Technology and Below-the-Line Labor in the Copyfight over Intellectual Property

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Kurt Vonnegut published his first novel, Player Piano (1952), at a time of high, dystopian anxiety about the abuse of technology by the state and by industrialists alike. The novel—which depicts an unsavory future in which new technologies make everyone’s skills obsolete—dutifully channeled these public concerns. Player pianos do not really figure in the novel, but the title was an explicit allusion to their contribution, historically, to the technological disemployment of musicians. Nor was Vonnegut the only writer of his generation to draw attention to the mother of cultural automation. The threat posed to artists’ livelihoods by the mechanical player piano was also shared by William Gaddis, who developed a lifelong obsession with the technology.¹

It is worth recalling briefly how and why the pianola, which had a short-lived but legally significant career, should have earned such a reputation as the original sinner. Its fin-de-siècle development was arguably the first salient example of an industrial technology designed, in large part, to cut the costs of creative labor. The subsequent pianola boom came at a time when the American Federation of Musicians (AFM) had scored some significant successes in negotiating wage scales and other conditions for its members. Indeed, the union’s bristling response to this new technology marked the beginning of the AFM’s long struggle against the automation of the jobs of live performers. By 1909, an estimated 330,000 of the pianos produced in the United States were mechanized, and by 1916, 65 percent of the market was still monopolized by player pianos.² The roll industry, which serviced the boom, had become one of the chief factors driving the music industries as a whole. While it was promoted as a great equalizer (create your own music in the home!), the pianola met the industry’s need to find a less durable consumer product than the standard piano. Aside from the instrument’s direct threat to live performers, the production of the player rolls created a low-wage manufacturing industry that offered compensatory factory-style employment to the displaced performers and others who could not find work in vaudeville or in one of the many
traveling dance orchestras of the time. As a result, the work of pianists was imperiled and degraded on all sides.

The pianist workforce took further hits with each new commercial technology for recording or broadcasting performances. While the advent of silent movies provided employment for piano accompanists in the theaters, the sound film process introduced by Vitaphone and the use of canned music in motion pictures would put them and thousands more movie and theater pit musicians out of work. Jukeboxes and other uses of phonographs took a further toll. In the space of two decades, pianists who had been the mainstay of virtually all commercial and domestic entertainment were reduced to bit parts in the Fordist assemblies of orchestras and big bands. By midcentury, the piano was more ubiquitous in households as an item of furniture than as an active complement to the hearth. It is fair to say, in keeping with the spirit of Vonnegut’s title, that the pianola set in motion a machinery of disemployment that continues to transform the craft of music making to this day.

But the player piano is more likely to be remembered, and cited, today as a key case study in copyright law. Pianists, after all, were not the only group whose livelihoods were threatened by the mercurial rise of these machines. Their use also deprived composers of profits from sheet music sales. Congress was asked to adjudicate whether the pianola companies had to pay copyright holders for permission to play their content. In their landmark decision of 1909, the legislators resolved that whoever wanted to record the music, and make subsequent copies of it, had to pay for the content, though not at a price set by the holder. Instead, the fee paid to the composer or the relevant copyright holder was set by law (at two cents for each copy).

This is a favorite dispute for scholars of intellectual property (IP) to revisit, because its resolution set the precedent not only for ASCAP’s licensing and royalty system, but also for the regulation of the radio and cable TV industries, and may yet prove to be a viable model for regulating the use of peer-to-peer file-sharing technologies. For the most part, however, legal scholars’ accounts of the case—Lawrence Lessig’s treatment, in his book *Free Culture*, is a good example—have nothing to say about the human piano players whose livelihoods were radically affected both by the mechanization of piano playing and by the congressional ruling. The only “musicians” who figure are the composers whose full authorial rights were being compromised by the industrial piracy of the day.

There is much to be learned from this exclusion. Constitutional scholars and First Amendment activists have assumed a natural leading role in the battle against corporate IP monopolies, but the history of creative property and its
relationship to technology cannot be left in the hands of law professors to write, nor should it be. Too much is left out, if only because legally-minded coverage of IP disputes tends to revolve exclusively around the interests of claimants: creators, copyright holders, or the general public of users and consumers. The state also figures in these accounts, because its judges and legislators have to decide not only whose interests will prevail in the resolution of disputes, but also how to weigh factors that advance national interests such as high-tech innovation, symbolic prestige, or the IP export trade that garners revenues from other countries.

