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Food, Money, and Democracy: Cultivating Collective Provisioning for Resilient and Equitable Communities of Work

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Abstract

Coordination rights, or the right to coordinate, is an emerging concept in law and political economy that establishes who is permitted to engage in economic coordination and who does not. Coordination rights are fundamental to the process of building resilient communities and determine whether social provisioning systems are "collective" or "concentrated". In concentrated provisioning systems, decision-making is consolidated in the hands of a few actors who tend to prioritize profit-seeking over environmental and labor concerns, leading to inequality and ecosystem degradation. Collective provisioning systems instead involve rich human experiences that foster cooperation and a holistic approach to production that improves environmental and social wellbeing. We demonstrate these differences through comparative analysis of industrial agriculture and alternatives such as the La Via Campesina movement for Food Sovereignty, the Black Cooperative Movement in the U.S., and restaurant reactions to the early days of the COVID-19 pandemic. Unfortunately, what is also displayed is that without reliable access to monetary resources collective provisioning systems are vulnerable to financial crisis and collapse. Alleviating these vulnerabilities requires that monetary systems themselves also adopt collective coordination principles. Accordingly, we present small and medium-scale monetary experiments that use food systems as a way to build community capacity. These experiments challenge the exclusionary nature of the dominant profit-driven mode of financial coordination and illustrate the potential of community-driven and socially beneficial frameworks for increasing resilience, equity, and health in our communities.

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Introduction

In recent years, the progressive caucus of the democratic party has drafted significant legislation to prepare our communities for climate change and address vast social inequity. [The Green New Deal](https://www.congress.gov/bill/116th-congress/house-resolution/109/text), [the Public Banking Act](https://www.congress.gov/bill/116th-congress/house-bill/8721/text?r=1&s=1), and the [Stable Coin Act](https://www.congress.gov/bill/116th-congress/house-bill/8827/text) are all informed by the notion that Congress can deploy its powers to reshape money creation.[1] Defined by Modern Monetary Theory (MMT), a country's "monetary sovereignty" is a set of institutional parameters: sole issuer of the currency, maintaining a flexible exchange rate, and having national debt denominated in one's own currency.[2] Under these parameters, countries like the United States, the United Kingdom, and Japan are monetary sovereigns. MMT economists frequently refer to such countries as the "monopoly issuer of the currency." As such, they sit at the top of the monetary hierarchy.[3]

MMT economists argue these countries are capable of bold and expansive coordination of human labor power and resources. However, the vast majority of the world's nation-states and subnational governance bodies are not monetary sovereigns. Rather, they are "users" of currencies. Whether they peg their exchange rate, enter a currency zone agreement or, like U.S. states and municipalities, are constrained by a Constitution, these geopolitical entities face much narrower policy spaces or, what will be defined below as "coordination rights," for organizing their social provisioning.[4] In practice, this means that these communities' capacity to coordinate what people can do for each other is severely constrained.

Such constraints give rise to two fundamental questions. First, are the privileges of monetary sovereignty and the corresponding policy space only available to monopoly issuers, or are horizontal and community oriented arrangements possible?[5] Second, how does one ensure that the mobilization of real resources (the labor and non-

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[1] H.R. 109, 116 Cong., Recognizing the Duty of the Federal Government to Create a Green New Deal, 2019, https://www.congress.gov/bill/116th-congress/house-resolution/109/text; H.R. 8721, 116th Cong., Public Banking Act of 2020, https://www.congress.gov/bill/116th-congress/house-bill/8721/text?r=1&s=1; H.R. 8827, 116th Cong., Stablecoin Classification and Regulation Act of 2020, https://www.congress.gov/bill/116th-congress/house-bill/8827/text.

[2] Randall L. Wray, *Understanding Modern Money: The Key to Full Employment and Price Stability* (North Hampton, MA: Edward Elgar, 1998); Warren Mosler, *The 7 Deadly Innocent Frauds of Economic Policy* (US Virgin Islands: Valance Co., 2010).

[3] Stephanie Bell, "The role of the state and the hierarchy of money," *Cambridge Journal of Economics* 25, no. 2 (2001).

[4] Wray, *Understanding Modern Money*.

[5] This paper is engaging with ongoing advances in MMT to explore sovereignty, not as a dichotomous structure but as a spectrum of tools and institutional settings that are malleable to the needs of populations. Contributors in this project include the work of Fadhel Kaboub, Ndongo Samba Sylla, and others.

financial instruments of production) are created and distributed in ways that ameliorate inequality and deliver price stability? In other words, must we wait for monopoly issuers to initiate a Green New Deal to address climate change or systemic inequities? If not, how do we effectively organize money from the bottom-up to get things moving forward?

To address these questions, we pursue a coordination rights analysis to investigate the institutional relationships between real resources (the materials and human effort used to make life happen) and monetary resources (congressional appropriation and finance). According to the Law and Political Economy literature, the concept of coordination rights arises from a critical engagement with antitrust law that sheds light on the historical contingency of which actors may coordinate activities and resources, and which ones may not.[6] As theorized by legal scholar Sanjukta Paul and economic researcher Nathan Tankus, coordination rights are privileges that include "joint bargaining; production itself (at least any sort of production that involves the efforts of more than one person); geographical or other market allocation decisions; resource allocation decisions between various economic activities, like research and development, and expansion; and last but not least, price setting."[7] These privileges make coordination rights important tools for challenging long held assumptions about efficiency, economies of scale, and the equality of exchange that naturalize the firm in orthodox economics. Naturalization of the firm's coordinating functions shapes antitrust law and legal judgements that consistently favor capital over labor and hierarchy over democratic decision making.[8]

In short, coordination rights cannot be assumed away as natural, but strike at the very core of what it is to be a firm or an institution that organizes and mobilizes production. We characterize these institutions as "communities of work." Communities of work generalize our discussion of production beyond the narrow profit maximization model of orthodox economics and facilitate a joint investigation of coordination rights and what heterodox economic scholars define as "the social provisioning process."[9] When coordination rights are applied to the orthodox philosophical underpinnings of exchange, competition, and scarcity, intrafirm coordination drives "concentrated" provisioning and the inequality we observe across

[6] Sanjukta Paul, "Antitrust as Allocator of Coordination Rights," *UCLA Law Review, 378* (2020), https://www.uclalawreview.org/antitrust-as-allocator-of-coordination-rights/.

[7] Sanjukta Paul and Nathan Tankus, "The Firm Exemption and the Hierarchy of Finance in the Gig Economy," *University of St. Thomas Law Journal* 16, no. 1 (2019), https://ir.stthomas.edu/ustlj/vol16/iss1/4/, 45.

[8] Paul and Tankus, 45.

[9] Frederic S. Lee, *Microeconomic Theory: A Heterodox Approach,* ed. Tae-Hee Jo. (New York, NY: Routledge, 2018).

production systems as varied as banking, rideshare services, and agriculture. In contrast, communities of work coordinated with an emphasis on commitment, cooperation, and care generate "collective" provisioning systems or inter-firm coordination.

These differing characterizations of communities of work draw on David Ellerman's 1990 comparative analysis of democratic workplace structures.[10] In his study, Ellerman makes the case that an economic democracy requires production to be organized by democratic firms. Democratic firms are communities of work where workers not only participate in management decisions but are also residual claimants of both the fruits and losses of their labor.[11] This democratic structure organizes the governed as the governors. In Ellerman's view, the structure of a community of work is analogous to the governing relations in a democratic state and its corresponding community of citizens. Here, we argue that for democratic workplaces to be part of a broader democratic economy, the monetary system's design, implementation, and maintenance must also reflect these democratic principles. In so doing, the standard MMT description of the monetary relation between issuer and user dissolves like those of workers and owners in a democratic firm. Moreover, collective monetary systems reveal more substantial understandings of work, effort, and care, where holistic approaches to production and reproduction are rooted not in hierarchy and power, but in a community's real resources.

