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Market democracies struggle with economic insecurity and growing inequality, presenting new threats to democracy. The revival of “political economy” offers a frame for understanding the relationship between productivity and justice in market societies. It reintegrates power and the social and material context—institutions, ideology, and technology—into our analysis of social relations of production, or how we make and distribute what we need and want to have. Organizations and individuals, alone and in networks, struggle over how much of a society’s production happens in a market sphere, how much happens in nonmarket relations, and how embedded those aspects that do occur in markets are in social relations of mutual obligation and solidarity. These struggles involve efforts to shape institutions, ideology, and technology in ways that trade off productivity and power, both in the short and long term. The outcome of this struggle shapes the highly divergent paths that diverse market societies take, from oligarchic to egalitarian, and their stability as pluralistic democracies.

1. Introduction

Neoliberalism was an ideology and institutional transformation program aimed to shrink the role of the state in the economy and “liberate” market actors to pursue their profits in response to market signals. The neoliberal policy packet—deregulation, privatization, low taxes, and free trade—promised economic dynamism in exchange for economic security and enhanced consumer sovereignty and entrepreneurial freedom in exchange for social solidarity. Together, these promised to increase productivity and sustain growth that would raise all boats.

The reality of the past four decades has been the inverse of the promise. Instead of broadly shared wealth driven by newly dynamic markets, the United States saw less dynamic markets coupled with dramatic rent extraction by a small oligarchic elite. Productivity growth since 1973 has been slower than in the preceding century, excepting a brief interlude from 1995-2004.¹ Business dynamism and entrepreneurship, measured by firm entry and share of employment in young firms, has declined.² Industry concentration has risen³ and markups have increased.⁴ Real median income stagnated⁵ while the share of income going to the 1% and the 0.1% skyrocketed.⁶ Economic insecurity has become widespread. Forty percent of American households reported in 2017 that they could not cover a \$400 emergency expense,⁷ and diseases of despair have made white non-Hispanic Americans the only developed world population that saw declining life expectancy in the past thirty years.⁸ That economic insecurity appears to be a significant driver of the present rise of populism.⁹

The fundamental error of neoliberalism and the neoclassical economics it built on was that it saw power solely in relations between the state and private actors, individuals and firms, while treating markets as arenas of free choice “naturally” coordinated by prices. This Pollyannaish view ignored the fact that power is a central determinant of behavior and payoffs in

market society, and that power, behavior, and motivations are shaped by the social and material context in which they occur. The role of the revival of “political economy” as a frame for work on the relationship between productivity and justice in market societies is precisely to reintegrate power and the social and material context—institutions, ideology, and technology—into our analysis of social relations of production, or how we make and distribute what we need and want to have. The “political” in “political economy” stands both for the pervasiveness of power *within* economic relations and the co-determination of distribution and production as part of the normal operation of the economy in market societies, and the deployment of the polity proper—the legitimate threat of public force—over economic relations.

My primary goal in this chapter is to outline a basic frame for such a model—combining insights of old institutional economics about power with contemporary understandings of human behavior, and applying it beyond institutions to technology and ideology as well. Together these outline a model of the economy as embedded coordination, cooperation, and conflict. At the micro level, the model is a strategic action framework, but shifting agency from *homo economicus* to *homo socialis*, whose motivations are diverse and socialized and whose decisions are situational and reasonable, not formally rational. These agents are embedded in a material (nature + technology) and social (institutions + ideology) context. The context sets the ratio of economic actors, organizations (firms and nonprofits) and individuals who pursue self-interest to those who pursue pro-social goals. Self-interested and pro-social actors interact strategically to advance their individual or prosocial goals, respectively, trading off productivity for power as they act strategically within their institutional, ideological, and material context, and invest effort into shaping future contexts to increase their power in future interactions. Individuals and organizations do so not only at the micro-, but also at the meso-level, as organizations and individuals engage in collective action—the Business Roundtable or Chamber of Commerce, the consumers movement, unions—similarly bargaining, lobbying, shaping social perceptions, and developing technologies that improve their short term payoffs and long term bargaining position. At the macro level, actors and organizations are embedded in social diffusion mechanisms. Many act without formulated intentionality, but simply follow practices and adopt institutions or technologies because these have become “the way things are done in our field,” incorporating the perspective of the new institutionalism in sociology.

Markets are never perfect. Information is imperfect and asymmetrically distributed. Individuals are cognitively bounded and motivationally diverse. Their motivations, pro-social and self-interested, are endogenous to situational and institutional settings. Real markets always mix price takers with price, interest, and wage setters. Institutions—formal law and social norms—shape motivation, feasible sets of behaviors, and likely outcomes of interactions. Bargaining power is a normal element of determining power in labor, consumer, and credit markets; and policy is made by politically-embedded institutions, not benevolent social planners.¹⁰ Under these realistic market conditions, firms and individuals mix strategies. They spend some effort on improving productivity to stay ahead of the competition, and some on obtaining market power horizontally to create larger rents, and bargaining power vertically to obtain a larger share of these rents from other claimants.

