Rethinking the Knowledge Problem in an Era of Corporate Gigantism[1]

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A preeminent theorist of laissez-faire, Friedrich von Hayek called the "knowledge problem" an insuperable barrier to central planning. Knowledge about the price of supplies and labor, and consumers' ability and willingness to pay, is so scattered and protean that even the most knowledgeable authorities cannot access all of it. No person knows everything about how goods and services in an economy should be priced. No central decision maker can grasp the idiosyncratic preferences, values, and purchasing power of millions of individuals. That kind of knowledge, Hayek said, is *distributed*.

However, in an era of artificial intelligence and mass surveillance, the allure of central planning has reemerged—this time, in the form of massive firms. Having logged and analyzed billions of transactions, Amazon knows intimate details about all its customers and suppliers. It can carefully calibrate screen displays to herd buyers toward certain products or shopping practices, or to copy sellers with its own, cheaper, in-house offerings. Mark Zuckerberg aspires to omniscience of consumer desires, profiling nearly everyone in Facebook, Instagram, and Whatsapp, and then leveraging that data trove to track users across the web and into the real world (via mobile usage and device fingerprinting). Indeed, you don't have to use any of those apps to end up in Facebook/Instagram/Whatsapp files—profiles can be assigned to you. Google's "database of intentions" is legendary, and antitrust authorities around the world have looked with increasing alarm at its ability to squeeze out rivals from search results once it gains an interest in their lines of business. Google knows not merely what consumers are searching for, but also what other businesses are searching, buying, emailing, planning—a truly unparalleled match of data processing capacity to raw communication flows.

Nor is this logic limited to the online context. Concentration is paying dividends for the largest banks (widely assumed to be too big to fail), and major

1 This essay originally appeared as "Tech Platforms and the Knowledge Problem" in *American Affairs*, Summer 2018. It is reprinted with kind permission of *American Affairs*.

health insurers (now squeezing and expanding the medical supply chain like an accordion). Like the digital giants, these finance and insurance firms not only act as middleman, taking a cut of transactions, but also aspire to capitalize on the knowledge they've gained from monitoring customers and providers in order to supplant them and directly provide services and investment. If it succeeds, the CVS-Aetna merger betokens intense corporate consolidations that will see more vertical integration of insurers, providers, and a baroque series of middlemen (from pharmaceutical benefit managers to group purchasing organizations) into gargantuan health providers. A CVS doctor may eventually refer a patient to a CVS hospital for a CVS surgery, followed up by home health care workers employed by CVS who bring CVS pharmaceuticals—all covered by a CVS/Aetna insurance plan, which might penalize the patient for using any providers outside the CVS network. While such a panoptic firm may sound dystopian, it is a logical outgrowth of health services researchers' enthusiasm for "integrated delivery systems," which are supposed to provide "care coordination" and "wraparound services" more efficiently than America's current, fragmented health care system.

The rise of powerful intermediaries like search engines and insurers may seem like the next logical step in the development of capitalism. But a growing chorus of critics questions the size and scope of leading firms in these fields. The Institute for Local Self-Reliance highlights Amazon's manipulation of both law and contracts to accumulate unfair advantages. International antitrust authorities have taken Google down a peg, questioning the company's aggressive use of its search engine and Android operating system to promote its own services (and demote rivals). They also question why Google and Facebook have been acquiring at least two companies a month, for years. Consumer advocates complain about manipulative advertising. Finance scholars lambaste megabanks for taking advantage of the implicit subsidies that too big to fail status confers.

Can these diverse strands of protest and critique coalesce into something more durable and consistent? This essay explores possible forms to channel social and economic discontent over the next few decades. I start by giving an accounting of where we are: a hierarchical, centralized regime, where corporate power is immense, and where large national apparatuses of regulation seem to be the only entities capable of reining it in. Against this economic reality, I can discern two vital lines of politico-economic critique at present.

Populist localizers want a new era of antitrust enforcement to rein in giant firms. These Jeffersonian critics of big tech firms, megabanks, and big health care combinations are decentralizers. They believe that power is and ought to be distributed in a just society. They promote strong local authorities, who are located closer to their own citizens.