By contrast, there is little room for those without an immediate legal stake in the disputes. Legal analysts of landmark cases rarely have anything to say about the multitude of jobs and livelihoods affected by the judicial treatment of IP-based assets and new technologies. Not only does this offend our sense of cultural and social history; it also weakens our capacity to understand, and react to, the vast changes occurring today as a result of the technology-driven IP property grab that has resulted in an aggressive expansion of copyright, patent, trademark, or publicity rights. In this essay, I will try to show why labor issues should be a more obligatory component of public debates about new technologies and the so-called corporate enclosure of the “information commons.”

We ought to acknowledge that efforts to regulate or propertize new technologies have the potential to drastically alter the landscape of work. Yet these consequences tend to go unexamined, whether in case analysis or in the realm of public opinion making, where libertarian concerns about the freedom of consumer choices hold sway to the detriment of attention to labor issues.

It is easy to see why the libertarian response has taken precedence. Since the profits of IP monopolists depend on the creation of information scarcity, corporations such as Time Warner, Microsoft, and MGM have declared all-out war on innovative technologies that can reproduce and disseminate information to users at a cost approaching zero. Consequently, these IP bullies are perceived as blocking our rights to information that “wants to be free.” Yet the historical ironies evoked by this assault speak directly to how labor has been discounted in the race to propertize. Consider that the legal vehicle for the new property grab is an expanded version of the limited monopoly rights granted to authors under eighteenth-century copyright laws so that they could pursue an independent living in the marketplace of ideas. Because U.S. law permits corporate entities to be artificial persons, most of the “authors” seizing the copyright and patent claims in the twenty-first century are global firms in multimedia, IT, and biotechnology. Likewise, the technologies under attack—file sharing and other peer-to-peer programs, de-encryption tools for picking digital locks, and
each successive generation of reverse-engineering techniques for overriding proprietary measures and “improving” original products—are the brainchildren of the kind of whiz kid innovators that patent laws were initially intended to encourage and assist. The early beneficiaries of patent grants, like their writer peers, were also breaking free of the rigid patronage of monarchs or states to make their own way in the industrializing world.

In the Lockean tradition, property rights have retained a formal, if distant, association with the labor for which such rights are understood to be a reward. In the case of intellectual property, the attachment is ever more tenuous. Legal scholars have explained why entitlement in IP disputes is limited to a relatively small number of economic actors who are close to the claim of being “authors” of the creative property in question. But if the impact of these disputes on the means of production is as profound as some commentators have described, then clearly an infinitely greater slice of the workforce has a legitimate interest in their resolution. Can the claims of those larger constituencies be represented in any adequate way in the current legal wrangling over IP? If the answer is no, then what can scholars and activists do to highlight and remedy this neglect?

The overwhelming evidence from IP law suggests that American courts have little interest in thinking outside of the box of singular authorship. They will not recognize the potentially legitimate IP claims of participants in the kind of collective creative work that is the norm in the culture, IT, and other knowledge-intensive industries, and they have even less interest in hearing the argument that the true source of most creative works is the public domain itself. Instead, judges are increasingly fixed on assigning monopoly rights (and lots of them) to single, indivisible “authors,” who are more than likely to be corporate entities. As several scholars have observed, the courts have invested more and more exclusive rights and privileges in the category of proprietary authorship at a time when cultural critics have been doing exactly the opposite—dissolving the Romantic mystique that supports any such notions about the extraordinary rights of creative geniuses. The state has obliged by passing punitive legislation to protect these privileges.

In the court of public opinion, corporate IP warriors can always win points by broadcasting the claim that they are defending the labor rights of vulnerable artists. However, the historical record and the experience of working artists today confirm that the struggling proprietary author has always been more of a convenient fiction for publishers to exploit than a consistent beneficiary of copyright rewards. Culture industry executives who are able to masquerade as the last line of protection for artists when they are systematically stripping
them of their copyrights are well set up to wave away claims on their IP assets from broader constituencies.

