

Who Owns the Intellectual Fruits of Job Guarantee Labor?

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THE PROBLEM

The neatly packaged synthesis of ideas, principles, and politically motivated rhetorical framing decisions that has come to be known as MMT has much to offer a range of political debates, ranging from fiscal policy and banking reform through to environmental, gender and racial justice. Like the various limbs and organs of the human body, these different offerings may appear to be more or less essential to MMT's core theoretical catechism, depending on one's particular vantage point and prior values. Nevertheless, to continue the analogy, it is not unreasonable to view the MMT corpus as being coordinated along two dimensions, and driven by two key forces, much like the human body is coordinated by its cardiovascular and central nervous systems. In particular, MMT's "brain" is its historical and technical understanding of the nature and operational dynamics of money, broadly understood as a mode of, and instrument for, social organization, and its "heart" is its full-throated and unapologetic advocacy for a universal right to dignified and meaningful work, ultimately enforced by the state through direct job creation.

These twin pillars function together in such a way as to bring macroeconomic theory back to its intellectual roots in applied moral philosophy, by

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simultaneously addressing the dual Humean questions of “what is,” and “what ought” as they relate to the condition of unemployment under modern capitalism: “Money *is* a creation of the state,” MMT tells us, “and employment *is* the act of buying labor with money. Thus, unemployment *is* what occurs when the state refuses to buy labor that is available for sale. Modern democratic-republican states that purport to represent the interests of their people *ought* not to allow this outcome to occur.”

MMT’s framing of the inherent symbiosis between money and labor is *prima facie* politically powerful: because unemployment is a monetary phenomenon, and money is a state phenomenon, unemployment is always and ever a political question about the monetary structure of the state. On the other hand, if that were all that MMT had to contribute, it would not be particularly original or politically useful, as it is trivially easy to say that the answer to “how to address unemployment?” is to “create more jobs,” and that the answer to “but how will you pay for it?” is “create more money.” Left unaddressed is how to respond to the obvious and inevitable counter-responses of (1) wouldn’t that be make-work? and (2) wouldn’t that be inflationary?

Luckily, however, MMT does address these concerns, through a nuanced empirical analysis of price formation, and the relationship between real and nominal growth, and the real social and economic cost of unemployment. To provide a crude summary, MMT argues that by offering a fixed nominal hourly wage rate to all potential workers,¹ a Job Guarantee program provides a real anchor for prices by, at the margin, stabilizing the real exchange rate of the currency at a specific amount of general labor time, provided that the productivity of such labor is, on average, equal or greater than if those individuals remained involuntarily unemployed.² In addition, MMT argues that market-based signals are merely one method of articulating preferences, and that it is possible for public, democratically-governed institutions to commit to the achieving and maintaining true full employment for all, while remaining agnostic on the question of which particular JG design model will be most effective in achieving that goal in any particular context.

Both of these responses are, in essence, claims about the viability of particular theories of value. The former asserts that, regardless of whether the labor theory of value is objectively true, it is possible to consciously design social systems that *make it true in practice*—at least, within the auspices of a jobs program.³ Similarly, the latter suggests that although there is a risk that a JG program will produce signal imperfections, including some degree of make-work, that risk is not necessarily greater than the risk of distorted signaling due to the imperfect nature of market institutions as vehicles for achieving broader social outcomes.

These responses represent some of MMT's most important contributions to the public policy debate. They implicitly answer the question of "what might be"—without which answers to "is" and "ought"-style questions have little practical relevance—and in doing so, build political consciousness and stretch the political imagination with respect to fundamental economic reform. If Walter Lippman is right, and the way that the world is imagined determines in any particular moment what men will do, MMT invites its students to reimagine not only the relationship between money and labor, but also between money and labor on one hand, and the entire system of modern finance capitalism on the other.

In this respect, MMT can be seen, at least with respect to its head and heart, as a Polanyian project. It recognizes that money and labor are "fictitious commodities," and thus, cannot ever be properly integrated into the otherwise totalizing market-logic of capitalism. Instead, it seeks to conceive of, and justify their value system, and resulting regulatory structure, upon alternate, social grounds.