To dispel misunderstanding, this explanation does not depend on particularly greedy agents or on “market failure” in the neoclassical sense. Even the best-intentioned employer who wants to fairly share returns with workers, faced with competitors who adopt practices and technologies that increase their profits by combining rent extraction with productivity enhancement, will be forced to compete in capital markets with those rent-extracting competitors. As long as some actors can use power to increase their profits with a productivity-power enhancement strategy that extracts larger returns, they will be able to outcompete the egalitarian producer in access to capital or in prices to consumers. They threaten the egalitarian with extinction unless the egalitarian producer itself can develop and deploy power in the credit and product markets in which it competes with extractive producers. Willfully or nay, just as in the standard models competitive markets force producers to adopt the most productivity-enhancing technologies on pain of economic death, so too do they force producers to adopt parallel power-productivity tradeoffs in response to their competitors once we recognize that there are usually opportunities to maximize returns through a mixed strategy rather than a pure productivity-focused strategy. Simply making markets “more competitive” will not solve the problem without deploying counterpower—usually through state regulation, sometimes through informal ideology or institutions (e.g., persuading consumer to buy fair trade or sustainable products; changing industry standards)—to contain the power-seeking behavior among all market actors.

How the preponderance of agents and firms act, what outcomes they obtain, and what practices form their competitive environment is shaped by the institutions, ideology, and technology that make up the context of the relation. Ideology shapes what a well-adjusted executive sees herself as bound to consider. Whether a firm operates under “shareholder maximization” or “stakeholder capitalism” affects the function the firm’s management is trying to achieve, and, in turn, affects how it trades off productivity for power in relations with whoever the “stakeholders” are—shareholders only, or also workers, the community, etc. A central battle in the rise of neoliberalism, from Friedman’s accusation that a business that “takes seriously its responsibilities for providing employment, eliminating discrimination, avoiding pollution” is “preaching pure and unadulterated socialism”¹¹ to Jensen and Murphy’s castigation of unions, politicians, and the business press as “uninvited guests” in managerial decision making,¹² was precisely over the ideological frame of what a well-socialized manager ought to do. These had a profound impact not only on executive compensation and the takeoff of the 1%, but also on disinvestment from labor and stagnation of middle income wages. The same is true of institutions, in particular law. Background legal institutions determine the relative bargaining power of actors in their relations, and through it their returns. If labor law makes it easy for workers to organize and generalizes terms negotiated by unions to a sector, labor will be in a stronger position to capture a larger share of the joint product. So too with technology. If a firm uses technology that makes workers fungible and easy to replace it will have stronger leverage with a threat to fire and replace employees than a firm that uses technology that depends on employees with firm-specific skills who would require months of training to replace. In these ways ideology, institutions, and technology shape how much firms and individuals must invest in improving productivity to increase their returns, and how much they can invest in simply grabbing a larger share of a stagnant or slowly-growing pie. Knowing

this, agents and firms not only act within context but also about context: they work to change institutions, deploy technology, or advance ideologies that will put them in a better bargaining position in future social relations.

All this sounds intentional; but only as far as necessary to provide a micro-foundational story. Individual agency must be complemented and generalized by meso-level analysis of collective action and macro-level patterns of cultural diffusion and institutional isomorphism. The 1970s saw a dramatic increase of business lobbying efforts, and these, in turn, supported institutions that weakened the power of government to constrain business and redirected government power towards weakening labor.¹³ Unions played a critical role not only on wage setting, but also as the central countervailing power in the political system over broad questions of economic policy and redistribution and as enforcement of compensation norms within firms, including managerial compensation.¹⁴ Any model of political economy must incorporate such conscious collective action and the balance of power between such meso-level countervailing forces. The same decade also saw a shift in elite and popular culture that embraced “superstar salaries,” legitimated previously extraordinary wages, and shifted status competition to managerial and financial compensation in ways that distorted the economy as a whole. Some of this was intentional, as Friedman’s argument about shareholder value was, but much of it was a more diffuse translation of rising individualism and self-actualization, with both left and right wing origins to the 1970s becoming “the Me decade”¹⁵ and its translation in the 1980s “Greed is Good” ethic.¹⁶ These conscious and emergent institutional and ideological shifts were complemented by deployments of ICTs to enable offshoring and outsourcing in the production system, and by computers and spreadsheets to enable ever more complex financial products that led to financialization. In combination, these moves put management and finance in a position to disinvest from labor, adopt short termism, embrace the earnings game, and use newly found legal freedom to suppress competition and extract a larger share of the resulting rents. These micro, meso, and macro dynamics combine to explain the observed patterns of the American economy over the past forty years—declining business dynamism, increasing concentration and markups, slower productivity growth, and the particular pattern of American inequality—a top 1% and 0.1% takeoff coupled with broad-based economic insecurity.

In contrast to this power-based story, the most influential neoclassical explanations of rising economic inequality gave a central role to technology: skills-biased technical change (SBTC)¹⁷ and the economics of superstars in winner-take-all markets.¹⁸ While details differ, these explanations of inequality share an intellectual framework with current arguments that robots will create structurally high levels of unemployment, platforms will casualize work, or algorithms and bots will cause information disorder and polarization. Technology, in all these explanations, develops exogenously, has a roughly deterministic shape (some things are easier to automate, others harder) and interacts with efficient labor markets to change the relative value of different kinds of labor (skilled/unskilled workers; routine/nonroutine tasks). This interaction makes highly-skilled workers valuable, the super-skilled few superstars, and relegates low- or mid-skilled workers to stagnant or declining wages.