Others have promoted gigantism as inevitable or desirable, and argue that we simply need better rules to cabin abuses of corporate power. Today's Hamiltonians argue that massive stores of data are critical to the future of artificial intelligence—and thus, to productive dynamism of the economy. They focus on better regulating, rather than breaking up, leading firms.

Jeffersonians and Hamiltonians have very different long-term views on what an optimal economy looks like. In the long-run, their visions are probably irreconcilable. However, in the short run, both sets of reformers offer important lessons for policymakers grappling with the power of massive tech, finance, and health care firms. This essay explores those lessons, specifying when a Jeffersonian approach is most appropriate, and when Hamilton's heirs have the better approach.

The Jeffersonian/Hamiltonian Divide

The tech policy landscape is often bleak. Corporate-funded think tanks strive to keep reform options in a relatively narrow window of tweaks and minor changes to existing law. The curse of over-specialization in the academy also keeps many law and policy professors on a short leash. Nevertheless, there are pockets of vitality in the field. Two camps that have arisen include a decentralizing camp, which I'd call Jeffersonian, and a more centralizing, Hamiltonian tendency that is comfortable with industrial "bigness."

The Jeffersonian school has coalesced around the problem of lax antitrust enforcement in the United States, and competition promotion more generally. The Open Markets Institute, kicked out of the New American Foundation for being too hostile to Google, has led the charge. Leaders at OMI, like Matt Stoller and Barry Lynn, argue that the Federal Trade Commission (FTC) should break up Facebook, establishing Instagram and WhatsApp as competing social networks. Lina Khan, also at OMI, has written an exhaustive critique of Amazon's gigantism that is already one of the *Yale Jaw Journal*'s most downloaded articles. The emphasis on subsidiarity in Catholic Social Thought is also a font of decentralist theory, often invoked by conservatives to protect the autonomy of local authorities and civil society institutions.

The Hamiltonians include traditional centrists (like Rob Atkinson, who recently co-authored *Big is Beautiful* with Michael Lind), as well as voices on both ends of the political spectrum. Recapitulating Schumpeter's praise of monopoly as a spur to growth, Peter Thiel's *Zero to One* is a paean to monopoly power, justifying its perquisites as the just and necessary reward for dramatic innovation. On the left, Evgeny Morozov does not want to see the data stores of the likes of Google and Facebook scattered to a dozen different versions of these services. Rather, he argues, they are most likely natural monopolies: they get better and better at each task they take on when they have access to more and more pooled data from *all* the tasks they perform. The ultimate left logic here is toward fully automated luxury communism, where massive firms use machine learning and 3-D printing to solve hunger, save the environment, and end the problem of scarcity.[2] Left centralizers also argue that problems as massive as climate change can only be solved by a Hamiltonian approach.

The Jeffersonian and Hamiltonian visions lead to very different policy recommendations in the tech space. Jeffersonians want to end Google's acquisition spree, full stop. They believe the firm has simply gotten too powerful. But even some progressive regulators might wave through Google's purchase of Waze (the traffic monitoring app), however much it strengthens Google's power over the mapping space, in hopes that the driving data may accelerate its development of self-driving cars. The price of faster progress may be the further concentration of power in Silicon Valley. To Jeffersonians, though, it is that very concentration (of power, patents, and profits) in megafirms that deters small businesses from taking risks to develop breakthrough technologies.

Facebook's dominance in social networking raises similar concerns. Privacy regulators in the US and Europe are investigating whether Facebook did enough to protect user data from third-party apps, like the ones that Cambridge Analytica and its allies used to harvest data on tens of millions of unsuspecting Facebook users. Note that Facebook itself clamped down on third party access to data it gathered in 2013, in part thanks to its worries that other firms were able to construct lesser, but still powerful, versions of its famous "social graph"—the database of intentions and connections that makes the social network so valuable to advertisers.

For Jeffersonians, the Facebook crackdown on data flows to outside developers is suspicious. It looks like the social network is trying to monopolize a data hoard that could prove essential raw materials for future start-ups. However, from a Hamiltonian perspective, securing the data trove in one massive firm looks like the responsible thing to do (as long as the firm is well-regulated). Once the data is permanently transferred from Facebook to other companies, it may be practically very hard to assure that it is not misused. Competitors (or "frenemies," in Ariel Ezrachi and Maurice Stucke's terms) cannot access data that is secure in Facebook's servers—but neither can hackers, blackmailers, or shadowy data brokers specialized in military grade psy-ops. To stop "runaway data" from creating a full-disclosure dystopia for all of us, "security feudalism" seems necessary.