Viewing MMT through a Polanyian lens gives rise to a meaningful observation, namely, that MMT's core catechism deals little, if at all, with the social contradictions associated with land—Polanyi's third form of fictitious capital. For Polanyi, "land" is less a geographic term than a conceptual category; "another name for nature, which is not produced by man."⁴ Although physical land clearly meets this definition, arguably so do things that are produced by "mankind" *in toto*, such as language, culture, and the law. All of these examples share in common the fact that they do not come into existence solely through the actions of individuals or private firms, nor do their use values derive from their respective consumptive utility. Instead, they are social institutions, created collectively and given value through their capacity to alter the dynamics of interpersonal relations.

At the same time, however, these various forms of "land," while being recognized as fundamentally social goods, are subjected to the same commodifying logic as chattel commodities. This process begins, and, as Marx observed, is at its most violent, with the process of enclosure that establishes exclusive private property rights in interests that either were not previously legally recognized, or were considered to be held in common on behalf of all people. Such privatization may be initially justified on a range of reasons, or, in some instances, not justified at all. Regardless, once established, private property rights typically are defended on the grounds that enclosure is necessary to prevent a "tragedy of the commons," or more mildly, to encourage via market-mechanisms the most efficient and socially optimal

use of scarce resources. Attempts to counter these critiques via reference to technological solutions, such as the use of dynamic access-based approaches as an alternative to the exclusive licensing of the electromagnetic spectrum, or via political solutions, such as the communitarian commons-management approaches highlighted by Elinor Ostrom,⁵ have historically been met with limited success.

The political economy of privatization, broadly speaking, deserves greater emphasis within the MMT catechism, as privatization efforts have the potential to dramatically hinder, if not directly counteract, any positive influence of a job guarantee on the process of decommodification of social life. While this potential exists with all forms of “land” enclosure, broadly speaking, they are perhaps most acutely observable today in the context of intellectual property law.⁶ As manual work and data interpretation is taken over by machines and algorithms, respectively, software becomes the primary underlying commodity of production. Similarly, as the rise of the Internet, cheap smartphones, and the “app”-based software economy reduces barriers to cultural production and entry into knowledge-based labor markets, the relative size of the intellectual, or creative, sector, is growing. Consequently, intellectual property assets now permeate the heart of almost every modern commercial industry, and comprise an increasing share of total global assets.

The significance of the digital revolution to the economic debate over the merits of intellectual property rights cannot be overstated. Unlike fisheries, or even the electromagnetic spectrum, ideas themselves are not inherently scarce or rivalrous. As George Bernard Shaw famously quipped, “If you have an apple and I have an apple and we exchange these apples then you and I will still each have one apple. But if you have an idea and I have an idea and we exchange these ideas, then each of us will have two ideas.” Historically, however, the scarcity, and thus the cost, lay in access to the physical means of reproduction of ideas. To put it bluntly, books were expensive to make, and the political concessions that printing press owners wrought from the public for their industrial investment were significant. Until the twentieth century, only Jesus Christ himself could assert the ability to feed five thousand with merely five loaves and two fish. Today, however, when it comes to intellectual nourishment, a single digital file can be replicated onto every networked computer on the planet, simply by pressing Ctrl C + Ctrl V.

While there are obviously non-trivial costs associated with the underlying infrastructure of the Internet, those costs do not significantly

increase with each new bitstream created. In other words, beyond the cost of maintaining the internet and underlying computer network, it is trivially cheap to infinitely reproduce digital knowledge goods that are already in existence.

Moreover, through the conceit of the facsimile, it is possible to “digitize” even non-digital cultural artifacts. For example, a priceless artwork cannot be replicated, but it can be photographed. A sculpture may be unique, but the .CAD file of its scanned image is not. Thus, as Columbia Law Professor and legal architect of the Free Software Movement, Eben Moglen, notes, “The great moral question of the twenty-first century is this: if all knowledge, all culture, all art, all useful information can be costlessly given to everyone at the same price that it is given to anyone; if everyone can have everything, everywhere, all the time, why is it ever moral to exclude anyone?”