By contrast, what vision of labor has been put forth by the opposition forces in their public campaigns to raise the alarm about IP monopolies? Liberal advocates of the public domain who argue for a “free culture” (free as in “free speech” not “free beer”) have petitioned for the fullest rights of access to information for users and consumers, while continuing to recognize copyright as a valid way of ensuring that individual creators receive their moral dessert. As the foremost public domain proponent, Lessig has compared this campaign for “free culture” to the antebellum free labor movement that fought against chattel and wage slavery alike. It is a loose analogy, and so perhaps it is not entirely fair to observe that this preindustrial ideal of self-reliant artisans—who wanted to sell their products, not their labor—is hardly the most practical response to the broad reality of the hierarchical divisions of labor that knowledge industries command today. On the other hand, it is an ideal that speaks to those whose labor rank puts them closest (but no cigar) to the entitlements due to “authors.” For this thwarted class fraction of high-skilled and self-directed individuals, whose entrepreneurial prospects are increasingly blocked by corporate monopolies, the analogy rings true enough.

In loose alliance with the public domain advocates like Lessig are the widely networked ranks of high-tech workers and cognoscenti who rally behind the umbrella term FLOSS, or FOSS (Free/Libre Open Source Software). The production credo of these workers, who are opposed to most proprietary restrictions on the use of information and information technologies, is cooperative in nature, with deep roots in the hacker ethic of communal shareware. The labor ethos of these IT communities leans heavily on volunteerism and mutual support. Because they are generally ill-disposed to state intervention, FLOSS engineers, programmers, and their advocates have not explored ways of providing a sustainable infrastructure for the gift economy they tend to uphold. Nor have they made it a priority to speak to the interests of less-skilled workers who lie outside of their ranks. For the most part, labor-consciousness among FLOSS communities (whether in the relatively distinct “free software” or “open source” subcultures) seems to rest on the confidence of members that their expertise will keep them on the upside of the technology curve that protects the best and brightest from proletarianization. There is little to distinguish this form of consciousness from the guild labor mentality of yore that sought security in the protection of craft knowledge.

Neither the public domain advocates nor the FLOSS evangelists have actively considered the consequences of IP disputes for the mass of workers and
employees who do not come close to the legal category of copyright/patent holder. It is odd that such labor concerns have not been more on the agenda. Consider the volume of public anguish expended on the recent “jobless recovery” or on the impact of skilled-labor outsourcing. Ranking politicians have reserved some of their most heated rhetoric, though not their fullest legislative powers, for the purpose of stemming job loss, especially in IP-based industries regarded as strategically important for the national interest. But this backdrop has not insinuated itself very far into the IP wars. The crusade against the IP monopolists continues to be dominated by strains of techno-libertarianism that lie at the doctrinal core of the “information society,” obscuring the labor that built and maintains its foundations, highways, and routine production. The result? Voices proclaiming freedom in every direction, but justice in none.¹¹

Today’s contest over technology-driven copyrights and patents cannot be only about protecting the claims of top-flight knowledge workers, or safeguarding the future of technological innovation, or guaranteeing consumer access to a rich public domain of information. The outcome has far-reaching consequences for the global reorganization of work, and we need to subject these consequences to a serious line of inquiry. Otherwise, it will be safely concluded that the IP wars are simply an elite “copyfight” between capital-owner monopolists and the labor aristocracy of the digitariat (a dominated fraction of the dominant class, as Pierre Bourdieu once described intellectuals) struggling to preserve and extend their high-skill interests.

The Acquisition Race

Though the idea of intellectual property has been around for much longer, IP entered the lexicon of state and corporate bureaucracies only after the 1970 founding of the World Intellectual Property Organization (WIPO). Hitherto a relatively stable niche of U.S. property law, IP legislation began to proliferate after the 1976 revision of the 1790 Copyright Act. No doubt this development reflected the consensus of the nation’s economic managers that IP-driven technology growth was becoming the primary industrial asset of the United States.¹² Though it was soon a leading factor in the balance of trade, weighted on the export side by the copyright-based and patent-rich industries of information, media, entertainment, software, and high-value manufacturing, the concept of IP did not fully enter public currency until the 1990s. The 1998 passage of the Sonny Bono Copyright Term Extension Act and the Digital Millennium Copyright Act brought the problem of excessive IP protection to the attention of a wide range of public interest groups. Finally, after 2003, when
the recording industry’s zero-tolerance crusade against Napster, its clones, and their users hit the courts, the term became all too familiar to the hundreds of millions engaged in online file sharing.