Policy conflict between Jeffersonians and Hamiltonians, "small is beautiful" democratizers and centralist bureaucratizers, will heat up in coming years. To understand the role of each tendency in the digital sphere, we should consider their approaches in more detail.

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2 Authors in this vein include Leigh Phillips and Michal Rozworski, *People's Republic of Walmart (Verso, 2019); Aaron Bastani, Fully Automated Luxury Communism* (Verso, 2019), and Peter Frase, Four Futures (2016).

The Jeffersonian Critique of Absentee Ownership

The largest, most successful firms of digital capitalism tend to serve as platforms, ranking and rating other entities rather than directly providing goods and services. This strategy enables the platform to outsource risk to vendors and consumers, while it reliably collects a cut from each transaction. Just as a financial intermediary may profit from transaction fees, regardless of whether particular investments soar or sour, the platform pockets revenues on the front end, regardless of the quality of the relationships it brokers.

This intermediary role creates numerous opportunities for platforms. For example, they police transactions and adjudicate disputes that used to be the preserve of governments. I call this powerful new role of platforms "functional sovereignty," to denote the level of power a private firm reaches when it is no longer one of many market participants, but instead, the main supervisor and organizer of actual market participants. Platforms like Amazon and Google are functionally sovereign over more and more markets, playing a quasi-governmental role as they adjudicate conflicts between consumers, marketers, content providers, and an expanding array of third and fourth parties.

Personalization is a mantra for digital strategists, who tend to assume it is a "win-win" proposition. For example, tailored search results both guard Google's users against distraction and tend to connect them to products they want. However, online markets premised on ever greater knowledge of our desires and "pain points," income level and wealth, can easily tip toward exploitation. Platforms have an interest in intensively monitoring and shaping certain digital spheres in order to maximize their profits (and, secondarily, to maintain their own reputations). However, in their ceaseless quest to annex ever more sectors into their own ecosystems, they all too often bite off more than they can chew. They tend to overestimate the power of automation to process all the demands that modern marketplaces generate.

This has led to another problem, familiar from the history of monopolistic enterprise: absentee ownership. When a massive firm buys a store thousands of miles away from its headquarters, it owns the store, and will seek profit from it, but it may only assess its performance in crude terms, with little interest in the community in which the store is embedded. The store may neglect traditional functions it served, simply in order to maximize the revenues that its absentee owner demands. A present owner, resident in the community, is more likely to run the store in a way that comports with community interests and values, since the present owner will itself experience any improvement or deterioration the store causes in its community.

Similar dynamics emerge online. Google owns the largest collection of videos online, but its YouTube subsidiary's profitability depends on calculated neglect of many aspects of the platform. Over the past two years, a litany of critics have flayed the firm for promoting disturbing, tasteless, shocking, and abusive content, even to children. The recent Google announcement that it would promote Wikipedia links to debunk the conspiracy theory videos YouTube does so much to promote, represents yet more layers of outsourcing—from a for-profit corporation to a non-profit that in turn delegates power over content to volunteers managed by a shadowy layer of administrators.

For Jeffersonians, the answer here is obvious: there should not be one, behemoth corporation with power over so many videos. YouTube says it needs the scale to keep its offerings free; Jeffersonians respond that the ad-driven business model is just a way to undercut subscription services which could better manage their offerings. Jeffersonians also point out that it is very difficult to know the extent to which services like YouTube are actually serving users and content producers, and to what extent they exist simply to maximize ad revenue.

A Hamiltonian Perspective on New Digital Utilities

The guiding spirit of Jeffersonians is the original intent of U.S. antitrust law—that immense corporations were so capable of dominating their customers, employees, and communities, that they needed to be broken apart. Dividing a large corporation into smaller part is a "structural remedy," because it addresses fundamental ownership stakes and control in society. This populist demand to break up the largest corporations has inspired antitrust attacks on firms ranging from Standard Oil to Brown Shoe to Microsoft.