This question is not one that Job Guarantee advocates can afford to remain agnostic about. It is possible, for example, to conceive of two future worlds, both of which have implemented a Job Guarantee, but with vastly different levels of intellectual property protection. In the first, intellectual property rights have been extended in perpetuity, almost all new knowledge and culture is privatized, public libraries are barren and underfunded, and individuals who work in job guarantee jobs retain their own copyrights and patents, and set their own market prices for consumer access upon publication. In the second, public spending and job-guarantee labor has been used to facilitate a revitalization of public knowledge sharing, leading to changing social mores that discourage exclusionary copyright claims over facilitation of sharing. Every individual carries, on their cell phone, a copy of the entire global public library, with every major book, song, academic publication, and poem in existence, and there are a myriad of large, mission-driven technological research programs using public money to disseminate scientific advances across the world at large.

Clearly, the degree of economic inequality and private control over social life in these two visions are vastly different. To the extent that the political goals of MMT including placing appropriate limits on the marketization of social life, and returning to individuals a degree of dignity and autonomy over their private lives, such goals are clearly hindered by a theoretical approach that does not fully address the enclosure of “land,” and, broadly speaking, the intellectual property implications of its approach to full employment policy design. Conversely, by explicitly articulating the potential for an macroeconomic policy, centered around public investment and a

Job Guarantee, to actively serve as an engine of decommodification of various forms of “land,” beginning first and foremost with intellectual property, MMT can expand its political impact, and establish itself as an heir of the full Polanyian intellectual project.

THE SOLUTION

Before diving into the policy details, we will take a brief sojourn into the world of intellectual property theory. At first glance, the intellectual property debate appears to be robust, with many diverse ideological and conceptual positions. With respect to copyright, for example, prominent legal theorists such as Landes and Posner (1989)⁷ continue to defend the traditional school of thought that argues copyright can and should balance the trade-off between incentivizing authors and limiting public access to authors’ works. Others, such as Frank Easterbrook, adopt a more radical maximalist approach, arguing that stronger and clearer copyrights increase the efficiency of markets and thus increase creative production in absolute terms.⁸ At the other end of the spectrum, copyright skeptics like Yochai Benkler, in his magnum opus, *The Wealth of Networks* (2006),⁹ argue that in the twenty-first-century networked society, the inhibitory effects of exclusionary copyright restrictions on non-market-based peer production outweigh their potential market benefits, and thus copyright fails to meet its own utilitarian criteria.¹⁰

In addition to utilitarian justifications, there are other non-economic justifications of intellectual property rights, including natural rights, authorial rights and communicative rights that hold sway in certain jurisdictions. However, the debate over the appropriate scope of copyright law remains dominated by utilitarian economic concerns for maximizing the production of new creative works. Opinions on the effectiveness of “strong” versus “weak” copyright regimes differ widely, while most are in agreement that an appropriate yardstick for comparison is their relative capacity to increase social production of art, culture and knowledge.

Upon closer inspection, these seemingly disparate approaches, in fact, share a common basis: the methodological commitment to approach the “copyright question” from an individualistic perspective. For the incentives theory school, this commitment is captured most clearly in the image of the lone Beethovenian artist, brimming with creative potential but unwilling (or unable) to actualize it in the absence of the external economic benefits

afforded to her by copyright. The public, by contrast, is relegated to the role of passive antagonist, desperate to benefit from widespread dissemination of the artists' work, yet unwilling to voluntarily pay the author the remuneration she desires. Despite the superior resources and coercive capacity of the public's legal and economic institutions, the artist is portrayed as being in the superior bargaining position in the long run by virtue of her capacity to simply refuse to commit to the pursuit of creative labor. Implicit in this framing is the assumption that the essence of the copyright problem is the risk of a Galtian crisis of deliberate underproduction by a specialized class of individuals, the "creators."