We substantiate these claims and their consequences through a comparative analysis of food systems. We focus on food because it is at once an input for human health and well-being, an output of production, and a source for extensive environmental services such as carbon sequestration. Food is important not only as a means of providing sustenance and survival, but also as a way of creating and defining culture. From soil ecologies to high cuisine, food is a connector across complex systems and is central to many of the narratives describing human development and the evolution of civilization.[12]

Our analysis of food begins with industrial agriculture which epitomizes concentrated provisioning and the pernicious social and economic impacts created by orthodox myths about efficiency and scarcity. We compare this system with a selection of food system producers, both past and present, that function as reactions to the precarity

[10] David Ellerman, *The Democratic Worker-Owned Firm: A New Model for the East and West* (New York, NY: Routledge, 1990).
[11] Residual claimants bear the costs of inputs used up in production and own the outputs (Ellerman 1990).
[12] Rachel Lauden, *Cuisine & Empire: Cooking in World History* (Berkeley and Las Angeles, CA: University California Press, 2013).

created by industrial agriculture, but also introduce vibrant communities of work that embrace collective democratic principles. La Via Campesina Movement for Food Sovereignty, the Black Cooperative Movement in the United States, and reactions by restaurant owners and chefs during the early months of the COVID-19 pandemic all demonstrate innovative strategies for the development and implementation of coordination rights. Deliberate and spontaneous, their stories of collective provisioning deliver lessons about the ways in which communities can organize and achieve diverse and holistic objectives.

As noted above, however, their objectives, or what people can do for one another, are contingent upon access to money structured by the prevailing coordination rights of the existing monetary regime. Through the lens of coordination rights, we claim, the monopoly issuer of the currency and the banking sector execute credit allocation decisions guided by the same preferences for hierarchy, worker vulnerability, and profits (or "intra-firm" logics) as the concentrated provisioning industries they support.[13] Accordingly, money's concentrated provisioning limits access to financial resources, most notably credit and liquidity, available for collective provisioning systems that embrace more capacious "inter-firm" logics of cooperation, care, and abundance.[14] Thus, for stable collective communities of work to be resilient and a greater part of social provisioning, monetary systems must be designed with the same philosophical underpinnings and inter-firm logics. This paper provides a vision for designing such systems.

The first step in materializing this vision is to work through the intellectual genealogy of the firm, which we proffer in Section I. "Why do firms exist?" is a simple yet fundamental question in political economy, and the evolution of the answers to this question builds context for practical implications.[15] The implications for coordination rights are most notable in the area of antitrust law's firm exemption, which "decides who gets to engage in economic coordination and who doesn't."[16] Taking up Uber, industrial agriculture, and finance as examples, we demonstrate that the consequences of following the neoclassical economic interpretation of coordination consistently yields hierarchy and concentrated provisioning. Economic coordination thus

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[13] Sanjukta Paul and Nathan Tankus, "The Firm Exemption and the Hierarchy of Finance in the Gig Economy," *University of St. Thomas Law Journal* 16, no. 1 (2019), https://ir.stthomas.edu/ustlj/vol16/iss1/4/.
[14] Paul and Tankus, "The Firm Exemption."
[15] Ronald H. Coase, "The Nature of the Firm," *Economica* 4, no. 16 (1937), https://onlinelibrary.wiley.com/doi/10.1111/j.1468-0335.1937.tb00002.x, 388.
[16] Sanjukta Paul and Nathan Tankus, "The Firm Exemption and the Hierarchy of Finance in the Gig Economy," *University of St. Thomas Law Journal* 16, no. 1 (2019), https://ir.stthomas.edu/ustlj/vol16/iss1/4/.

becomes the privilege of the few, rather than a democratic and inclusive social provisioning process.

Section II builds on our discussion of social provisioning by comparing alternative systems of coordination rights. The La Via Campesina International Movement for Food Sovereignty, the Black Cooperative Movement in the United States, and the cooperative behaviors observed in the restaurant industry during the early months of the COVID-19 pandemic each contribute lessons about how coordination rights can be applied to break away from hierarchy and inequality. Diverse in their scales, time periods, and geographic locations, each exhibits a consistent commitment to education, inclusion in decision making, and the value of care. Together, these examples of collective provisioning bring forward the strengths of deliberate and organized coordination, evincing the power of improvisation and the ability of actors to execute transformative strategies quickly and effectively.

From this foundation of coordination, commitment, and care, we return to money in Section III. The crux of our argument is that coordination rights are not limited to the firm, but extend to the monetary systems that support them. In this section, we unpack MMT's conception of monetary hierarchy and describe the coordination rights that animate money creation. Central to this analysis is the "franchise" relationship between Congress (the monetary sovereign) and the banking sector.[17] Examination of this relationship highlights the role of orthodox myths in perpetuating concentrated provisioning, by both limiting Congressional appropriation and expanding the role of the banking sector in provisioning communities of work. Relatedly, we criticize financial technology, or "fintech," for reinforcing the existing concentrated provisioning apparatus. Bitcoin, like industrial agriculture, is exemplary for comparing an orthodox vision of scarcity and exchange to an alternative application of the coordination rights that are revealed through MMT's institutional analysis.

The final section develops a model for the experimental design of monetary systems that are reflexive, non-exclusionary, and consistent with the production and reproduction of collective provisioning and associated communities of work. In these models, anchor institutions serve as fulcrum points for engagement between community-level resource mobilization and macro-level policy agendas such as the Green New Deal or the Paris Climate Accord's commitments and goals. This structure, we argue, goes a long way toward finding deep connections between a community's real resource capacity and the monetary instruments that mobilize these

[17] Robert Hockett and Saule T. Omarova, "The Finance Franchise," *Cornell Law Review* 102, no. 1143 (2017), https://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=2660&context=facpub.

resources. While the design of such systems may appear exotic or radical on the surface, this section points out that the fundamentals of hierarchy, legal design, and existing technology are all already being leveraged by the financial sector to manipulate payments systems, threaten market stability with automated trading algorithms, and privatize cash with cryptocurrencies and digital tokens. These destabilizing and extractive efforts are not the only path forward. Instead, monetary coordination and collective provisioning present an opportunity for robust public engagement and stewardship of monetary systems.

Taken together, the investigation of coordination rights, social provisioning, and communities of work shows that all systems of production evolve and that their parameters are experimental--from Egyptian obligation and debt networks of beer and bread to land trusts and urban agriculture in Detroit, Michigan. For this reason, new methods for evaluation and novel forms of measure are necessary and best derived through "learning by doing" experiments that marry our monetary and productive systems. Understanding connections between actors and institutions participating in the process of designing and implementing monetary systems and the corresponding systems of production cultivates reflexive relationships.

The study of such relationships exposes an important site of theoretical tension related to the mobilization and meaning of sovereignty. One the one hand, monetary sovereignty's strict parameters exclude many from participating in money's design, while on the other, food sovereignty presents an inclusive and boundary-free model. The latter, we argue, represents a promising horizon for denaturalizing sovereignty as an ontological matter. It embraces the malleability of the term's definition as an experimental framework for enhancing inclusion and jettisoning the pernicious insider-outsider contestation of monetary sovereignty.

Consequently, while the language of freedom, independence, and sovereignty is often used by those seeking solidarity and relief from oppression, we reject the notion of freedom perpetuated by orthodox economics as reducible to individualism and choice. This individualist/independence view of freedom is zero-sum, divisive, and perpetuates hierarchies and inequalities that only serve the interest of a few. Alternatively, coordination rights and social provisioning point to a freedom best understood as rooted in the Germanic derivation of "free" meaning "friend."[18] This form of freedom, or the ability to be a friend, is not available to slaves, because they are not free to make commitments or promises.[19] This makes plain the core difference

[18] David Graeber and David Wengrow, *The Dawn of Everything: A New History of Humanity* (New York, NY: Farrar, Straus and Giroux, 2021), 195.
[19] Graeber and Wengrow, *The Dawn of Everything.*

between freedom as choice and freedom to promise. One draws from a state of nature, while the second is grounded by friendship, a familiar social construct. Thus to build on the freedom to commit, we prioritize one of our most fundamental social constructs, our monetary promises or IOUs.[20] Through monetary experimentation, we can use collective promises and the power of coordination to create new ways of doing things for each other and our communities. This invites myriad redesigns of money's promise that abandon independence, scarcity and exchange and commit instead to dependence, abundance, and care. Such experimentation raises our capacity for production that is oriented toward sustainable prosperity for all.