More recently, though, antitrust authorities have been more cautious about breaking up large firms. Both the Department of Justice and the Federal Trade Commission have narrowed their interest to focus almost entirely on large firms' present, price effects on consumers. So a massive firm that undercuts competitors by reducing quality is of little concern to them. Nor is the possibility that the same firm will, eventually, once it has monopolized a space, raise prices dramatically for customers (or reduce wages for workers). Instead, there is a single-minded devotion to efficiency—more, for less, faster. Free or low prices in the short run trump other considerations.

To see the practical effects of this obsession with the short-term, imagine searching for "weather" in Google, and instantly seeing its own weather forecast filling your mobile screen. Had it linked to three forecasting sites in that precious screen space, it might have directed more exposure and advertising revenue to sites with diverse interfaces, more or less information, or other variations. For example, the site WeatherSpark used to give a beautifully precise image of storms' movement over time—the perfect visual analogue to Accuweather's minute-by-minute forecasts of rain or clear skies. But WeatherSpark no longer offers that service, and who knows how many other startups gave up on occupying this space. To establishment antitrust authorities, there is no ground to intervene—consumers get the basics of weather from Google's interface, and it is free. It's a short-termist outlook that omits long-run considerations in the name of a presentist scientism. In their worldview, there is no room for argument about whether better or worse alternatives do or should exist. Antirust is supposed to protect "competition, not competitors"—and a singular lack of concern for quality translates into profound lack of interest in whether current or future competitors could do a better job than a digital behemoth. But how can we know if there is competition, if there are no competitors to provide it?

In the wake of this narrowing of antitrust law, more Hamiltonian voices have called for a revival of public utility law to cabin the power of massive online firms. The utility regulators of the early 20th century did not want to see 10 different phone companies digging up the streets to provide competition in calling services. Nor did they envision localized power generation (however tempting that prospect may now be for those pursuing a distributed, renewable grid based on solar power). Instead, these regulators accepted the massiveness of telecom, power, and other firms as an inevitable aspect of modern economic rationalization. They just wanted a state (and unions) massive enough to offer countervailing forces.

For the Hamiltonians, an agency like the Federal Communications Commission provides a behavioral alternative to structural remedies. A Federal Search Commission, for example, could monitor how Google treats competing firms in search results, and force it to provide alternatives to its own services in such results.[3] European competition authorities may effectively create such an agency, if they are serious about policing Google's treatment of vertical search competitors (that is, narrow gage searching for certain types of goods or services).

Hamiltonians identify with technocratic left-liberalism. They want to deploy tools like cost-benefit analysis and advanced data analysis to calculate just when it might make sense for a service to be folded into a conglomerate, and when it makes sense to create rules that presume the independence of firms. However, there are more ideologically ambitious endorsements of industrial scale and scope. For example, Evgeny Morozov warns against efforts to split up Google or Facebook, since advances in AI may only be possible when truly massive amounts of data are consolidated. In a recent podcast, the socialists of Chapo Trap House joked that they were happy to see Amazon consolidate power. Once it takes over every business in the country, it will be easy to "cut off the head" and simply impose government control over the economy. "Free Whole Foods hot bar for every-

3 O. Bracha & F. Pasquale, *Federal Search Commission: Access, Fairness, and Accountability in the Law of Search*, 93 Cornell L. Rev. 1149 (2008).

one!" was the imagined denouement. Similarly, if all the private health insurers in the US merged, the stage would finally be set for "single payer:" the government need only take over the one insurer left standing.

Authors at *Jacobin* (including Alyssa Battistoni, Peter Frase, Christian Parenti) are also articulating a neo-Hamiltonian approach of advanced corporate capacity tempered by countervailing power of government and labor unions. Allowing centralization into large peak organizations like Germany's general trades union council and mega-manufacturers, would enable corporatist negotiations over the division of the spoils from the types of investment made possible by massive concentration of resources. Germany's largest trade union recently negotiated to reduce its members' workweek to 28 hours, while also getting a 4.3% pay raise—exactly the type of deal U.S. workers could have gotten had productivity gains since the late 1970s been widely shared, and had business and labor been similarly organized.