The neoclassical property rights school of thought takes the commitment to methodological individualism one step further. They retain the trope of the heroic artist, but reject the incentives theorists' claim that the normative goal of copyright law should be to balance the trade-off between her interests and those of the public. Indeed, with the exception of the "night watchman" functions of property protection and contractual enforcement, the neoclassical school largely rejects the premise that copyright policy should take into account the collectively expressed interests of the public whatsoever.

Instead, they argue that the allocation of scarce resources, including the labor involved in the production of creative works, is best determined by the spontaneous aggregation of subjective individual preferences through the decentralized price mechanism.¹¹ Consequently, the goal of copyright law should be to extend, to the greatest extent possible, the phenomena of capitalistic markets in real goods and services in the conceptual space. This theory thus places not only the creator, but also the consumer public and even the legal institution of copyright itself in the sphere of capitalistic markets whose dynamic core is the voluntary behavior of freely acting individuals.

The commons-based peer production school, on the other hand, employs an individualistic framework in an entirely different way. As Benkler describes, the focus of their inquiry is on the implications of new forms of social production made possible by the development of computer and Internet technology. Yet with the notable exception of the legal institutions of intellectual property, this approach tends to downplay the mediating role of the state in delineating the boundaries of hierarchical, market and non-market activity, and remains skeptical about its potential to be used as a vehicle for positive change. Instead, they focus specifically on how technological development affects the evolving dynamic relationship

between market and non-market ordering of interactions between individuals.

As Benkler argues, “the necessity for the state’s affirmative role is muted because of my diagnosis of the particular trajectory of markets, on the one hand, and individual and social action, on the hand, in the digitally networked information environment. . . . There is more freedom to be found through opening up institutional spaces for voluntary individual and cooperative action than there is in intentional public action through the state.”¹²

Refreshing, however, Benkler’s skepticism toward the relevance of the state to his analysis is explicitly couched in empirically contingent and narrow terms, as evidenced by his acknowledgment of the positive social role played by existing state programs such as public education, healthcare, as well as his advocacy of greater public investment in basic research.¹³ Perhaps even more importantly, he emphasizes the state’s capacity to interfere and actively harm the development of cooperative modes of production, particularly through the legal institution of copyright. Thus, the commons-based peer production school accepts the need for ongoing critical engagement with the state, but in a primarily defensive way in order to protect the commons and peer production against the encroachment of hierarchical or market forces.

The fact that these three contrasting schools share a commitment to methodological individualism allows theorists from different backgrounds to engage in constructive debate without getting bogged down in fundamental terminological or epistemological disagreements. However, the cost of this analytical unidimensionality is that structural problems that cannot be framed in individualistic terms are largely precluded from discussion. This would not be a major concern if such problems were of little immediate significance, or alternatively, if there was general consensus as to their appropriate remedy. When it comes to the realm of macroeconomics, however, the problems are large and pervasive, and there is significant disagreement even over the basic conditions of social reality. Consequently, the omission of systemic macroeconomic considerations from the copyright debate ends up resembling a debate on the merits of tails, where, after vociferous and prolonged debate on their biological function and aesthetic qualities, everyone comes to the realization that they have, in fact, been talking about the tails of different animals the entire time.

By contrast, the legal debate over the scope of patents is slightly more nuanced, in that it typically acknowledges a structurally significant role for

public investment in various areas of research and technological development. At the same time, however, there is no meaningful attempt to engage with the macroeconomic implications of the state's unique monetary powers, nor its unavoidable role as the investor-of-last-resort with respect to ensuring sufficient effective demand and work opportunities to maintain full employment. Instead, the debate typically assumes conditions of capital scarcity, whereby the funds to pay for public research derive from taxation of private enterprise, and, thus, in the long term, have limited potential to serve as an alternative source of major investment to the private market. Also, typically underlying these discussions is a belief that market forces are *prima facie* more effective aggregating individual preferences than democratic mechanisms, and, consequently, the latter is *per se* more desirable than the former. At the same time, however, there is a growing recognition in some sectors that research funded by public money should be made publicly accessible, as the citizenry writ large has "already paid" for its production, and should not have to do so again at the point of individual consumption. These green shoots are promising, but have yet to flourish into a coordinated, coherent public movement.