The corporate clampdown on the ubiquitous practice of downloading music and other entertainment products was a sobering initiation for many into the tawdry reality of the IP grab. As a result, everyone has a horror story to tell. There’s the one about ASCAP suing the Girl Scouts for singing some of its members’ songs around the campfire; George Clinton being sued for singing some of his own songs without permission from the copyright owner of his back catalog; the “Happy Birthday” song, now owned by Time Warner, and restricted to licensed uses until 2030; or the ultimate in class betrayal perpetrated by the litigious copyright owners of Woody Guthrie’s “This Land Is Your Land,” and the Fourth International’s flagship song, “The Internationale.” Beyond the music ghetto, things only get more surreal; Donald Trump has trademarked the expression “You’re Fired,” along with his accompanying hand gesture from the TV reality show *The Apprentice.*

These stories now belong to the demonological archive of consumer folklore. But the truly chilling ones apply to the lifeworld itself, where multinationals like Syngenta, AstraZeneca, DuPont, Monsanto, Merck, and Dow are engaged in a cutthroat race to patent seeds, livestock, plant genes, and other biological raw materials that have been the basis of subsistence farming in the developing world for centuries. The corporate privatization of biodiversity is a colossal act of plunder, infinitely more damaging to the basic income and health of mass populations than the petty piracy of movies in developing countries is to those who work in the Hollywood entertainment system. Neoliberal pillage of nature and indigenous knowledge is an imminent threat to food security and livelihoods across the global South.

From the perspective of countries with few IP assets, the demand, on the part of rich nations, to respect and protect the IP rights of foreign multinationals is little different from the traditional imperial call on a vassal to pay tribute. Nor, as an economic arrangement, is it much of a departure from the colonial pattern by which the periphery supplied raw materials to be processed and branded in the core. Today, the materials come in the form of traditional knowledge—seeds, folklore, healing remedies—and are converted into IP by the likes of Monsanto, Disney, and Pfizer. Resistance to this arrangement surfaced at a stormy April 2005 meeting of WIPO in Geneva. A bloc of global South nations, including key players such as Brazil, Argentina, and India, flatly challenged the efforts of the rich countries to continue imposing IP rights protection through global trade treaties. According to the statement submitted
by India, “no longer are developing countries prepared to accept this approach, or continuation of the status quo.” The fighting words continued, albeit in the jargon of progressive policy wonk diplomacy: “Given the huge North-South asymmetry, absence of mandatory cross-border resource transfers or welfare payment, and absence of domestic recycling of monopoly profits of foreign IP rights holders, the case for strong IP protection in developing countries is without any economic basis. Harmonization of IP laws across countries with asymmetric distribution of IP assets is clearly intended to serve the interest of rent seekers in developed countries rather than that of the public in developing countries.”

The rationale behind the uprising was plain enough. Why should poor countries spend their scarce resources on IP policing operations for foreign multinationals? They see none of the benefits of Sony, Bertelsman, Microsoft, or Aventis’s profits, nothing in the way of technology transfers, and precious little that could be viewed as a development asset. By contrast, their underground pirate economies do a passable job of providing much-needed drugs, software, consumer technologies, seeds, and all manner of cultural products at affordable prices, and at cost margins that filter into the pockets of local producers and distributors. Piracy, from this viewpoint, is just another name for catering to community needs and staving off predatory outsiders.

The 1960s saw a similar revolt against the Western copyright laws embodied in the multilateral Berne Convention of 1884 and largely written to benefit the major IP exporters. The break, conceived by African nations at a Brazzaville meeting in 1963, resulted in the Stockholm Protocol Regarding Developing Countries. Like the Development Agenda put forth in Geneva this year, it was vigorously opposed by Washington. The world’s leading pirate nation for two centuries, the United States had lately become a net exporter, and though it would not become a full Berne signatory until 1989, it was beginning to flex its muscles as a global IP bully. The outcome of the wrangling—the Paris revisions of 1971—preserved intact the broad international membership of Berne but relaxed restrictions on IP uses for scholarship, teaching, and research in developing nations. The outcome of the 2005 insurgency remains to be seen, but copyright powers in the North will be less likely to agree to concessions on educational materials than they were thirty-five years ago. In the intervening years, higher education has become a key site of capital accumulation in the knowledge economy.