I. Coordination Rights and the Social Provisioning Process

R.H. Coase's 1937 article, "The Nature of the Firm," canonizes what is today the common, naturalized view of the firm. But even Coase begins by questioning the very existence of the firm. If competition and exchange transactions of scarce resources are organized by efficient production, coordinated through the price mechanism, he asks, then why do firms exist in the first place? Coase answers that intra-firm coordination "consists of the system of relationships which comes into existence when the direction of resources is dependent on an entrepreneur," while "outside the firm, price movements direct production, which is coordinated through a series of transactions on the market."[21]

Today, however, modern textbooks naturalize the firm's internal coordination. Rather than investigating the system of relationships that require an entrepreneur, textbooks leave hierarchical firm structures largely unquestioned.[22] In Robert S. Pindyck and Daniel L. Rubinfeld's Eighth Edition of *Microeconomics*, for example, one reads that "firms offer a means of coordination that is extremely important and would be sorely

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[20] Stephanie Kelton, "The Role of the State and the Hierarchy of Money," *Cambridge Journal of Economics* 25, no 2. (2001).

[21] Ronald H. Coase, "The Nature of the Firm," *Economica* 4, no. 16 (1937), https://doi.org/10.1111/j.1468-0335.1937.tb00002.x, 388.

[22] Coase quotes Francis Raleigh Batt: "The master must have the right to control the servant's work, either personally or by another servant or agent. It is this right of control or interference, of being entitled to tell the servant when to work (within the hours of service) and when not to work, and what work to do and how to do it (within the terms of such service) which is the dominant characteristic in this relation and marks off the servant from an independent contractor, or from one employed merely to give his employer the fruits of his labor." See Coates, "The Nature of the Film," 404. Similar musing about "bad masters" and the problems associated with workers' bargaining rights are found in Alfred Marshall's discussion of firm coordination. See, John Henry, *The Making of Neoclassical Economics* (New York, NY: Routledge, 1990), 219.

missing if workers operated independently."[23] When it naturalizes firm input decisions and relinquishes the analysis that gives rise to the entrepreneur, traditional neoclassical economics lacks a theory of democratic or social enterprise. The result, as David Ellerman explains, is that "the firm is seen as a technologically specified black-box or, from the institutional viewpoint, as a piece of property, a capital asset—not a community of work qualifying for democracy."[24] Further obscuring the system of relations and internal operations, current neoclassical orthodoxy naturalizes copyrights, licenses, bargaining power, and price-setting. These are examples of coordination rights that structure firm behavior both within its boundaries and beyond, but are taken for granted by the standard supply and demand model.

As an alternative to orthodox accounts that naturalize the economic experiment that is the firm, we maintain that in and beyond the modern firm coordination rights make up all communities of work. Such a framing moves beyond narrow and misleading oppositions between what allegedly lies inside and outside the firm. A necessary paradigm shift, the coordination rights approach enables us to analyze and imagine an array of communities of work as historically specific and always-political entities, from conventional firms to cooperatives and large-scale or small-scale monetary systems. The perspective of coordination rights dovetails with and enriches heterodox economic perspectives, which highlight legal allocations through examinations of social provisioning processes. Frederic Lee, for instance, defines the social provisioning process as "an emergent system of social-economic activities that generate an array of surplus goods and services (over what is used up in production) needed to sustain households and their social relationships, and thus society as a whole."[25] Combining the heterodox analytical perspective with Paul and Tankus's coordination rights creates a transdisciplinary lens for understanding the constitution of communities of work and how they generate and use resources. Through this lens, two different forms of the social provisioning process are brought into view: concentrated and collective.

A vehicle of concentration, the firm is a community of work grounded in neoclassical economics that produces systems of relations to achieve profits and constrict resource provisioning accordingly. Conventional thinking understands profits to be more likely when intra-firm coordination rights privilege owners of capital and financial assets with easy transferability. Workers' coordination rights are always suspicious on this view because they eschew the price mechanism. Instead, workers are told that they

[23] Robert S. Pindyck, and Daniel L. Rubinfeld, *Microeconomics,* 8th ed. (Upper Saddle River, NJ: Pearson Education, 2013), 203.
[24] David Ellerman, *The Democratic Worker-Owned Firm: A New Model for the East and West* (New York, NY: Routledge, 1990), 207.
[25] Lee, *Microeconomic Theory,* 1.

should accept the wage and working conditions that "the market" offers them. Paul and Tankus describe the example of Uber.[26] As a firm, Uber enjoys a range of coordination rights including, most importantly, the right to set the prices it charges customers across their vast rideshare system. The rights of Uber drivers to coordinate, organize, and negotiate wages and benefits packages are severely limited, because they, like truckers and other gig economy workers, independently compete in a system where the price mechanism sets the terms. With its singular focus on profits, this concentrated form of provisioning excludes from consideration the values and needs of large populations in Uber's communities of work.

Organizing the allocation of coordination rights to firms while denying them to workers is not new. Farming and agriculture provide another telling example for understanding concentrated provisioning's impact on communities of work. Under the leadership of Secretary of Agriculture Earl L. Butz (1971-76), for instance, the United States experienced what Wendell Berry called a transition from agri-*culture* to agri-*business*.[27] In this transition, increasing reliance on capital and fossil fuel-intensive production expedited the concentration of agricultural land ownership. Heralded by Butz as "the machine age," this transition reduced the number of people necessary to work the land.[28] For Butz, it was a tremendous success, freeing people to engage in productive activities other than farm labor. Similar rhetoric is used to describe the individual freedoms of today's gig economy workers and their flexibility to pursue other professional development opportunities. However, this freedom did not generate robust and diversified rural communities. Instead, as Wendell Berry rightly predicted, the industrial model drained these communities of the cultural spirit that comes from raising food as a collective process.

Instead of being set free by Butz's policies, farmers are squeezed by concentrated provisioning both up and downstream on the supply chain. Responding to this pattern of concentration, food systems researchers have since created a metric that combines the share of the top 4 firms in a market as a measure of industry consolidation.[29] Called the "concentration ratio 4" (CR4), this measure also proxies as a measure for concentrated provisioning. Upstream from farmers, CR4s for production inputs and equipment include: agrichemicals 65%, animal pharmaceuticals 58%, seeds 52%, and farm equipment 45%. Downstream, the story is similar. Farmers

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[26] Paul and Tankus, "The Firm Exemption and the Hierarchy of Finance in the Gig Economy."
[27] Wendell Berry, *The Unsettling of America: Culture and Agriculture* 3rd ed. (San Francisco, CA: Sierra Club Books, [1977] 1996).
[28] Earl L. Butz, "Agribusiness in the Machine Age," in *Power to Produce: The 1960 Yearbook of Agriculture* (Washington, DC: United States Department of Agriculture, 1960), 380-85.
[29] William D. Heffernan, Mary Hendrickson, and Robert Gronski, *Consolidation in the Food and Agriculture System* (Washington, DC: National Farmers Union, 1999).

face high CR4s in the processing of soybean 80%, beef processing 73%, pork processing 67%, and chicken processing 54%.[30] The concentrated provisioning of agriculture along the supply chain culminates with consumer products, where the CR4 measures are cold cereal (83%), soft drinks (82%), beer (77%) salty snacks (63%), and bread (58%).[31] What might appear as diverse product options are in reality coordinated by ten multinational corporations.[32]

The concentrated provisioning of the food system leaves important input from workers out of decision-making processes. The corporate application of coordination rights provisions research, land use, market selection, and prices in ways that transform communities of work both on and beyond the farm. This transformation concretely reduces land ownership and incomes. In 2019, median yearly income for farms grossing under $350,000 where at least one operator spends 50% or more of their work hours farming was $654.[33] In order to maintain their enterprises in the face of declining margins, concentration has forced farms themselves to consolidate and expand. The median size of U.S. crop farms in 1987 was 650 acres, and by 2017, it had increased to 1,445.[34] Similarly, in dairy, the midpoint herd size has increased from 80 to 1,300 over that same time period.[35] This narrowing of value production leaves communities of work without a voice. Places like Berryville, Arkansas avoid expressing their needs out of fear their towns will "evaporate" if industrial producers like Tyson, "the center of economic gravity," were to move. [36]

Consistent with the struggles of Uber drivers, concentrated provisioning does not afford farmers the same coordination rights enjoyed by the corporate structures in the food system. Concentrated provisioning limits independent producers' abilities to sustain themselves and cultivate healthy communities of work. Uber drivers self-