Thanks in part to the anemic state of both the copyright and patent discourses with respect to macroeconomic issues, it is possible to make the case for an anti-proprietary agenda by effectively sidestepping the traditional copyright debate entirely, and framing the issue not as a macroeconomic extension of the intellectual property debate, but as an intellectual property extension of macroeconomic debate. The case for public investment in the creative commons is not grounded in some abstract belief in the superiority of non-proprietary modes of production, or of public over private investment, but in the need to develop an intellectual property policy response to two incontrovertible macroeconomic facts: (1) in the case of monetarily sovereign nations, public money is not "taxpayer" money, but rather, is a legislative articulation of public will *sui generis*; and (2) the federal government cannot help but engage in an ongoing project of investment and job creation, at least some fraction of which will be spent on labor that involves a creative or intellectual component.

The primary policy implications of this conceptual approach undoubtedly manifests in the way that MMTs communicate and model the Job Guarantee program. Much as other MMT writings have stressed the disproportionate benefits of a Job Guarantee program to gender equality ("the Feminist JG"), racial equality ("the Anti-Racist JG"), environmental sustainability ("the Green JG"), and so forth, it is important to acknowledge

and highlight the potential of direct job creation programs to serve as a primary engine for the production of knowledge and culture (i.e. “the Intellectual JG”). Such an emphasis could be further deconstructed into support for artistic and scientific production, with the former having clear antecedents in the arts projects of the New Deal, and the latter paired with an argument for increased access to public higher education. This would redefine the meaning of “work” to incorporate, both ongoing education, and the production and dissemination of one’s accumulated knowledge.¹⁴

However, in recognition that the Job Guarantee is ultimately intended to “mop up” remaining unemployment, rather than be the first-order source of public investment to reach necessary levels of targeted effective demand, an “intellectual” Job Guarantee can and should be supplemented with additional forms of public money-driven investment in non-proprietary knowledge production. Many such programs and institutional vehicles already exist in some form, such as the national endowments for the arts, humanities and science, although they rarely are identified and grouped under such a common rubric. Moreover, few are articulated as large-scaled investment programs, in contrast to more robust conceptions, such as Mariana Mazzucato’s proposals for “Mission-Oriented Finance for Innovation.”¹⁵

In addition to expansion and greater emphasis on these proposals, another mode of facilitating non-proprietary knowledge production is to directly provide citizens with an equal “investment vote,” and allow communities the opportunity to crowd source investment decisions, with the sole caveat that all such options must be based around non-proprietary production. One way of doing this would be to issue to every citizen an annual non-refundable investment voucher credit to every individual through a dedicated payments platform.¹⁶ These vouchers could be given directly to creative worker, or alternatively, could be delegated to intermediaries to invest it on their behalf, subject only to registration requirements and minimum procedural oversight to prevent fraud. In exchange for access to such a pool, which at \$100 per capita would be around \$3 billion in size in the USA (more than ten times the amount annually appropriated for the National Endowment for the Arts), individual creative workers would voluntarily sign onto a government creative worker registry, much like non-profit organizations sign up for tax-exemption status, except the registry would be for identification purposes only—that is to say, administrative quality control would not be allowed. As with creative jobs under the Job Guarantee program, any individual receiving funds through this registry

would be required to publish any and all creative works under a non-proprietary license.

These three modes of public investment—direct job creation, direct government spending, and indirect, government-financed-but-consumer-driven spending—could be given greater or lesser prominence, depending on the particularities of the political and social context in which they were applied.