Academics don’t have to hail from Africa or India to see the evidence in their own workplace. The chilling effects of the IP clampdown extend into every corner of campus. Institutions increasingly claim ownership of traditional
academic works—from syllabi and courseware to published research—that had hitherto been assigned to the independent copyright jurisdiction of their faculty creators. Now these materials are increasingly regarded as “works for hire,” prepared by employees in the course of fulfilling their contracts, in much the same way as an industrial corporation asserts ownership of its employees’ ideas and research.\(^\text{18}\) Well-established trends confirm that the research university is behaving more and more like an adjunct to private industry; the steady concentration of power upward into managerial bureaucracies, the abdication of research and productivity assessment to external assessors and funders, the pursuit of intimate partnerships with industrial corporations, the pressure to adopt an entrepreneurial career mentality, and the erosion of tenure through the galloping casualization of the workforce.\(^\text{19}\) From the perspective of increasingly managed academic employees, the result is systematic de-professionalization; the value of a doctoral degree has been degraded, while new divisions of labor have emerged that are corrosive to any notion of job security or peer loyalty.\(^\text{20}\)

As Clark Kerr once prophesied, academics are now more like “tenants” than “owners” of their university institutions, but today’s university is not quite the high-tech “knowledge factory” that he, and his critics, described.\(^\text{21}\) The research academy—with its own bulging portfolio of patents, copyrights, trademarks, and corporate funding contracts—is undoubtedly a conduit for capitalizing and transmitting knowledge to the marketplace, but it is also an all-important guardian of the public domain. As Corynne McSherry points out in *Who Owns Academic Work?*, the academic workplace is characterized by a tension that lies at the heart of knowledge capitalism. As the academy increasingly hosts property formation and incorporates the customs of the marketplace, ever greater care must go into maintaining its function as a guarantor of truth and unreservable knowledge.\(^\text{22}\) This is not just window dressing, or money laundering. Without an information commons to freely exploit, knowledge capitalism would lose its primary long-term means of reducing transaction costs. Nor, if all knowledge were propertized, could faculty entrepreneurs poach on the community model of academic exchange to advance their own autonomy and status as knowledge owners. Consequently, the traditional academic ethos of disinterested inquiry is all the more necessary not just to preserve the symbolic prestige of the institution but also to safeguard commonly available resources as free economic inputs, in much the same way as manufacturing, extractive, and biomedical industries all depend on the common ecological storehouse for free sources of new product.
High-Tech IP and Outsourcing

Though the academy is the natural home of this tension, its side effects are familiar to all knowledge professionals who enjoy a degree of autonomy in their workplace. This is because the collegiate model of the self-directed thinker has steadily migrated to knowledge-intensive industries, where no-collar employees emulate the work mentality and flexible schedules of disinterested research academics on corporate “campuses” or in surveillance-free work environments. Arguably, the diffusion of this temperament is much better evidence of the character of knowledge capitalism than are departmental water-cooler tales about the corporatization of universities.

As the knowledge and work customs of the academy infiltrate the high-tech corporate world, they are employed to extract IP-rich value from employees in ways that were impossible in more traditional, physically bounded workplaces. In return for ceding freedom of movement to workers along with control over their schedules and work initiatives, employers can claim ownership of ideas that germinate in the most free times and locations of their employees’ lives. New mobile technologies aimed at ubiquitous computing and telecommunications have directly facilitated employers’ annexation of that free time. In principle, employers can now harvest IP returns from their employees anytime, anywhere. With the advent of globally networked technologies, the value collecting has extended its reach even further.

This new geographical scope has opened the way to a wave of outsourcing of skilled work, which cuts costs drastically, and, just as important, imposes labor discipline on each end of the transfers. Under pressure to hold on to their hard-earned skills, onshore employees struggle to keep their jobs above the red line, while their offshore counterparts are warned that their new jobs could move to a cheaper location at any time. The process of outsourcing, moreover, depends on an implicit understanding that the skills and every other facet of the work being migrated are the intellectual property of the employer. IP, in this context, is much more than technology-driven legal entities such as patents, copyrights, and trademarks. It is the whole range of assets—processes, techniques, methodology, and talent—that are required to operate and make use of technologies and that business analysts often refer to as “intellectual capital.”

In the course of researching my recent book *Fast Boat to China*, I tried to trace some of the operations involved in “knowledge transfer,” the favorite corporate euphemism for the outsourcing of skilled work. This process involves extracting knowledge and skills from the heads of onshore employees
and moving these assets to replacements in a cheaper part of the world. Global work-flow platforms and other business process technologies have been developed to gather, coordinate, and reintegrate the results from far afield. These technologies, and the modular units of information that they move around, are designed to minimize IP leakage or theft. Naturally, this process of knowledge diffusion and recomposition is a much more complex and fraught logistical operation than shipping out machinery to set up a plant offshore. But with the requisite technologies, global firms are now in a position to shift around bits and pieces of ever more skilled occupations at will. Perhaps only science fiction can help us imagine the kinds of technologies that might be developed to ensure the truly efficient extraction of knowledge. But the basic steps in this process are already considered routine in many multinational corporations.

