2015. *Quantum Mind and Social Science: Unifying Physical and Social Ontology*. Cambridge, United Kingdom ; New York: Cambridge University Press.