ISSUES

An important issue raised by the Benklerian wing of copyright minimalists is the importance of adopting a “copyleft” approach to non-proprietary cultural production, rather than merely relying on the traditional public domain. Under this approach, individuals receive copyrights for their work, but release it under conditions which allow anyone to use, modify, and distribute, provided that they, in turn, preserve such freedoms for the work *and any derivative works*. As Richard Stallman, the founder of the Free Software Movement explains:

The simplest way to make a program free software is to put it in the public domain uncopyrighted. This allows people to share the program and their improvements, if they are so minded. But it also allows uncooperative people to convert the program into proprietary software. They can make changes, many or few, and distribute the result as a proprietary product. People who receive the program in that modified form do not have the freedom that the original author gave them; the middleman has stripped it away. In [our project], our aim is to give *all* users the freedom to redistribute and change [our] software. If middlemen could strip off the freedom, we might have many users, but those users would not have freedom. So instead of putting GNU software in the public domain, we “copyleft” it.

Copyleft [...] provides an incentive for other programmers to add to free software. [...] Copyleft also helps programmers who want to contribute improvements to free software to get permission to do so. These programmers often work for companies or universities that would do almost anything to get more money. A programmer may want to contribute her changes to the community, but her employer may want to turn the changes into a proprietary software product. When we explain to the employer that it is illegal to distribute the improved version except as free software, the employer usually decides to release it as free software rather than throw it away.

To copyleft a program, we first state that it is copyrighted; then we add distribution terms, which are a legal instrument that gives everyone the rights to use, modify, and redistribute the program's code, *or any program derived from it*, but only if the distribution terms are unchanged. Thus, the code and the freedoms become legally inseparable.

[...] Copyleft is a way of using of the copyright on the program. It doesn't mean abandoning the copyright; in fact, doing so would make copyleft impossible."

Thus, copyleft encourages the growth of the intellectual commons, while defensively protecting it from harmful dilution or theft. In contrast to simply eliminating property rights entirely, it adopts a quasi-ironic strategy of delivering anti-proprietary outcome through proprietary means.¹⁷ Moreover, it does so without entering into a politically difficult fight over the limits of intellectual property protection *in general*, but rather exploits the existing protections in order to achieve a non-exclusionary outcome contrary to their original exclusionary intent, such that legal expansions in the scope of copyright laws do not undermine, but instead further defend the copyleft commons from degradation. In this way, the copyleft movement's ironic approach to intellectual property, and MMT's ironic approach to the monetary system¹⁸ are natural siblings.

Another issue to be considered is the political nature of the information architecture itself. Simply because intellectual property rights are typically wielded as a means for legal rent-seeking, does not mean that all information ever produced should be publicly available. Privacy and other ethical considerations in the dissemination and use of information remain important considerations when considering the balance between worker autonomy and the public interest in sharing the intellectual fruits of publicly funded labor. In this way, the idea that an anti-proprietary full employment agenda can help establish a "knowledge-sharing economy," founded upon scientific principles in accordance with the Deweyian concept of "democratic experimentalism,"¹⁹ and driven by "big data" analytics, must take into account the long-established principles of scientific ethics with respect to experimentation on human subjects, and ensure that they are as fundamental to program design as the principle of information sharing.

Furthermore, when considering what copyleft arrangements to implement, recommend, or require to public workers, it is worth giving serious consideration to the non-economic justifications for various forms of "moral" or "authorial" rights in creative work,²⁰ as well as the potential

risks associated with conditioning access to public employment to acceptance of a particular vision of intellectual property. Such consideration obviously does not need to result in greater political timidity, or *per se* dilution of the copyleft agenda via accommodation of proprietary models, but at the very least, it should be given weight when assessing the political costs of implementation, and when crafting the rhetorical and moral justifications used to sell such policies to the public. This is particularly important given that a coherent copyleft agenda would require changing *existing* funding procedures for a range of federal programs and public funding streams, as well as merely incorporating certain features into the design of future programs.