At its most ambitious, the Hamiltonian vision tends toward a dream of a robust universal basic income guaranteed under fully automated luxury communism. Artificial intelligence and robots mimic workers, who still are paid for the data they (or their forbears) contributed to advance AI's development. Hamiltonianism can be the economic equivalent to geoengineering—an embrace of the radically new and large-scale, arising out of the sense that inequalities and climate change are such massive problems that only rapid technological advance can solve them. Jeffersonians adhere to something like a precautionary principle, questioning whether any entity should accumulate the power necessary to, say, compare everyone's genomes, convert millions of workers' movements into patterns of behavior programmable into robotics, or maintain social credit scores on all citizens.

Reconciling Jeffersonian and Hamiltonian Perspectives

All these trends suggest new fault lines in economic thought for the 21st century. To alleviate these tensions, we should return to some seminal tensions in the neoliberal project. In the 1930s and 40s, the University of Chicago economist Henry C. Simons warned that monopolies posed a mortal threat to classical liberal ideals of free and open markets. In his *A Positive Program for Laissez Faire,* written in 1934, Simons argued that "the great enemy of democracy is monopoly, in all its forms: gigantic corporations, trade associations and other agencies for price control, trade-unions—or, in general, organization and concentration of power within functional classes." However, by the 1950s, George Stigler and Aaron Director supplanted Simons at Chicago, and offered a far more hands-off approach to antitrust law. They viewed concentrated *state* and *union* power as a far greater threat to society than concentrated corporate power. And since the former was needed to combat the latter, they downplayed the harm that massive corporations could pose (outside a narrowly delimited category of conduct that was to become ever smaller as Chicago scholars like Robert Bork shrank the domain and force of antitrust law).

What if Chicago had followed Simons's path instead of Director's? Neoliberals might have embraced a more even-handed approach to confronting excessive power in society. Antitrust authorities would have better resisted behemoth firms' aspirations to centralize data collection and control of workers. Policymakers could have better balanced efforts to reduce state power with parallel efforts to decrease corporations' ability to work their will upon communities and workers. A 1950s era policy agenda to reduce union power looks risible in the 2010s, when union density has declined so precipitously, while corporate concentration has risen.

Jeffersonians have their own blind spot when it comes to labor. Too much of the Jeffersonian literature idealizes small-holders, advancing an idea of every-man-as-entrepreneur. But most of us are, and will be, working for someone else for most of our life. Thus Atkinson and Lind are right to argue, in *Big is Beautiful,* that small businesses should be held to many of the same labor and consumer protection laws that now only govern larger corporations. Otherwise, the wizards of franchising and platform capitalism will simply find new ways to disaggregate existing concerns into smaller units, to get around regulation. Undercapitalized and judgment-proof small businesses are the perfect business law-breakers, since they have little to lose if caught.

However, a core insight of the Jeffersonians must be respected: there really is no "one best way" to handle many products and services. The question then becomes, how to identify optimal scale and scope of enterprise in different industries. When a firm has a bona fide need for data to solve a problem (such as calculating optimal routes for a fleet of self-driving cars), that is a much better rationale for "bigness" than simply using data to rearrange commercial transactions to its own advantage. Stacy Mitchell of the Institute for Local Self-Reliance has observed that, "when third-party sellers post new products, Amazon tracks the transactions and then starts selling many of their most popular products." However much that practice increases economic productivity, it does so at an unacceptable cost of concentrating power in one firm while discouraging entrepreneurship outside it. Policymakers should protect vulnerable sellers against it.

The structural concerns of the Jeffersonians are a first line of defense against over-concentration in the economy. Competition authorities should take them seriously, particularly when there is no substantive *productive* rationale for bigness. If Amazon needs to buy equipment manufacturers to pursue vertical integration to make a better Kindle, fine—but if it is acquiring other firms simply (or mainly) to enhance its bargaining power relative to consumers or suppliers, that is not a legitimate rationale for mergers. Similarly, authorities need to recognize that mergers in the name of "better service" or "cheaper inferences" about users can lead to overwhelming bargaining power for a platform vis a vis advertisers it serves—and its ability to intrude upon the privacy of its users. Those are the key reasons why the FTC should have blocked Google's purchase of DoubleClick, and Facebook's acquisition of Instagram and WhatsApp.[4]