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[30] Mary K. Hendrickson, Philip H. Howard, Emily M. Miller, and Douglas H. Constance, "The Food System: Concentration and Its Impacts," *A Special Report to the Family Farm Action Alliance*, published November 19, 2020, addended May 6 (2021), Accessed July 27, 2021. https://farmactionalliance.org/wp-content/uploads/2021/05/Hendrickson-et-al.-2020.-Concentration-and-Its-Impacts_FINAL_Addended.pdf.
[31] Hendrickson et al, "The Food System."
[32] Oxfam: https://www.oxfamamerica.org/explore/stories/these-10-companies-make-a-lot-of-the-food-we-buy-heres-how-we-made-them-better/.
[33] USDA/ERS, 2019, Principal Farm Operator Household Finances by Farm Typology, https://www.ers.usda.gov/data-products/farm-household-income-and-characteristics/farm-household-income-and-characteristics/#Farm%20Household%20Characteristics.
[34] James M. MacDonald, "Tracking the Consolidation of U.S. Agriculture," *Applied Economic Perspectives and Policy* 42, no. 3 (2020): 361–79.
[35] James M. MacDonald, Jonathan Law, and Roberto Mosheim. "Consolidation in U.S. Dairy Farming," *USDA Economic Research Report 274*, July 2020.
[36] Christopher Leonard. *The Meat Racket: The Secret Takeover of America's Food Business* (New York, NY: Simon & Schuster, 2014), 8.

exploit to survive, while farmers too must compromise ecological and social values to keep their farms going.[37]

Concentrated liquidity provisioning, meanwhile, further compromises the potential for farmers or gig economy workers to voice challenges to coordination rights. Because these are non-competitive oligopolistic sectors, their major firms have privileged access to credit, which we identify as a form of economic coordination. When financial institutions extend credit, they enable chosen actors to coordinate the activities of others. Coordination occurs when firms purchase resources and labor power to organize productive processes. And when financial institutions extend credit and enable coordination, they do so with the expectation of making a profit from these already-existing firms. Firms in this concentrated form of provisioning attempt to keep wages low and privilege profit over any other concern.[38] Financial actors bet on firms because they, too, function within a profit logic and depend on the profitability of their debtors.

Concentration patterns are widespread in the gig and technology industries. On Paul and Tankus's reading,

> The financial press is filled with stories about venture capitalist investments in Google, Apple, and similar entities. The appetite of this category of financiers provides an enormous financial advantage for young, hierarchical firms looking to grow quickly and dominate markets. What all this amounts to is that our current financial system allocates finance to those that currently possess wealth and market dominance, while allocating additional funds to those firms that financiers are willing to gamble will become wealthy and dominate markets in the future. This gamble is profitable because it forecloses the possibility that young firms will have any democratic character. Thus, it is the hierarchical access to finance which transforms the hierarchical organization of production from a quirk of our legal system into the organizing principle of our social system.[39]

The organizing principle here is what Coase identifies as entrepreneurialism and the system of social relations that supports it. Such a system is not natural, but the result of two sets of coordination rights. First, the entrepreneurial system grants rights to

[37] Ryan E. Galt, "The Moral Economy Is a Double-edged Sword," *Economic Geography, 89* (2013): 341–65, https://doi.org/10.1111/ecge.12015.
[38] Raj Patel, "Agroecology is the Solution to World Hunger." *Scientific American.* (September 22, 2021). https://www.scientificamerican.com/article/agroecology-is-the-solution-to-world-hunger/.
[39] Paul and Tankus, "The Firm Exemption and the Hierarchy of Finance in the Gig Economy," 53.

individual private firms to coordinate people's activities that make profit. Second, the system allocates rights to financial actors which, in extending credit to concentrated firms according to private preferences, perpetuate processes of for-profit coordination.

Paul and Tankus critique this form of coordination because it depends on hierarchical and anti-democratic practices, which consistently make people and the planet vulnerable to exploitation. Concentrated coordination is not designed to be inclusive, flexible, just, resilient, ecologically sound, or responsive to local needs. Instead, it creates spaces of scarcity and vulnerability, proliferating illness in neighborhoods, soil, air, and water systems.[40] Naming concentration what it is—a large-scale experiment in coordinating human activities, technology, and ecological systems—opens up space for different, and more promising, forms of coordination that provision collective communities of work.

II. The Food System and Collective Provisioning

The La Via Campesina International Peasants' Movement (LVC) is a collective response to the social and environmental precarity produced by industrial agriculture. It, too, is an experiment in economic coordination. LVC's experiment is designed to generate a diverse array of productive returns identified and defined through democratic and collective decision-making practices, not simply profits. LVC's decision-making begins with the derivation and maintenance of its definition of what it means to be "food sovereign." The "Declaration of Nyéléni" defines food sovereignty in the following manner:

> [Food sovereignty is] the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations.[41]

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[40] Benjamin Wilson, *The Production of Space, Place, and Food: The Ecology of Money and the Emergence of Transformative Circuits of Money Capital* (PhD diss., University of Missouri-Kansas City, 2015); Benjamin Wilson, Alison Humphrey, and Christina Ciaccio, "Heterodox Microeconomics," *American Review of Political Economy* 16, no. 1, doi: https://doi.org/10.38024/arpe.whc.1.11.21; Benjamin Wilson, Natalie June Kane, Neal Wilson, Peter Eaton, and Doug Bowles, "Housing, Health, and History: Interdisciplinary Spatial Analysis in Pursuit of Equity for Future Generations," in *Intergenerational Responsibility in the 21st Century,* ed. Julia M. Puaschunder (Wilmington, DE: Vernon Press, 2018), 57–82.
[41] "Declaration of Nyéléni," Nyéléni Village, Sélingué, Mali, February 27, 2007, https://nyeleni.org/IMG/pdf/DeclNyeleni-en.pdf, 685.

Guided by this definition, LVC centers on real resources such as labor, land, water, soil, and seeds. To protect such inputs, the movement emphasizes "six guiding principles." One focuses on food for people. Two values food providers. Three aims to localize food systems. Four stresses local governance and control. Five seeks to build knowledge and skills. And six emphasizes working generatively with nature.[42] LVC's principles shift the focus of food production from concentrated monetary gain to the collective benefits of taking a holistic approach to organizing the food system for the environment and its inhabitants. This shift in coordination rights creates a community of work based in stewardship, not extraction. It also eschews rule by an individual "entrepreneur" or "master" by embracing collective and democratic participation.[43]

As in the concentrated provisioning system of industrial agriculture, the struggle over coordination rights for LVC is a struggle to direct production, manage geographic space, acquire and disseminate knowledge, and promote systemic growth. To complete these tasks, LVC adopts an inter-firm or collective provisioning strategy over the intra-firm strategy that arises out of neoclassical economic thinking. More complex than a horizontalist model, LVC builds and maintains a complex constellation of actors and relations that facilitate the production of sustainable and culturally appropriate foods. Boasting over 200,000,000 members across 81 countries, including the participation of 182 organizations worldwide, LVC coordinates the advancement of institutional change for collective provisioning from the highest levels of international governance to localized exercises in village democracy and inclusion.[44]

LVC's interlocking strategy is political and environmental. The coordination between their efforts to transform production practices seeks to deliver equality for exploited groups and save ecologies and cultural heritage from climate change. By advancing this knowledge and disseminating it on a world stage, LVC's practices attract researchers and partnerships from multiple actors, including universities and the Food and Agriculture Organization of the United Nations (FAO). The results and findings coming from these studies unveil a diverse range of ecological and social benefits in populations from Malawi to New York City: increased biodiversity; resilience to environmental shocks such as floods and droughts; greater educational attainment; gender equity; and improved mental health outcomes.[45] LVC's successes establish a

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[42] Raj Patel [Guest Editor], "Food Sovereignty." *The Journal of Peasant Studies* 36, no. 3 (2009), https://www.tandfonline.com/doi/full/10.1080/03066150903143079, 685.
[43] Ronald H. Coase, "The Nature of the Firm," *Economica* 4, no. 16 (1937), https://doi.org/10.1111/j.1468-0335.1937.tb00002.x.
[44] La Via Campesina, Accessed September 25, 2021. https://viacampesina.org/en/who-are-we/.
[45] Patel, "Food Sovereignty."

framework for understanding how to allocate economic coordination in food production and build collective provisioning systems. The emphasis on local providers, producers, and the natural environment used to produce food cultivates coordination beyond an individual firm or farm and creates returns beyond the margin. Also suggested by the available data is that food system performance is improved by inter-firm coordination which, unlike concentrated systems, promotes network-level organizing and supply chain diversification.