These technological explanations naturalize inequality as an inevitable function of the most distinctive dynamic in market society—productivity growth through technological change. Efforts to address inequality must therefore focus on fitting the poorly trained workers to inevitable technological change. Efforts to address inequality by changing dynamics in the market itself will hurt growth and undermine welfare generally. The primary weakness of SBTC and winner-take-all theories is that they fail to explain how countries at the same technological frontier embrace these technologies with widely differing social consequences. The Nordic social democracies; Germany, France, and Japan all operate at the same technological frontier as the United States; yet each exhibits substantially different patterns of inequality, and none exhibit the escape of the 1% that characterizes American inequality.

Here I offer an alternative model of how technology interacts with institutions and ideology to shape power and behavior in markets. Organizations and individuals, alone and in networks, struggle over how much of a society's production happens in a market sphere, how much happens in nonmarket relations, and how embedded those aspects that do occur in markets are in social relations of mutual obligation and solidarism. Polanyi diagnosed the emergence of market society as successful disembedding of the economy from society.

My argument here is that the extent and pattern of that disembedding is a focus of continuous struggle in society. Neoliberalism marked a high point in the extent to which markets were permitted to regulate social relations (privatization) and the extent to which markets were permitted to operate unmoored from solidaristic social relations (deregulation and "Greed is Good" morality). As it turned out, both productivity and justice suffered when agents and firms were left free to pursue their self-interest in markets unfettered by mutual social obligation. Post-neoliberal political economy will have to re-embed more of our production system in such relations of mutual solidarity and recalibrate power between present economic elites and the rest of the population, and will have to do so by pushing on all three primary dimensions of context—institutions, ideology, and technology.

Many economic actors are market actors who aim to maximize rents, and trade off productivity for power so as to maximize their rents over time. Some are organizations or individuals alone or in networks, who are either insulated from market dynamics or seek to operate outside the market and serve values other than profit maximization. These nonmarket actors also seek technologies, create ideological frames, and push for institutions that increase their power to secure their own values—freedom, community, sustainability—and the adoption and viability of their interventions and innovations are themselves the object of struggle with market actors who seek to keep these activities within the market, rather than shifting them to the domain of social interactions. The state, as the locus of legitimate coercive violence, plays a central role in shaping the power dynamics within the market and the relative domains and power of market and nonmarket sectors in the economy, and influencing how the state uses its power is a central arena of struggle.

This explanation leaves room for sustained divergence among societies at the same productivity frontier, and allows them to sustain productivity growth at roughly equivalent

levels while maintaining meaningful differences in the justice of their social relations. The payoff for understanding the economy in these terms is to allow us to design interventions that are properly attuned to the correct sources of inequality—power and extraction—rather than diverting attention to fine-tuning and risk-absorption in an otherwise perfect market that exist nowhere, and never has. Narrowly, it suggests that more aggressive regulation may increase productivity while improving justice, rather than trading off efficiency for equality, but that that regulation needs to focus on extraction, rather than competition *per se*, because competition may actually intensify efforts to gain vertical power to extract rents from narrower margins. More systematically, it requires reconstructing state capacity to act in the economy as a counter-force to the extractive power of disembedded market actors, but making that renewed state capacity more democratically accountable and open to criticism, error correction and revision than was the case at the height of the modernist confidence in expertise and rational elite administration.¹⁹

Most fundamentally, understanding the political economy of market societies requires us to focus on market reach as much or more than on market power. Transformation requires that more of the basic necessities of life be produced through nonmarket forms of production—public or third sector—so that more people have a chance to keep body and soul together without being forced to maximize the monetary value they can capture from their own labor, and more of us have a greater freedom to decide what we do with our lives free of the tyranny of the market. The range of transformation proposals, from public options for a much broader range of basic needs,²⁰ through calls for strengthening and expanding the role of non-profit, commons-based, and cooperative enterprises all represent part of this broader push to expand the domain of nonmarket production and reduce the imperative to go to the market for everything.²¹ These are, in turn, complemented by drives to embed market production itself in relations of mutual solidarity and obligation, as in efforts to revive stakeholder capitalism and establish a newly central role for firms as purpose-driven organizations.²²

2. *Political Economy: Definitions and Overview*

Political economy is the study of social relations with power. “Power” is a property of a relationship between A and B, describing A’s capacity to shape B’s behavior, outcomes, or context so that the efficiency/distribution tradeoff in the relationship between A and B is closer to A’s preferred tradeoff than to B’s, short term (within context) or long term (about context). “Context” is the social and material setting within which A and B act and relate to each other. The social context is made of institutions and ideology. The material context is nature and technology.

“Institutions” are *explicit or implicit instructions for who should do what in which social relation*, serving as constraints and affordances on behavior for persons in the social relation to which they apply. Law is a system for producing such instructions susceptible to enforcement by legitimate violence. Social norms are systems of such instructions enforced through social coercion—gossip, shaming, ostracism—or internalized social conformism. Organizational or professional norms are explicit or implicit instructions produced by a given set of social actors, to

govern behavior—create affordances and constraints—in the social context for which they are developed so as to constitute the social relations they constitute—the workplace, the profession, etc.