CONCLUSION

Modern Monetary Theory and its crown-jewel policy, the Job Guarantee, are revolutionary because they invert long-held social presumptions about the nature and source of investment, who bears political responsibility for unemployment, and the kinds of economic institutions that not only may be sufficient to address our macroeconomic woes, but are almost definitionally necessary to do so. Its insights transport existing political debates to new terrains, which have vastly different dynamics and power relations. In doing so, MMT raises the possibility of empowering new conceptual strategies for the promotion of freedom and justice in all of its many extant struggles.

One such struggle that, until now, has received relatively little attention is the fight against land enclosure that imposes private property rights in spaces, and on resources, that previously were public commons, in ways that promote the interests of owners and rent-seekers against the broader public purpose. In the digital age, that process manifests most obviously through the form of legal restrictions on how we create, use, modify and share streams of binary information that, when fed into and interpreted by a computer, spit out comprehensible words, sounds, images and machine instructions.²¹

The non-corporeal nature of the underlying “digital commodities” created by intellectual property rights brings into stark relief the legally (and thus, socially) constructed nature of the “market for ideas.” Our capacity to create information is no longer limited by the number of printing presses in operation, or, in the final instance, by the number of trees that need to be cut down to produce the paper upon which the ideas are printed. Instead, it is patently obvious that the only reason we must purchase a copy of an mp3

file from a distributor, rather than copy our friend's version, is because the law tells us we must do so, purportedly out of concern for the need of the original artist to earn a living. The creation of a bitstream requires only a host medium in which for electrons to flow, and, as we enter the twenty-first century, such media are becoming almost as ubiquitous as people themselves. Thus, the only question that remains is: how do we pay for the labor required to make the first copy of the bitstream?

This question brings the intellectual property debate squarely into the realm of MMT. Rather than view the challenge of encouraging investment in creative production as a unique issue, beginning with the Gutenberg Bible in the sixteenth century, MMT correctly embeds it within the broader macroeconomic debate out of which it originally emerged. Creative production is ultimately a special case of production in general, and while a special theory may be warranted, it must be developed against the backdrop of, and in relation to, the general theory.

Thus, MMT has much to offer those involved in the movement for intellectual freedom. But simultaneously, the movement for intellectual freedom has much to offer MMT, inasmuch as it highlights an analytical and operational dimension of macroeconomic policymaking in need of further theorization and debate within the MMT literature. For those seeking to pick up the MMT mantle and carry it into the next generation, much heavy lifting remains to be done in this space. It is my hope that this chapter will serve as a starting point for that discussion.

NOTES

1. Or, conceivably, a fixed nominal index of tiered wage rates, based on publicly recognized credentials and/or demonstrated practical competencies.
2. In other words, if the JG wage is \$15 an hour, then each dollar is valued at 4 minutes of the average person's time.
3. This observation recalls that well-known economics joke: "That works very well in practice, but is it true in theory?"
4. K. Polanyi, (1944), *The Great Transformation*, Boston: Beacon Press. p. 72.
5. See Elinor Ostrom, 1990, *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press: United Kingdom.