A similarly promising story can be found in the rich history of the Black Cooperative Movement (BCM) in the United States. In this story of struggle, collective provisioning delivers robust public goods production in ways that reinforce the findings in LVC analysis. Much like the ongoing global peasant movement, supply chain diversification and economic coordination in the African American community has a long legacy, buttressed by fortitude and resilience in the most extreme circumstances of exploitation. Indeed, African Americans have been successful practitioners of cooperative economic coordination for generations, organizing and maintaining connections to one another even as families, common languages, and other social ties were fractured through slavery's violence.[46]

The BCM has formed many documented cooperative provisioning systems. Black consumer cooperatives arose, for example, as alternative purchasing infrastructures in response to Reconstruction-era exclusion and violence. Black cooperatives collectively organized to improve their purchasing power by buying basic food staples in bulk. Finding success in capturing the coordination right of bargaining power for the purchase of flour, dairy, and other dietary staples, Black cooperatives were able to rapidly expand to include the production of finished goods, basic care services, and even began to build membership bases capable of delivering insurance protections.[47] By taking control of production, settling new spaces, and developing education and communication practices, Black cooperatives orchestrated collective coordination rights that allowed them to define economic provisioning systems across a variety of goods and services that the concentrated provisioning system of segregation made scarce through systemic discrimination and terror.

Take the exclusionary and brutal space of Mississippi, where Fannie Lou Hamer's Freedom Farm Corporation and Pig Bank implemented several economic coordination strategies. As discussed in Jessica Gordon-Nembhard's book *Collective*

[46] Clint Smith, *How the Word is Passed: A Reckoning with the History of Slavery Across America* (Little, Brown and Company, 2021); Jessica Gordon-Nembhard, *Collective Courage: A History of African American Cooperative Economic Thought and Practice* (University Park, PA: The Pennsylvania State University Press, 2014).
[47] Gordon-Nembhard, *Collective Courage.*

Courage: A History of African American Cooperative Economic Thought and Practice, Hamer's Freedom Farm grew out of her work to create the Mississippi Freedom Democratic Party (MFDP) and the fight for voting rights. In addition to seeking a collective voice in state politics, Hamer challenged concentrated provisioning, arguing that "cooperative ownership of land opens the door to many opportunities for group development of economic enterprises which develop the total community rather than monopolies that monopolize the resources of the community."[48] Freedom Farm built a collective community of work, guided by the principles of cooperative ownership and MFDP's demands for "a guaranteed income, fair representation for black and poor on all state agencies receiving federal funds, expanded daycare, free and complete medical care for every person from birth to death, expanded federal food programs, and free higher education."[49] Hamer's micro-scale model, writes Gordon-Nembhard, "institutionalized a structure and process for low-income and destitute rural people to feed themselves, own their own homes, farm cooperatively, and create small businesses together in support of a sustainable food system."[50]

In Gordon-Nembhard's account of the long and diverse history of the BCM, Freedom Farm represents merely one of many examples that address the exclusion and devaluation of human and environmental resources in concentrated provisioning. Cooperative Home Care Associates (CHCA), situated in the South Bronx borough of New York City, used a cooperative strategy "to create decent jobs and provide needed service in an impoverished community that were centered on health care and supported the kind of training the co-op wants all its employees to have and benefits the industry citywide."[51] On Gordon-Nembhard's telling, Cooperative Economics for Women (CEW) in Jamaica Plain, Massachusetts, "provided tutoring in English as a second language, legal services, and welfare advocacy services," as well as "employment experience and a cooperative perspective through a rigorous and comprehensive innovative training program."[52] Yet another example is the Ujamaa Collective in Pittsburg, Pennsylvania. Responding to racist market structures that barred people of color from entry, the Ujamaa Collective created a "market designed to provide booths and tables to entrepreneurs in early stages of their development, so they could showcase their homemade wares, foods, and goods."[53]

Through the coordination of knowledge, production, and geography, Black cooperatives across the United States collectively produced, distributed, and

[48] Gordon-Nembhard, *Collective Courage*, 178.
[49] Gordon-Nembhard, *Collective Courage*, 179.
[50] Gordon-Nembhard, *Collective Courage*, 180-1.
[51] Gordon-Nembhard, *Collective Courage*, 164.
[52] Gordon-Nembhard, *Collective Courage*, 166.
[53] Gordon-Nembhard, *Collective Courage*, 169.

consumed goods such as food, care work, and art. These communities of work directed material resources. Yet they also crucially resourced knowledge and learning-by-doing practices necessary to build robust collective provisioning models. Rejecting orthodox narratives about competition, exchange, and scarcity, such provisioning exhibits how, in Gordon-Nembhard's language, "cooperatives require trust and solidarity, and at the same time create trust and solidarity in the process of developing and maintaining the co-op."[54] In other words, instead of reifying a black-box production system, cooperative production relies on a transparent model of inter-firm coordination and trust. To build trust, the BCM implemented a series of educational practices and communication systems. Newsletters, reading groups, and membership models are all part of a diverse catalog of strategies that generate robust quantitative and qualitative knowledge about democratic collective provisioning and the cultivation of trust and solidarity.

While the deliberate nature of cooperative economic education and planning displays effective means for organizing collective coordination, the COVID-19 pandemic made plain how quickly communities can organize collective provisioning. On the fly and in an extreme environment of uncertainty, many restaurant chefs and owners significantly modified business models in order to care for their communities. These shifts swiftly prioritized safety and food access over immediate bottom-line concerns.

It is difficult to imagine any industry more competitive than the pre-pandemic restaurant industry. Restaurants compete directly and daily for the same customers and are often concentrated in the same urban area, sometimes in the same block or building. While restaurant failure rates are notoriously difficult to calculate, one commonly cited statistic is that about 60% of restaurants fail within their first year, and nearly 80% close by year five.[55] Even though some researchers have cautioned that this statistic may be artificially high, it is clear that in order to survive, restaurants must not only serve delicious food, but also must vigilantly maintain their balance sheets.

Between July and November of 2020, we conducted seventeen in-depth interviews with chefs, restaurant owners, and other decision-makers in the restaurant industry. Their restaurants ranged from rural to urban and from food trucks to fine dining. The restaurants were scattered throughout the country, with the largest concentration in the Northeast. Interviews lasting from approximately forty-five to ninety minutes and

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[54] Gordon-Nembhard, *Collective Courage*, 87.

[55] J.J. Healy and Máírtín Mac Con Iomaire, "Calculating Restaurant Failure Rates Using Longitudinal Census Data," *Journal of Culinary Science & Technology,* 17, no. 4 (2019): 350–72; Jarrett Bellini, "The No 1. Thing to Consider Before Opening a Restaurant." CNBC. March 15, 2016. Accessed August 26, 2021. https://www.cnbc.com/2016/01/20/heres-the-real-reason-why-most-restaurants-fail.html.

were recorded and transcribed. The research team identified themes, which were then deliberately developed into codes. Six key codes were developed, each with as many as eight sub-codes. First, researchers independently coded four of the interviews. Next, the team met to discuss and agree on how coding decisions were made in order to align their coding criteria for the remaining interviews.

Our analysis evinces that the restaurant industry's response to the coronavirus pandemic in the spring of 2020 was not hyper-competitive or intra-firm orientated, as one would expect in a highly competitive industry, but rather largely cooperative and communal. As a co-owner of a casual dining restaurant in a small city put it, "That was one actually surprising effect of COVID, all the restaurants in our town, it's not like we aren't friendly, but we put on friendly faces. … But this summer [of 2020] we actually started a restaurant support group where people were very candidly sharing information about their businesses, information about their management practices, and that was really cool." In three separate interviews, our subjects specifically described increased cooperation with other restaurants, while others mentioned improving support for local producers. These examples provide evidence that restaurants actually became less competitive in the face of a financial crisis. Instead, they intuitively recognized the value of cooperation and collaboration.

The interview data indicate that most of our interview subjects prioritized community safety and the welfare of workers over short-term financial gains. As a rural upscale dining restaurant owner characterized it, "That decision [to close] was mostly just one that we thought was our social responsibility, because the government was urging people to stay home to stop the spread, and we didn't even want to offer takeout food at that point because we thought it was more to set an example and protect our staff and our own family….And I also felt like because we own real estate and because we, we own the building where we, where our business resides, we had that ability to make choices for safety and for our staff over finances." The support of staff also regularly took precedence over profit among our interview subjects. In the words of one chef/owner, "I kept five of my staff on, employed full time during this whole thing, even when we were closed because they were staff members of mine that had families. So, you know, we couldn't just say 'Hey, you're on your own,' or think that, you know, unemployment would be enough to take care of that man and their families."