“Ideology” or “knowledge frame” is that subset of institutions that shape *how we understand the world, what causes what, what goes with what, what is valued and what loathed*.²³

“Technology” is *congealed practical knowledge embedded in material culture*. “Practical knowledge,” knowledge applied functionally to achieve desired outcomes, is a universally adopted element of definitions of technology. I add “embedded in material culture” to distinguish technology from institutions and ideas, each of which is often (appropriately) treated as a form of practical knowledge (how to behave; how to interpret). I add “congealed” to add a temporal dimension (embedding in material culture takes time and creates friction in transitions between various materially-instantiated social relations) and constrained plasticity (given a material context, some things are easier to do and others harder to do but there is no fully deterministic relation of “if technology x, then practice y”) to the analysis. It is this friction and constraint that makes technology a distinctive dimension along which actors can extend and entrench power.

Power in social relations, its magnitude and distribution, is a function of institutions, technology, and ideology. Institutions are the “rules of the game:” instructions about who can do what in which context that define the relation and distribute power within it. The fact that you can touch the ball with your hands, cannot hold it for more than 3 seconds, and must dribble to advance makes basketball a distinct social practice from soccer or American football. Technology describes the material conditions under which a practice so constituted is carried out. The fact that the hoop is of a certain size and located 10 feet off the ground means that taller players are more talented in basketball than they would have been had the same hoop been set at 2 feet. Ideology is the conception people have of what they are doing, the frame through which they understand the practice and define their preferences and beliefs, and understand their constraints in the situation. Basketball is a competitive game, not a comic performance, and if the players imagined that it was the latter rather than the former, their behavior in game would be different (Harlem Globetrotters) even though the technology and formal rules might be identical.

While my focus here is on the economy, the framework of social relations with power applies to the four major domains of social life: economy, polity, kinship, and culture. In the economy (social relations of production), it describes relations of employers and employees and among co-workers, lenders and borrowers, both commercial and interpersonal (family loans), landlords and tenants, or among neighbors helping each other to manage their building or neighborhood, a firm and its suppliers and customers, shareholders, managers, and line workers, or peers in peer production, and so forth. Note that the economy relates to production, rather than markets—how much of relations of production are mediated purely through prices and how much and what is carried on through social relations of cooperation and solidarity is variable and often a site of contestation. “Socially-embedded” production does not mean “just” or “liberating.” On the background of patriarchal norms, the location of care work in the market or the family is a central site of struggle along both gender and class lines.²⁴ Different countries located care work in relations of production or reproduction, and these resulted in radically

different coalitions that shaped both the structure of labor markets (dualized vs. egalitarian) and gender relations in Christian Democratic countries focused on defending the family wage of core manufacturing workers as opposed to Nordic social democracies that emphasized public universal child care.²⁵ In the polity (social relations of coercion backed by threat of legitimate violence) it relates to citizens and non-citizens; armies or police and citizens, in their own polity or another; leaders (people who can order armies or police) and subjects (people who are subject to enforced coercion by legitimate violence). In kinship (social relations of reproduction) it relates to parents and children; between spouses; among sexual partners; between nuclear families and more distant relatives and neighbors conceived in a given society as within the set of people engaged in reproduction, carrying special mutual obligations not enforced through the polity of providing care services, whether or not reciprocally. In culture (social relations of meaning making) it includes priests and parishioners, authors and storytellers, readers, critics, artists, scientists, composers and musicians, etc.

Modern societies since the emergence of capitalism are centrally characterized by struggle over the extent to which the economy is autonomous from these other systems of social relations, and the extent to which the economy is dominated by self-interested behaviors mediated purely by markets and prices, as opposed to social relations of obligation and mutual support. Modern capitalist economies diverge from each other, and change over time, precisely in response to how they resolve the scope of markets in the economy and the degree of autonomy that purely self-interested action coordinated through prices is permitted to shape the economy.²⁶

Actors in society are usually aware that they are in relations of power, and engage in actions in different domains to shape their power in those domains. Wealthy individuals and companies spend money on the political process to change laws that distribute power between them and their competitors and employees, so they can extract higher rents and keep a larger share of those higher rents.²⁷ Workers organize to increase their economic bargaining power, as well as to influence law through the political system and social norms to give them a larger share of the rents.²⁸ The same is true for ideology. Corporations buy economists to support the claims of executives that they should be compensated highly or explain why regulation that would constrain their ability to extract rents is inefficient. Academics and artists mobilize to reshape knowledge and culture to shift society in aid of their views. The women's and gay rights movements are probably the most successful strategic cultural transformation movements of the past half century, paralleling in the domain of identity-based domination the success of the shareholder value and agency theory as cultural transformations of the economy over the same period. And corporations choose technologies that maximize their rents over time, not purely their productivity. In particular, from within a range of possible technological assemblages, companies choose those that maximize the tradeoff between their improved productivity and the market power they will be able to exercise horizontally over competitors and disruptors to increase the magnitude, and extend the period during which they can capture rents, and vertically their bargaining power over employees, consumers, suppliers, and complementary vendors over the share of rents that accrue from deploying the technology. In parallel, civil society organizations, unions, and activists push back by trying to construct technical infrastructures that liberate them or create levers of counterpower. This is as true for birth control in shaping

relations of reproduction as it is for free software in shaping relations of information production. The result of this continuous struggle is a social and material context within which relations of production, reproduction, legitimate coercion and meaning making are lived, and within which future iterations are once again negotiated and fought out.