6. See, e.g., James Boyle, 2003, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 *Law and Contemporary Problems*, pp. 33–74.
7. William Landes & Richard Posner, 1989, *An Economic Analysis of Copyright Law*, 18 *J. Leg. Stud.* 325, 325–333.
8. Frank Easterbrook, 1990, *Intellectual Property is Still Property*, 13 *Harv. J.L. & Pub. Pol’y* 108.
9. New Haven: Yale University Press.
10. See also Eben Moglen, 2003, *The dotCommunist Manifesto*, available at http://emoglen.law.columbia.edu/my_pubs/dcm.html.
11. For background to this view, see Friedrich Hayek, 1978 *The Constitution of Liberty*, University of Chicago Press: Chicago.
12. Benkler, 2006, p. 22.
13. *Id.*, p. 21.
14. The obvious model for this is the university academic, who, in addition to providing a direct “service” (i.e. teaching students), is expected to continue their own education, and publish scholarship. For an example model of this, see Bernard Lietaer, 2010, *The Saber: A Currency for the Educational Sector*, available at <http://www.lietaer.com/2010/01/the-saber/>. Alternatively, one could view the Buckaroo and Denison Volunteer Dollar models as implicit examples of “Intellectual JG” programs. See Warren Mosler, 2010, *The UMKC Buckaroo: A Currency Model of World Prosperity*, available at http://www.huffingtonpost.com/warren-mosler/the-umkc-buckaroo-a-curre_b_970447.html; Fadhel Kaboub, 2012, *Denison Volunteer Dollars: The Currency of Civic Engagement*, available at <https://www.youtube.com/watch?v=vSQ6POEV86U>.
15. See Mariana Mazzucato, 2013, *Mission-Oriented Finance for Innovation: New Ideas for Investment-Led Growth*, *Policy Network: United Kingdom*.
16. This model is almost identical to Dean Baker’s *Artistic Freedom Voucher* proposal, but where he proposes a refundable tax credit I propose a direct monetary grant issued through a dedicated payments platform. See Dean Baker, 2003, *The Artistic Freedom Voucher: Internet Age Alternative to Copyrights*, Center for Economic and Policy Research, at http://www.cepr.net/documents/publications/ip_2003_11.pdf.
17. Of course, there are many different forms of copyleft licenses. For more on the philosophical and legal differences between various

- them, see Anne Barron, 2012, Kant, Copyright & Creative Freedom, 31, *Law and Philosophy*, 1–48.
18. Rather than viewing the monetary system as the source of the evils and excesses of capitalism, MMT treats it as its ultimate source of potential redemption.
 19. See, e.g., Michael C. Dorf & Charles F. Sabel, 1998, A Constitution of Democratic Experimentalism, 98 *Columbia Law Review* 2, pp. 267–473.
 20. See, e.g., Jane Ginsburg, 2015, The Author’s Place in the Future of Copyright, in Ruth Okediji, ed., *Copyright in an Age of Exceptions and Limitations*, Cambridge University Press, 2015.
 21. See, e.g., Eben Moglen, 1999, Anarchism Triumphant: Free Software and the Death of Copyright, *First Monday* (“We need to begin by considering the technical essence of the familiar devices that surround us in the era of “cultural software.” A CD player is a good example. Its primary input is a bitstream read from an optical storage disk. The bitstream describes music in terms of measurements, taken 44,000 times per second, of frequency and amplitude in each of two audio channels. The player’s primary output is analog audio signals [...] Like everything else in the digital world, music as seen by a CD player is mere numeric information; a particular recording of Beethoven’s Ninth Symphony recorded by Arturo Toscanini and the NBC Symphony Orchestra and Chorale is (to drop a few insignificant digits) 1276749873424, while Glenn Gould’s peculiarly perverse last recording of the Goldberg Variations is (similarly rather truncated) 767459083268. Oddly enough, these two numbers are “copyrighted.” This means, supposedly, that you can’t possess another copy of these numbers, once fixed in any physical form, unless you have licensed them. And you can’t turn 767459083268 into 2347895697 for your friends (thus correcting Gould’s ridiculous judgment about tempi) without making a “derivative work,” for which a license is necessary. At the same time, a similar optical storage disk contains another number, let us call it 7537489532. This one is an algorithm for linear programming of large systems with multiple constraints, useful for example if you want to make optimal use of your rolling stock in running a freight railroad. This number (in the U.S.) is “patented,” which means you cannot derive 7537489532 for yourself, or otherwise “practice the art” of the patent with respect to solving linear programming

problems no matter how you came by the idea, including finding it out for yourself, unless you have a license from the number's owner. Then there's 9892454959483. This one is the source code for Microsoft Word. In addition to being "copyrighted," this one is a trade secret. That means if you take this number from Microsoft and give it to anyone else you can be punished. Lastly, there's 588832161316. It doesn't do anything, it's just the square of 767354. As far as I know, it isn't owned by anybody under any of these rubrics. Yet.").