While restaurateurs organized and collectively discovered strategies to survive, condemnation of the government's response to the pandemic in general, and the support extended to restaurants in particular, was nearly universal among our interview subjects. Restaurant owners and chefs were frustrated that the programs did not substantively provide the kind of support they needed. "I think in some ways the response wasn't strong enough," a restaurant owner reflected. "And then in other ways I feel like they did a lot of harm to our business and our community, because there just was not the right kind of support." Another chef/owner suggested that "the industry from an economic standpoint is misunderstood." A third owner speculated that the power of large players in the restaurant industry had dictated the type of support that was offered. He suggested that pandemic relief programs from the federal government are "not really aimed at small business owners. They're made for small chains and it was very clear that, you know, independent restaurants don't have good enough representation at a government level." Independent restaurants clearly needed access to financial aid during the pandemic, but the concentrated provisioning system of the federal government was not nimble enough to deliver an aid package that was sufficiently nuanced to allow them to use its financial resources in a way that was actually useful. The government didn't know what restaurants needed, so it constructed an aid package that met its own needs and the needs of those entities large enough to make their voices heard.

From peasant farmers to chefs, these narratives of collective coordination range in scale and urgency, as much as in historical, social, and spatial context. Yet as countervailing forces that struggle against the anti-democratic and hierarchical practices of concentrated provisioning, these efforts are consistently met with resistance. Resistance includes direct violence and foreclosure, but also the prioritization of the needs of those with lobbying power over those without a voice. While collective provisioning successfully develops integrated and far-reaching coordination rights, access and the power to maintain those rights are always vulnerable to financial stress and liquidity crisis.

To address this precarity, LVC and the BCM seek independence from the existing corporate and financial systems. When they do so, they reduce their holistic visions to the dominant inside-outside theoretical framework they need to escape. Regrettably, they lack the tools to thoroughly question the monetary system as the naturalized site of coordination, even as they engage in inter-firm solidarity. While they do attempt to change the broader infrastructures of coordination, they do not struggle to transform the most general and important institution: money.

Just as there are struggles over the coordination of food provisioning, money is a site of coordination rights struggle. Money coordinates communities of work. "Each monetary form configures interaction in distinct ways, setting up a new set of risks, rewards, relations, and expectations," writes money historian Roy Kreitner. "[S]uch projects do not just happen; they are engineered."[56] If firms are not natural coordinators of production, then the monetary system must be examined as to its own distinct legal structure of coordination rights. Thus for LVC, the BCM and others to emancipate themselves from concentrated provisioning and its reliance on profits, collective provisioning must push beyond the struggle to cooperate with scarce resources. It must, instead, reclaim the power to define resources and their corresponding systems of coordination through money creation.

III: Monetary Design, the Hierarchy of Money, and Financial Technology

Recognizing their financial precarity, the BCM, LVC and social enterprises in general have worked to liberate themselves from money scarcity. However, efforts such as Hamers' Pig Bank, memberships systems, insurance schemes, and fundraising structures do not change the system and tend to leave vulnerabilities in place. We can, by contrast, transform monetary relations that leverage collective dependence, rather than continue to seek monetary independence, by becoming critically aware of what MMT scholars term the "hierarchy of money." The hierarchy of money highlights the importance of monetary coordination rights, designating who can issue and extend credit and the terms of satisfying credit-debt relations. The current macroeconomic design and allocation of credit provisioning work to produce and reproduce intra-firm coordination at multiple scales of aggregation. It is hardly surprising that we find concentrated patterns in the contemporary money system, since the notion of monetary sovereignty is itself structured by intra-firm logics. Like those that concentrate ownership in finance, such logics limit the scope of investment from the monetary monopoly. By concentrating credit provisioning and democratic participation, monetary sovereignty closes off collective solutions to social and environmental crises. To describe the intra-firm coordination of credit, we delineate the existing hierarchy of money from the top down.

MMT's analysis of the hierarchy of money reveals various institutions and relations that constitute the legal organization of money. From this heterodox perspective, money is defined not as a neutral commodity that naturally flows where value is produced, but as a social relation that defines what is currently valued. As a social relation, the legal context of economic coordination becomes all the more clear, because money's social relation is a promise, a promise to pay, or an IOU.[57] As an IOU, the legal protections—or coordination rights—for the participating parties change given the relative position of the issuer and acceptor of the promise on the

[56] Roy Kreitner, "Legal History of Money," *Annual Review of Law and Social Science* (July 2012): 424.
[57] Stephanie Kelton, "The Role of the State and the Hierarchy of Money," *Cambridge Journal of Economics* 25, no 2. (2001).

hierarchy. At the top of the hierarchy, in the MMT literature, is the "monetary sovereign" or the apex issuer of the currency.[58] In the United States, for example, the ultimate power to create new promises lives in Congress. Congress is the monopoly issuer of the currency; it maintains "the power of the purse."[59]

The U.S. monetary monopoly's collective promises, or credit creation, mobilizes communities of work in myriad forms. For instance, "We the People" are committed to protecting U.S. borders and defending U.S. national interests. Therefore, "we" collectively promise, with little hesitation, the credit necessary to support and expand our national defense and military apparatus. Other public goods, however, are not so generously credited on account of a number of social, political, and economic rationales.[60] Without access to direct issuer credit, provisioning activities such as healthcare, education, and farming must secure credit for their operations from other sources to support their communities of work.

One-step down from direct Congressional appropriations, yet still at the top of the monetary hierarchy, sits a banking sector equipped with a distinct set of coordination rights for organizing credit creation. Hockett and Omarova describe the coordination rights allocated to banks as mirroring the rights extended in a franchisor-franchisee relation.[61] As "finance franchises" of the United States' *Full Faith and Credit,* the banking sector, like LVC, defines and sets its own organizing principles. Only unlike LVC, the banking sector's organizing principles direct resources for the production of private benefits and profits. These principles are grounded in orthodox economic's exchange theory of value and influence an array of underwriting and decision-making practices.[62] Like other franchises, the banking sector is not granted complete independence from its franchisor, but the Federal Reserve Act and the Federal Reserve's authority to monetize and accommodate the banking sector's promissory notes facilitate extensive coordination of production. This step in the relationship is critical as it identifies banknotes as a swap with the Fed of unspendable for spendable

[58] Katharina Pistor, "A Legal Theory of Finance," *Journal of Comparative Economics* 41, no. 2 (2013).
[59] Stephanie Kelton, *The Deficit Myth: Modern Monetary Theory and the Birth of the People's Economy* (New York, NY: Public Affairs, 2020).
[60] Kelton, *The Deficit Myth.*
[61] Robert Hockett and Saule T. Omarova, "The Finance Franchise," *Cornell Law Review* 102, no. 1143 (2017), https://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=2660&context=facpub.
[62] David Freund outlines the emergence and expansion of the monetization and accommodation of notes in the housing sector. The vast expansion of this sector, including the development of new appraisal and underwriting standards, as well as education programs for higher education and professional credentialing, represents a recent example of how to construct a new set of monetary coordination rights and foster transformation. See David M.P. Freund, *Colored Properties: State Policy & White Racial Politics in Suburban America* (Chicago, IL: Chicago University Press, 2007).

promissory notes.[63] Bank notes are promises, but are furnished, through legal design, with status as dollars through federal policy and agency. In this process, bank IOUs are afforded the *Full Faith and Credit* of the United States to organize communities of work.

Instead of the Fed's accommodation and monetization of banknotes being recognized as the malleable coordination right that it is, conventional wisdom reinforces myths from neoclassical economics about commodity money and its scarcity. Considering the size of the financial industry, it is easy to imagine money coming from banks, private profits, and savings, and not to recognize its public origins. What is more, money's public origins are further obscured by fictions that reduce the federal government to a "household" and pathologize Treasury bond issuance as deleterious fiscal "debt." The household metaphor politically constrains direct monetary issuance, while regular exceptions are made for the military and crisis intervention. Both the household myth and the failure to recognize money as a malleable coordination right are rooted in neoclassical mythology. This mythology silences money's history and alternative systems of coordination and leave the status quo functioning of the monetary system intact.[64] To imagine and write new, more inclusive narratives, it is helpful to see the banking sector for what it is: an instrument in the grand experiment of public money creation.