3. *Power-seeking technical change:*

a. *Technology politics in the Internet era: a case study of political economy*

Generally, we can think of self-interested market actors as choosing between different mixes of productivity-enhancing or power-enhancing actions. In competitive markets, they can make things better more cheaply than competitors and capture quasi-rents (temporary ability to price above marginal cost) until competitors can copy their technological or institutional advance. But actors also engage in diverse methods to create larger rents and extend their half-life by slowing down the competition and to extract a larger share of those rents vis-à-vis their suppliers, workers, and consumers. Self-interested agents strategically trade off total welfare produced from their interaction for share of surplus within the interaction; and short-term gains within the interaction for longer term changes in market power and bargaining power that will secure them larger shares in future interactions. They do so by leveraging their power within the interaction, and by shaping the elements of future contexts that will shift their power in future interactions.

Such actors play a range of parallel games to affect the social and material context of future interactions. They operate in politics and litigation to shape law; in science and academia to shape knowledge, technology, and institutions; and in media, religion, and marketing, to shape knowledge frames. A society in which rent extraction reaches sufficiently high levels to dramatically decrease productivity-improving investment may fail and see declining standards of living or lose a war to another country with superior technology. But societies have substantial room to diverge from a single most productivity-enhancing path of technological development because fallibility and imperfection are unavoidable in any society. The trade-offs between rent-seeking and productivity-enhancing actions are pervasive everywhere, and societies do not possess a coordinating mechanism through which to drive technological change single-mindedly toward the most productivity-enhancing technological-institutional assemblages. Neither markets nor central planning operate with sufficient precision and completeness to achieve such coordinated optimization.

The dynamic is familiar to anyone who observed technology politics since the 1990s: particularly the battles over copyright and privacy. The political practice of the time exhibited a crisp understanding of the role of institutions and technology to shape each other, and through these market and political power. The founding of the Electronic Frontier Foundation (EFF) in 1990 and Electronic Privacy Information Center (EPIC) in 1994 marked civil society mobilization around the recognition that law could and was aimed to shape technological development in ways that had profound normative implications. These combined libertarian and liberal concerns, aiming to counteract both state-based and market-based efforts to shape law to give states or market incumbents power over citizens and consumers. Civil society mobilization responded to industry efforts to leverage the moment to increase control over cultural markets. The recording and movie

industry associations (RIAA, MPAA) were at the forefront of legislative battles aimed to design the Internet as a “celestial jukebox” that would allow them to charge for every use of commodified culture and redress their fears that it would become a global photocopier and destroy their industries. Legal academics began to participate in legislative battles and litigation around copyright law and efforts of the copyright industries.²⁹ The same was true in battles over privacy and encryption. Battles over infrastructure regulation, open access, spectrum policy, and later net neutrality all took the same shape and common understanding: incumbent firms were using law, standards processes, and new technological affordances to lock in and extend their market power into the future, and a coalition of academics, activists, hackers, artists, and civil society organizations were fighting back to preserve freedom from markets and within the newly emerging technological context.³⁰

The practice embodied a basic model: firms and individuals engaged in politics and litigation in order to shape law and technology to shape markets (more or less concentrated/innovative) and politics (more or less democratic or authoritarian). These, in turn, translate into the degree to which firms can exercise power over consumers, competitors, and disruptive innovators (and states over residents etc.). Individuals—acting alone or in networks as heroic hackers, or collectively in social organizations—could push back not only through politics and institutional battles, but first and foremost by building technologies of freedom that would physically render inoperative the institutional efforts of the firms or improve democratic participation to defeat the lobbying politically or limit the effective enforcement power of the state to cabin its power. Nowhere was the version of the ideology more clearly embodied in practice than in the free software movement.³¹ Here, as in the free culture movement that followed it, we saw direct conflict between firms seeking to bring more of the economy into market relations, and a social movement of people seeking to construct a context that allowed more of the economy to function on nonmarket models. But there were conflicts even within this movement, most prominently between those who continued to insist on the “free software” moniker, emphasizing the political dimensions of non-proprietary production of software vs. those who adopted the “open source” terminology, emphasizing the innovation advantages of the practice over its social and political significance.

Free software and Wikipedia anchored a sustained effort by academics and activists to challenge the core tenet of neoliberalism—that markets were necessary and sufficient for growth and freedom. Instead, advocates of the commons (myself included) pointed to these enormously successful commons-based practices as existence proof that the economy, or social relations of production, need not be purely cleared by prices in markets supported by ever-more perfect deployment of property and contract. Indeed, we argued at the time, user innovation, socially-motivated hacking, and norms-driven knowledge production offered important checks on purely market-based model of information, knowledge, and cultural production.³² This work coincided with extensive experimental work in economics during the same decade that documented the importance of prosocial motivations, and their sensitivity to institutional and situational factors.³³ These lines of work suggested not only that an exclusive focus on self-interested action in markets was unnecessary to improve productivity and welfare, but that these dominant ideological tenets of neoliberalism were harmful to innovation, learning, and the possibility of more cooperative human

systems to deliver at least as much productivity in ways that offered greater individual freedom and were more embedded in social solidarity. This effort to create an alternative ideological frame was then deployed strategically in specific institutional battles—over copyrights and patents, standards processes, spectrum policy, or broadband policy—to reduce the power of incumbent and dominant firms and create the institutional and technical space for workarounds through which individuals in society could pursue their own goals.