It will be politically difficult to "unscramble the omelet" of currently dominant firms. Authorities are wary of reversing mergers and acquisitions, even when they are obviously problematic in hindsight. While Jeffersonians may keep our digital giants from getting bigger, Hamiltonians will need to monitor their current practices, and intervene when they transgress social norms. Thanks to the movement for algorithmic accountability, we know that algorithmic corporate decisionmaking is frequently deployed to arbitrage around extant anti-discrimination, due process, and media law. Agencies like the Consumer Financial Protection Bureau, the Federal Communications Commission, the Federal Trade Commission, and state attorneys general, should closely monitor platforms in order to ensure that they are actually giving their users a fair shot at access to customers, advertising, and growth. These firms no longer are mere market participants. They make markets, and need to be treated as such. Even Mark Zuckerberg recently conceded that the question is not *whether* to regulate Facebook, but *how*. Other tech CEOs should adopt a similar openness to the societal values they have shunned for so long.

Context Matters

There is ongoing struggle over what responsibilities the domination of an online space should entail. Investors demand a fantasy of monopolization: their firm not merely occupying a field, but developing "moats" against entrants, to guarantee both present returns and future growth. However, the day-to-day reality of operational budget constraints pushes the same firms toward the pathologies of absentee ownership.

Law can help resolve these tensions. Competition laws take aim at the functional sovereignty of large tech platforms, reducing the stakes of a firm's domination of a field. At the very least, antitrust authorities should have blocked Facebook's purchases of Instagram and Whatsapp, instead of letting its juggernaut of domination over communication roll up some of the few entities capable of providing alternative modes of association online. Ten, twenty, or one hundred social net-

4 For more on the advantages and disadvantages of antitrust policy here, see Frank Pasquale, Dominant Search Engines: An Essential Cultural & Political Facility, in *The Next Digital Decade* (2011).

works could eventually emerge, if competition law were properly enforced, and interoperability standards could assure smooth connections among confederations of social networks, just as AT&T, T-Mobile, and Verizon customers can all talk to one another seamlessly. If that diversity emerged, we could worry less about a few persons in Silicon Valley essentially serving as a world Supreme Court deciding which expression was appropriate for a so-called "global community," and what should be banned or obscured (in oft-secretive algorithmic manipulation).[5]

When industrial giants can't be broken up, there are still many ways to neutralize their power. Utility-style regulation mitigates the worst failures of absentee owners, as well as the caprices of the powerful. The state can require Google to carry certain content on YouTube, just as it has required cable networks to include local news. Moreover, whenever policymakers are afraid that firms like Google, Amazon, or Uber are taking too large a cut of transactions, they can take a page out of the playbook of insurance regulators, who often limit insurers to taking 15% to 20% of premiums (the rest must be spent on health care). That kind of limit recognizes the infrastructural quality of these firms' services. We would not want to live in a world where the electric company can endless jack up charges in order to take advantage of our dependence on it. Digital monopolists should face similar constraints.

Though Jeffersonian trust-busters and Hamiltonian utility regulators have very different views of political economy, each counters the untrammeled aspirations (and disappointing quotidian reality) of stalwarts of digital capitalism. They also help us understand when giant firms can help us solve the "knowledge problem" Hayek identified, and when they exacerbate it via obscurity and obfuscation.[6] If conglomeration and vertical mergers actually help solve real-world problems—of faster transport, better food, higher-quality health care, and more—authorities should let them proceed. Such industrial bigness helps us understand and control the natural world better. But states should block the mere accumulation of bargaining power and leverage. Such moves are exercises in controlling persons—a much less salubrious aim of industrial organization. Economic policy focused on productivity and inclusive prosperity will balance and do justice to important insights from both Jeffersonian and Hamiltonian critics of our increasingly sclerotic economy.

5 Kate Klonick and Thomas Kadri, "How to Make Facebook's 'Supreme Court' Work," *N.Y. Times*, Nov. 17, 2018.

6 Walter Adams and James W. Brock, *The Bigness Complex* (Stanford University Press, 2004).