Exacerbating the urgency to re-evaluate the system of economic coordination rights afforded to the financial sector's experimentation is the current trajectory of financial technology or "fintech." Instead of connecting financial activities to real resource production, emphasis is instead placed on transaction speed and the creation of novel forms of collateral, such as derivatives, stable coins, and credit default swaps. The latter is expanding and growing the shadow banking sector.[65] The former, like in the neoclassical model, is justified by the exchange theory of value in which greater transaction speed and asset diversification allegedly lead to precise pricing and stable markets. This, however, does not appear to be the prevailing outcome as high-speed

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63 Steven D. Grumbine, "Episode 96—Treasury's Gift to the Fed with Robert Hockett," November 28, 2020, on *Real Progressives Podcast,* https://realprogressives.org/podcast_episode/episode-96-treasurys-gift-to-the-fed-with-robert-hockett/#fwdmspPlayer0?catid=0&trackid=0.

64 For a rich history of struggle between communities seeking democratically organized "moral economies" of money and countervailing efforts at "monetary silencing," see Jakob Feinig, *Moral Economies of Money Politics and the Monetary Constitutions of Society* (Redwood City, CA: Stanford University Press, 2022).

65 Saule T. Omarova, "Dealing with Disruption: Emerging Approaches to Fintech Regulation," *Washington University Journal of Law and Policy* 61, no. 25 (2020), https://openscholarship.wustl.edu/law_journal_law_policy/vol61/iss1/9; Zoltan Pozsar, "Can Shadow Banking be Addressed Without the Balance Sheet of the Sovereign?" *VoxEU*, November 16, 2011, https://voxeu.org/article/shadow-banking-what-do.

algorithm trading increasingly takes place in the secondary and shadow markets, where it is at best "disruptive," and at worst, a potential driver of systemic collapse.[66]

While trading speed innovations are possibly catastrophic, the emergence of cryptocurrencies and stable coins affords a more holistic view of the limited imagination being executed in fintech. Many fintech innovations are mired in the ill-conceived notions of neoclassical economics. Like Hamer's Pig Bank, crypto suffers from the same neoclassical inside-outside framing by seeking total independence from the dominant monetary architecture. Bitcoin, for example, captures these limitations at the levels of both theory and practice. Grounded in libertarian and metallist philosophies, Bitcoin's design emphasizes decentralization and anonymity because, as Sarah Jeong summarizes this view, "state governments, central banks, and other financial third parties cannot be trusted.[67] Or, as stated bluntly by the still-anonymous Satoshi Nakamoto in Bitcoin's founding white paper, "What is needed is an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party."[68] In short, Bitcoin's design operates as neoclassical economics textbooks imagine money to work. Bitcoin ignores coordination. It does not just assume scarcity. It writes scarcity into its very design. Yet such design principles present a significant problem for both Bitcoin and orthodox economics. There is always coordination. Coordination is not a bug in the system but a fundamental attribute of communities of work.

It should come as no shock to learn that Bitcoin, with its underlying reliance on exchange, competition, and scarcity, is currently producing and reproducing hierarchy and concentrated provisioning. Nor is it any wonder that increasingly Bitcoin relies upon formerly "untrustworthy" third parties such as central banks, which anchor concentrated provisioning writ large. Central banks, financial intermediaries, and the shadow banking sector are all absorbing Bitcoin into the existing international monetary architecture.[69] The concentrated provisioning of Bitcoin ownership and its extraordinary energy use mimics the patterns of scarcity and precarity for workers and the environment observed in trucking, agriculture, and the gig economy.[70] Bitcoin's

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[66] Omarova, "Dealing with Disruption."
[67] Sarah Jeong, "The Bitcoin Protocol as Law, and the Politics of a Stateless Currency," *SSRN Electronic Journal* (2013), 10.2139/ssrn.2294124, 2.
[68] Satoshi Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System," (2008), https://bitcoin.org/bitcoin.pdf.
[69] Douglas Rushkoff, "How Bitcoin Ends," *Fast Company,* March 1, 2018, https://www.fastcompany.com/40537404/how-bitcoin-ends.
[70] Alex Hern, "Bitcoin's Energy Use is Huge: We Can't Afford to Ignore It," *The Guardian,* (January 17, 2018), https://www.theguardian.com/technology/2018/jan/17/bitcoin-electricity-usage-huge-climate-cryptocurrency.

identity as a monetary experiment is obvious and brusquely declared by its supporters. From the ontological level to empirical evidence, the outcomes of their reductive experimentation suggest that alternative designs of monetary systems are both desirable and possible.

Bitcoin appears to be failing as a currency, but in executing a global experiment, LVC and other public actors seeking to build systems of relations organized by more than just profits need to take note. Bitcoin has opened a conversation about what money is and whence it comes, and its technological contribution is one that can advance monetary system architectures beyond the simplicity of neoliberalism's competitive worldview of transactions and scarcity.

In opening the contemporary imagination, a new conversation about monetary sovereignty is ready to be had, and the present movement for "food sovereignty" provides a strong direction for guiding this conversation. How do communities define not only their food, but also their monetary systems? How do they design those systems to support production schemas that create the value and wealth that is needed? Instead of the harmful and potentially dangerous activities of so-called "disrupters," we seek transformative innovation from cooperative provisioning system participants who can engage and lead in the construction of collective monetary politics, design, and creation.

IV. Monetary Coordination, Community Anchors, and the Stewardship of Sovereignty

Rather than acting as good stewards for the collective *Full Faith and Credit* of the United States, private finance and fintech atomize the promise of monetary coordination rights and thus the capacity for publicly organized and democratically directed production. In contrast, food sovereignty and related movements are building collective provisioning schemas of production. In order for these schemas to be resilient, however, historical evidence demonstrates that a reliable source of liquidity is necessary. To build a resilient monetary architecture, we outline a vision of micro monetary systems that leverage the lessons afforded by food's collective provisioning. These lessons include the need for an alternative philosophical grounding, a reflexive democratic decision structure, and innovation guided by learning-by-doing and collective practice.

As with the rise of LVC and the food sovereignty movement, the transformation of money's provisioning begins with a philosophical grounding and core principles that extend beyond the profit margin. In the present political conjuncture, we recommend that such values can be drawn readily from the legislative agenda that includes the Green New Deal, the Public Banking Act, and the Stable Coin act. Taken together, these still-unpassed laws confirm that many Americans are interested in achieving economic security, a sustainable environment, new models of public financing, and protections from fintech's predatory and systemic threats. To organize coordination rights that allow communities to direct resources in ways that adhere to these basic values and principles, we propose a model that is designed to utilize existing institutions by "embracing the dynamic relationship between local currency experimentation and global monetary reform."[71]

At the top or apex of these context-specific experiments are community anchor institutions. Anchor institutions are strong candidates for this position, given their economic contributions and adherence to goals beyond profits.[72] Communities in Action, a national public health advocate, defines anchor institutions as "large, usually nonprofit organizations tethered to their communities, like universities, medical centers, or local government entities."[73] Economically, hospitals and universities account for 8 percent of the U.S. labor force, 7 percent of gross domestic product, and they own, maintain, and manage enormous real estate interests. From this position of economic strength, such institutions are uniquely qualified to anchor credit provisioning for communities of work that align with real resource constraints and needs consistent with public objectives.

The first step for these institutions to execute experimental credit creation is to leverage the primary lessons of MMT and the hierarchy of money. To create demand for their credits or promises and generate the policy space needed to coordinate and direct resources, it is necessary to forge a strong reciprocal obligation or tax circuit. Historically, taxes and other coercive techniques, such as fees and fines, reliably generate demand and general receivability of the monetary instrument.[74] Given the desire to cultivate trust and pursue non-extractive value objectives, non-coercive reciprocal relations represent a valuable space for experimental design.

One promising means to fashion collective and non-coercive reciprocal circuits is to diversify payments and obligations that redeem regular obligations in a local monetary

[71] Rohan Gray, "Monetary Resilience," *Western New England Law Review* 41, no. 3 (2019): 505.
[72] Farzana Serang, J. Phillip Thompson, and Ted Howard, *The Anchor Mission: Leveraging the Power of Anchor Institutions to Build Community Wealth* (College Park, Maryland: The Democracy Collaborative, 2013).
[73] Communities of Action, 2018, https://www.nap.edu/resource/24624/anchor-institutions/.
[74] Mathew Forstater, "Taxation and Primitive Accumulation: The Case of Colonial Africa," *Research in Political Economy* 22 (2005): 51–65, 10.1016/S0161-7230(04)22002-8; Jakob Feinig, *Moral Economies of Money: Politics and the Monetary Constitution of Society* (Stanford, CA: Stanford University Press, forthcoming).

system. For example, inviting multiple outlets for redemption, such as local taxes, tuition, energy, transportation, carbon, labor, health services, mobile services, and internet connectivity, encourages cooperation between institutions. Structuring collective promissory notes to cultivate publicly resourced guarantees establishes coordination rights for producing food, energy, and education, as well as resources that build resilience and trust. As various institutions implement these experiments, valuable data about resource provisioning, as well as practical tools for developing a robust federal public banking infrastructure emerge, not from high theory or top-down legislation, but by active participation and learning-by-doing across diverse communities of work. This bottom-up strategy stands to rectify current breakdowns between fiscal policy and local actors, as observed specifically in the restaurant industry's pandemic relief efforts.