Most of the battles of the 1990s and 2000s focused on individual freedom and the relative domains of market and nonmarket, rather than on distribution. Nonmarket nonproprietary production was celebrated largely as a degree of freedom from the power of market actors to invade our privacy and set the terms of our cultural conversation. The Access to Knowledge movement was a first reorientation toward distribution-sensitive politics of technology, particularly influenced by the Access to Medicines movement before it.³⁴ Since the Occupy moment we have seen more efforts to include concerns with economic power and economic insecurity and inequality. The platform cooperativism movement;³⁵ the purpose-driven-startup QuiShare festivals; the municipalism-oriented Sharing Cities Alliance; or the National Domestic Workers Alliance are all seeking to reorient technologically-mediated economic practice toward egalitarian relations of production, using different mechanisms to embed production in solidaristic social relations (cooperativism, purpose-driven organization; municipalism; and social mission-driven nonprofit organization, respectively). In academia, Julie Cohen's work on the legal construction of informational capitalism,³⁶ Shoshana Zuboff's on surveillance capitalism,³⁷ Juliet Schor's work on the sharing economy,³⁸ Amy Kapczynski's analysis of the cost the price system to innovation and culture,³⁹ Karen Levy's on monitoring of truckers,⁴⁰ or her work with Solon Barocas on impact of consumer data collection on workers,⁴¹ Ajunwa, Crawford, and Schultz's work on workplace surveillance,⁴² Veena Dubal's on the precarity of the gig economy drivers,⁴³ Frank Pasquale's on algorithmic black boxes,⁴⁴ Barocas and Selbst's focus on big data's disparate impact,⁴⁵ or Brishen Rogers' on the major dimensions of technological power employers seek as leverage over employees⁴⁶ are leading examples of this reorientation. A distinctive feature of this newer work is a call for reviving state power as a counterbalance to market power—nowhere more forcefully than in Lina Khan's work on antitrust, particularly in the context of technology⁴⁷ or Sabeel Rahman's call for leveraging democratic governance to contain the domination of market actors.⁴⁸

This latter point marks a divergence between the literature of the 1990s-2000s and the more recent literature. Earlier work reflected skepticism of the state, and focused on containing the state's help to powerful market actors. The emergence of former corporate allies in the free culture and open Internet movements—Google and Facebook—as the new market behemoths, and the recognition, since Gamergate at least,⁴⁹ that decentralized processes can themselves lead to repressive action—gender domination, hate speech, or propaganda—have led to a renewed interest, in academic work and activism, in designing interventions around a more effective state, rather than purely resisting market domination.

It is important, however, that we not permit the disappointment with how decentralized strategies to construct nonmarket models of social production were subverted by firms and state actors to overshadow the core insight of two decades of commons-base practices. Social relations of production do not have to be carried out purely as arms-length, fully market-mediated

transactions. Embedding production in more solidaristic forms of cooperation can enhance, rather than retard, innovation and productivity, while at the same time supporting other, non-material normative goals—freedom, mutual solidarity, and justice. Focusing our efforts on reviving an accountable, effective role for the state in the economy cannot and should not turn us away from that basic lesson—that re-embedding production in social relations is a major pathway for achieving both productivity and equality, rather than trading off one of the other.

b. Horizontal and vertical power-seeking

Liberated from solidaristic obligations (as firms were during the past forty years), firms seek to grow and entrench their power horizontally and vertically. Horizontally, they seek to escape market discipline by raising entry barriers to competitors and disruptors who threaten to innovate around the firm's market position. For any given level of market power and rents achieved through these horizontal moves, firms seek to increase their bargaining power vertically: over suppliers, vendors of complements, and workers, so as to increase their share of the rents produced by these complementary relations. Firms also seek to gain power over consumers, which allows them both to increase the magnitude and longevity of the rents horizontally, and to shift more surplus from consumers to producers. Firms pursue these horizontal and vertical dimensions of power through strategies that span technology, institutions, and ideology.

Horizontally, the telecommunications and information technology industries provide many examples of strategic adoption of technology to increase entry barriers to competitors and disruptive innovators. AT&T deployed unnecessarily expensive “protective connection arrangements” to undermine competitors to its equipment subsidiary. This emphasis on high-capital cost technology to create entry barriers is not unique to telecommunications, as Noble's classic study of the adoption of numerical control over record-playback systems in machine tool automation showed.⁵⁰ Microsoft inserted nonstandard technical elements into its web browser and Java implementation to protect its monopoly over the operating system from emerging Web-based bypasses. In each case firms engaged not only in technical changes, but in extensive litigation and lobbying to create an institutional setting conducive to their continued power.

Vertically, firms invest in technological innovations that create bottlenecks and leverage over suppliers and complementary vendors where none are technically necessary, over workers, and over consumers. The App Store is no more technically necessary for loading software on a mobile than it had been for the PC. Its function is to create a bottleneck that allows Apple to extract rents from complementary app developers and delay or degrade apps that threatened to decrease its rents or bargaining power.⁵¹ Cisco developed “policy routers” in 1999 to enable newly emerging cable broadband providers to extract rents from suppliers of complementary products. The result have been two decades of political struggles over net neutrality. The dynamic is replicated in Google and Facebook's advertising platforms and Amazon's relations with sellers in Amazon marketplace.⁵²

Firms deploy technologies that increase their bargaining power over labor in three primary ways—homogenization, monitoring, and fissuring.⁵³ As both Noble and Bowles

emphasized, automation that standardizes and simplifies labor inputs weakens labor bargaining power, whereas automation that increases productivity more but requires experienced operators strengthens labor. Monitoring similarly alters bargaining power by removing workers' credible threat to slow down production if not treated fairly. The theory of efficiency wages is that when firms cannot perfectly observe effort or quality, they pay workers a premium to encourage them to make firm-specific investments and work beyond what is observable. If technologies make effort more observable, workers' bargaining power declines, and with it wages. Levy and Barocas, for example, show how retail firms have repurposed systems originally designed to monitor customers to both homogenize experienced sales-people, making them more readily replaceable, monitor employees more finely to impose starker discipline, and externalize the risk of the ebb and flow of business onto workers. Finally, employers can deploy technologies that enable workplace fissuring and undermining worker collective action, as Rogers emphasized or as Gray and Suri demonstrated when they showed how much of contemporary "artificial intelligence" systems incorporate human "last mile" operations in the United States and India, harnessing individuals operating behind a one-way mirror in which everything they do is observed and measured, while disabling worker coordination.⁵⁴

Companies also develop technologies and institutions to increase their bargaining power over consumers and their ability to extract rents from them. Battles over privacy or algorithmic use of data are now the dominant front of consumer-oriented struggle in technology politics. Captured evocatively by Zuboff as "surveillance capitalism," several of the world's most valuable companies are focused primarily on developing technologies whose core task is to extract information from and about, and run behavioral experiments on, consumers. One would need Panglossian optimism to imagine that pervasive surveillance, on-the-fly interface design and personalized, experimentally-validated behavioral advertising was designed to inform, rather than manipulate consumers. Successfully manipulating demand would increase the value of the quasi-rents by manipulating users' willingness to pay. It would also increase the half-life of the quasi-rents by delaying competitive entry: manipulating information about substitutable products and magnifying perceived differentiation between the manipulator's product and substitutes. Applied to politics, the translation of this power into shaping the institutional dimension of power is obvious. There is little quantitative evidence to support the claim that these technologies in fact work effectively to manipulate demand, either commercial or political.⁵⁵ Yet it is clear that their purpose is to develop such power over consumers, and that even without evidence advertisers are buying enough of the promise to obtain such power to make these technology companies the most valuable in the world.

Power-seeking technical change makes clear that notice-and-consent approaches to "privacy" are doomed to fail even in the most consumer-privacy-protective regulatory regime. Solutions that depend on notice and consent assume that as long as consumers get the right information and the rights to control the data collected about them, the technological developments will be steered toward welfare-enhancing solutions driven by consumer choices. That benign assumption collapses once we understand that the entire technological drive to develop commercial surveillance arises in a relationship between powerful sellers and powerless consumers, and is designed to enable ever-finer manipulation of consumer preferences and

perceived options to sustain and increase that power differential. Consumers need robust forcing regulation, anchored in public values expressed through nonmarket systems, to counter the market power of firms like Google, Facebook, or Amazon.

4. Power-seeking technical change: markets vs. state and commons

Freedom from markets depends on the best alternative to engaging in a market transaction at all. This goes to the very heart of what differentiates different market societies: the degree to which they are disembedded from social relations. One of the central effects of DRM was denying interoperability to free software products that could substitute for proprietary, market-based products. A critical dimension of artists' efforts to engage fans in voluntary payments systems was to reconstruct the relationship between artist and fan as a social relation of mutual recognition and respect, rather than commodity exchange. And it was precisely the emergence of a significant nonmarket commons-based sector at the heart of contemporary economies that promised the most radical transformation wrought by the new technology.

In the 1990s and early 2000s the Internet Engineering Task Force (IETF), the WWW, free software generally reflected efforts by networks of individuals who developed the most important technological innovations of the period to achieve a more egalitarian, decentralized, and democratic power distribution. None of these efforts was perfect. They mixed libertarianism and anarchism with liberalism. They were mostly male, white, and American. Many objected to them along these dimensions. But they were fundamentally different from, and often directly in conflict with, efforts by market and state actors to concentrate power in a handful of firms or national security and law enforcement agencies.

As we begin to look for regulatory and policy responses to the present crisis, finding mechanisms to integrate the most valuable elements of state power as counterpower to market actors with the most valuable elements of nonmarket actors as a counterbalance to both state power and the power of market actors, each with their own modes of error and abuse, presents a critical dimension of design. This includes clarifying the central role of actors insulated from markets, like the university system or nonprofit civil society organizations, in the learning adaptive regulatory approaches that Rodrik and Sabel propose.⁵⁶ It includes the efforts, most prominently present in Barcelona and the sharing cities declaration, of creating a public-commons partnership model of local regulation.⁵⁷ And it may include developing public support models, just as the USDA supports farmers, to provide loans, insurance, training, and research to support a resurgent cooperativism. All these are mechanisms of supporting significant production and opportunities for developing social relations of production insulated from power in markets, and may offer, at sufficient scale, distinctive opportunities to engage in the economy without being subject to the normal power dynamics (though these will also embody power relations, not utopias), as well as sources of political power to further support egalitarian politics.⁵⁸

5. *Conclusion*

Political economy is the study of the construction, maintenance, and deployment of power in social relations of production. The defining idea of neoliberalism was to remove the state as a major source of power in the economy, and to disembed economic relations from solidaristic social relations. In practice, in the United States at least, it meant weakening the state vis-à-vis firms but deploying its power against labor; and leveraging the emergence of the individual in American culture into legitimation of oligarchic extraction.