While this type of monetary experimentation may appear radical or outside existing legal parameters, it is consistent with the observed and legally tolerated behavior of the financial industry. Given shortages in government-guaranteed money market instruments, the shadow banking sector creates its own privately guaranteed instruments.[75] In doing so, financial institutions pressure the Federal Reserve from the bottom up to stabilize the financial system from the top when defaults cascade across balance sheets culminating in macroeconomic crisis. As legal scholar Katharina Pistor construes it, this reflexive relationship between the Fed and imperiled financial actors is economically enabled by the system's "discretionary power to do what it takes to rescue the system."[76] The relation between banks and federal agencies is elastic in its enforcement of contracts that threaten the system and inelastic for those on the periphery.[77] Unfortunately, under the current model of corporate finance and concentrated provisioning, institutions of public provisioning are crippled by peripheral neglect and inelastic enforcement. During the COVID-19 pandemic, former Senate Majority Leader Mitch McConnell made clear the hegemonic assessment of public provisioners on the periphery, stating outright that he would rather see states and municipalities undergo default and bankruptcy than to extend federal relief to stabilize sub-federal balance sheets. In stark contrast, Federal Reserve Bank of Minnesota President Neel Kashkari pledged full accommodation to the financial sector by declaring in an interview with *60 Minutes* that "there's an infinite amount of cash at the Federal Reserve."[78]

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[75] Zoltan Pozsar, "Can Shadow Banking be Addressed Without the Balance Sheet of the Sovereign?" *VoxEU*, November 16, 2011, https://voxeu.org/article/shadow-banking-what-do.
[76] Katharina Pistor, "A Legal Theory of Finance," *Journal of Comparative Economics* 41, no. 2 (2013), 44.
[77] Pistor, "A Legal Theory of Finance"
[78] Scott Pelley, "Coronavirus and the Economy: Best and Worst-Case Scenarios from Minneapolis Fed President," 60 Minutes, March 22, 2020, https://www.cbsnews.com/news/coronavirus-and-economy-best-and-worst-case-scenarios-60-minutes-2020-03-22/.

Given the financial sector's flexibility to create privately guaranteed instruments and the precarity faced by states and municipalities, community anchors are reliable partners for institutions up and down the hierarchy. At the local level, the host municipality is an obvious partner, because they too provision public resources and wield substantial government powers.[79] One such power of particular interest for these experiments is the power to tax. Designing reciprocal payments that are receivable for university tuition and/or municipal property taxes, for example, is likely to generate wide community level receivability and allow for coordination of local promises that deliver desirable environmental and human health outcomes.[80] Merging the powers and resources of municipal, state, and anchor institutions to inform inter-firm coordination, supported by their own systems of credit provisioning, pressures federal institutions up the hierarchy to maintain system stability. However, rather than imposing these pressures under duress and potential crisis, these collective provisioning systems augur possibilities for productive cooperation via everyday practice and learning-by-doing.

One such relational example is the ongoing experimentation between the Federal Reserve Bank of Boston and the Massachusetts Institute of Technology's digital currency initiative.[81] Expanding and opening the possibility for wider public participation and experiential learning in the process of monetary design significantly complements their hypothetical closed-system experimental process. Monetary experimentation also offers other regulatory agencies such as the Office of the Comptroller of the Currency, the Federal Mint, Treasury, and the Securities and Exchange Commission spaces of engagement in the redesign of public finance in partnership with willing and democratically organized participants. These experiments model both theoretical and deeply practical steps for mitigating not only financial systemic risk, but also the widespread vulnerability of ecosystems and communities due to climate change, as they institute coordination rights for the systems vital to human and planetary survival.

Assuming such global stakes, the reflexivity of such experiments cannot be limited to national regulatory agencies. The stewardship of monetary systems, like food, is not

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[79] Nathan Tankus, Responding to the University Budget Crisis with University Currencies, Notes on the Crisis. Substack, May 14, 2020. https://nathantankus.substack.com/p/responding-to-the-university-budget.

[80] William Saas, Benjamin Wilson, Scott Ferguson, and Maximilian Seijo, "The Uni Currency Project: Democratic Finance for Public Higher Education After COVID-19," Working Paper 128, Global Institute for Sustainable Prosperity, August, 2020, http://www.global-isp.org/working-paper-no-128/.

[81] Treacy Reynolds, "The Federal Reserve Bank of Boston Announces Collaboration with MIT to Research Digital Currency," Federal Reserve Bank of Boston. August 13, 2020, https://www.bostonfed.org/news-and-events/press-releases/2020/the-federal-reserve-bank-of-boston-announces-collaboration-with-mit-to-research-digital-currency.aspx.

only a U.S. project but an international endeavor. Like LVC, the practice of monetary governance must reject the arbitrary limitations created by national borders. The international for-profit banking system, for example, knows no borders and benefits from a complex web of swap lines and global agencies. The construction of a collective provisioning system is already well underway, as anchor institutions possess valued partners abroad. Health care systems, universities, and NGOs represent a countervailing web of social relations ready to direct, produce, and share collective provisioning resources. Solidarity and trust need not adhere to administrative boundaries, as LVC has grandly displayed. The receivability of collectively structured monetary coordination rights need not be contingent upon race, location, or any other geopolitical boundary. Following the basic logic of Green New Deal's jobs guarantee proposal, community-driven production, knowledge, and systemic stability are available for all who are ready and willing to participate.[82]

While these macro-scale visions might seem well beyond immediate reach, a reflective process of monetary design and public provisioning starts with engagement and participation. Such designs can begin as small as university classroom exercises, but with experience and confidence can grow to mobilize public banking and inter-governmental strategic plans that improve lives.[83] We advocate for the implementation of experiments that create and reinforce inter-public institutional economic coordination and diverse portfolios of receivability. What can communities of work guarantee and create? What do they want to promise to deliver for one another? In this process, it is critical that new models for appraising and underwriting these promises are shared and disseminated to help others deliver on said promises. The communities of work are already there; they simply require access to the coordination rights necessary to realize their potential.

Concluding Remarks

All firms and systems of production are coordinated efforts. The division of labor, collective bargaining, and the need to recognize the limitations of competition and its corresponding zero-sum economics are central elements in political economy's struggle to engender cooperation. Whether it is the deliberate efforts of food movements or the immediate adoption of democratic practices in the restaurant industry during the COVID-19 pandemic, the cooperative motive is strong and these communities of work are worthy of liquidity provisioning. Innovation in the structure of coordination rights opens up possibilities to extend the power of *Full Faith and Credit* accommodation to collective provisioning. To do so, the food system appears

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[82] Pavlina Tcherneva, *The Case for a Job Guarantee* (Medford, MA: Polity Press, 2020).
[83] Saas, Wilson, Ferguson, and Seijo, "The Uni Currency Project."

to be rich soil for cultivating solutions from carbon to calories. LVC and BCM harbor diverse and still-untapped powers of political engagement. Now they must be directed toward the construction of dynamic monetary systems capable of maintaining healthy collective promise balance sheets. Global stewardship can no longer be constrained by sovereignty and the intra-firm logic of individualism. It should, instead, reflect the freedom that is only possible when we understand our dependence.[84] Pushing the boundaries of cooperation is better done pedagogically than through the continued force and fraud perpetrated by concentrated provisioning's orthodox coordination rights. Given that, as economist Thomas R. De Gregori submits, "it is the sum total of human knowledge ... that is the prime resource and the one that defines all others," it is time to share knowledge and organize money as the coordinator of collective communities of work.[85]

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[84] Scott Ferguson, *Declarations of Dependence: Money, Aesthetics, and the Politics of Care* (Lincoln, Nebraska: University of Nebraska Press, 2018).
[85] Thomas R. De Gregori, "Resources Are Not: They Become: An Institutional Theory." *Journal of Economic Issues* 21, no. 3 (1987): 1241–2.

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