The core role of a post-neoliberal political economy is to ground our understanding of the economy as an arena of struggle structured by social and material context, in which individuals and organizations continuously trade off power and productivity to pursue their diverse goals. A critical dimension of struggle involves the extent to which a society's economy is embedded in social relations of solidarity and mutual obligation, as opposed to disembedded from these, and is structured purely as an arena of self-regarding action coordinated by prices and unconstrained self-interest. Developing such an understanding, I try to demonstrate here, requires integrating understandings of how power operates to shape relations in the economy with understandings of the diversity of human motivation and social dynamics, and the endogeneity of both motivation and social patterns of behavior to the institutional and ideological context within which people interact with each other. Power struggles in society play out across both social and material context—institutions, ideology, and technology—and are oriented toward both distribution within the context of the moment and to the structure of context to influence the distribution of power over time.

Much of my focus in this chapter has been to displace the “efficiency (or growth) vs. equality” frame of neoclassical economics and neoliberal ideology with an explanation of how productivity and equality are not in fact in tension when power is reintegrated into our understanding of how markets operate. Given that markets are never efficient in the neoclassical sense, the pursuit of rents plays a central role in structuring both productivity and equity. Part of the story has strategic micro foundations—agents trade off productivity for power over time in order to increase the value of quasi rents they can obtain and to extend their longevity. But purely aggregating micro-foundationally specified individual actions is incomplete. Agents with similar positions in social exchange, who regularly face similar payoffs from distinct institutional arrangements, technological assemblages, or knowledge frames, come to understand themselves as having a shared interest and act upon it. The copyright industries, represented by the RIAA and MPAA, did battle with civil society organizations like the EFF and Public Knowledge over DRM and other technological choices, both sides believing that the technologies deployed and institutional frameworks around them would shape the respective bargaining power of the industries and users. The microfoundational analysis must be complemented with understanding collective action, which is where political and social movement analysis becomes critical, and with cultural analysis to understand how ideology shifted, and the extent to which ideological shifts were part of a strategy, or developed independently in ways that nonetheless complemented intentional collective and individual action.

A more profound departure from prevailing understanding of market societies is that the mix of agents and organizations in a society, and therefore the relative patterns and goals towards which they deploy power, is endogenous. The extent to which society is typified by self-interested individuals and rent-seeking firms as opposed to prosocial individuals and socially-embedded organizations is itself a critical arena of struggle. The battles over the commons, the experience of commons-based practices in the first two decades of public Internet culture, and the coeval emergence of the study of prosociality in the behavioral sciences mean that societies can diverge significantly along the dimension of how the preponderance of agents and organizations conceive of their goals and preferences. This divergence can stabilize into the diversity of we see in the organization of social relations of production between in different times and places—be it the shift from “Treaty of Detroit” American labor relations to the neoliberal extraction, or the divergence between Nordic social democracies and American liberalism. These are themselves not natural or inevitable differences, but the results of historical battles, carried out within and about institutions, ideology, and technology, concentrated on the degree to which a society and its members perceive their economic activity as autonomous of social obligation or embedded in it.

Efficiency and equity cannot be separated in analyzing market society. Markets are pervaded by power, and market societies have substantial freedom to settle on any of a broad range of arrangements at the same productivity frontier, including choices about technological adoption and institutional forms that have significant impact on fairness and freedom. Market actors know this and act strategically in interactions both within markets and about the institutional and technological determinants of power in market relations so as to increase their ability to extract quasi-rents in all their interactions. Only organized counterpower, in civil society and through democratic control of the state, can provide a sufficient counterweight to arrive at more just settlements. As a practical matter, that means we will need substantially more muscular antitrust law, stronger labor protection and organizational support, extensive reregulation of the financial sector, and dramatically more labor-protective trade policy, as well as new models of democratic accountability and substantive regulation of algorithms and data collection and use. We are already seeing a new will to go in that direction in Europe when focused on multinational technology firms, but more broadly and systematically among several of the more progressive Democratic presidential candidates in 2020.

But simply imagining a re-empowered state cannot wipe away decades-long recognition that the state itself is highly imperfect and an arena of power struggle and manipulation. A central challenge of the coming years will be to design new models of integrating the state back into playing a major role as a counterpower within the economy without ignoring the fallibility of the state itself. These new models will be different than the hierarchical models of the 1950s and ‘60s, and may share more with the experimentalist models of the type Rodrik and Sabel describe as models for developing good jobs. Difficult as that institutional design problem is, it is necessitated by the recognition that market actors left to pursue their own goals will systematically seek rents and undermine productivity growth, and that there is substantial room to improve the just distribution of economic returns while forcing firms to improve productivity by shutting off avenues for rent seeking. A central way of reducing some of the load the state along will have to carry as countervailing force in the economy will be to invest public power

and fiscal capacities to support a broader and more robust emergence of nonmarket models to play a larger role in the economy. Cooperativism, municipalism, and the third sector more broadly can come to play a more significant role in the economy, in particular in providing the basic necessities in order to reduce the imperative of engaging in market transactions to satisfy these basic needs. It is, after all, the need to make money to satisfy those needs that is the core driver of compulsion to enter into the labor market in market societies, and hence the core source of capital's power over labor where that imperative is overpowering.

The first step toward any of these reforms, however, is to understand market society as political economy, as social relations with power, rather than as a more-or-less natural and efficient process that will work itself clean if only ill-informed regulators and pesky activists get out of the way.

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