In high-tech industries, where job-hopping is endemic among valued employees, managers have learned to build into the cost structure the risk of workers walking off with the company’s IP. Yet the perception that they are the true, “dispossessed” authors of corporate IP helps to explain why engineers in these sectors are often the most zealous participants in FLOSS projects during their downtime. In FLOSS’s cooperative nonproprietary mode of production, they do not see the product of their labor as alienated. More to the point, free or open source software is a product that reflects their class consciousness; it is a flattering tribute to their collective labor, and the philosophical zeal for it to be used by everyone, with only minimal restrictions, endows the claim to universality to which any rising class must aspire.

For that reason alone, the much-lionized history of shareware and its maturation into the dual-track ethos of free software and open source can be seen as the narrative of a distinctive class fraction—a thwarted technocratic elite whose libertarian worldview butts up against the established proprietary interests of capital-owners. While they see their knowledge and expertise generating wealth, they chafe at their lack of control over the property assets. Their willingness to work against the proprietary IP regime is directly linked to their entrepreneurial-artisanal instincts, but, more important, it is a power-test of their capacity to act upon the world. The class traitors in their midst are engineer innovators who go over to the dark Gatesian side of IP monopoly enforcement.

But what about those further down the entitlement hierarchy, who are not direct participants in this power struggle, and whose prospects in the chain of production do not extend to the profile of the master craftsman straining at the corporate leash? They are much more distant from the rewards of authorship, and are less likely to feel personally disrespected when IP rights are
expropriated from above. When their jobs are outsourced, they are simply told to retrain, or seek occupational niches that are secure from flight. (Middle-class parents may soon hope their children grow up to be plumbers.) Alternatively, if they belong to unions, say, in the copyright industries (one of the few union strongholds in the private sector), their affiliates may find it strategic, for the purposes of job protection, to side with employers engaged in the punitive clampdown against IP infringement.

In any event, their interests do not coincide with the highly skilled auteurs-manques or with the general public, the other claimant to partial ownership of IP rights. Adjunct teachers in the academic workforce are a good example. Full-time, tenured faculty, whose claim to authorial status is relatively strong, barely regard them as colleagues, rarely speak on their behalf, and are disinclined to oppose initiatives that clearly involve institutional expropriation of faculty IP rights but that affect adjuncts disproportionately. This is surely one of the reasons for the largely unobstructed growth of remote learning programs and private, for-profit, online institutions (made possible by Internet technologies) such as the University of Phoenix, Walden University, Kaplan University, Westwood College, and DeVry University.²⁷ Lack of full-timer opposition also explains the steady march to outsource writing, or other “remedial,” programs from four-year institutions to the underpaid staff at extensions or in two-year community colleges.²⁸ It is also driving the overseas expansion of American collegiate brands, in the form of a “global campus” system, which, ultimately, will adopt some of the fiscal logic of global corporations, balancing the onshore budget against a network of offshore units.

Such initiatives are aimed at cutting teaching labor costs and establishing control over curricular materials and rights. Except at the height of the dot-com boom, when digital technology fever penetrated even the fantasies of Ivy League administrators, full-timers have generally viewed such developments as a threat only to those who do not share their own guild privileges. Even so, contingent faculty constitutes strong, articulate voices, and they have sought to unionize in great numbers to protect their interests.²⁹ Compared to the marginalized in other knowledge industries, they are taking steps to clarify their relationship to IP rights in their workplace.³⁰

Their counterparts in the technology industries have a harder time making claims on IP. Consider the landmark, decade-long court case (Vizcaino v. Microsoft, first filed in 1993) brought against Microsoft by its “permatemps.” Thousands of longtime employees who had worked alongside full-timers but who were denied benefits because they were classified as “independent
contractors,” sued the corporation for undercompensation. One of the biggest claims in the case revolved around their exclusion from the Microsoft Employee Stock Purchase Plan, which would have brought indirect benefits from IP assets the permatemps helped to create. Faced with several rulings that established the workers as “common-law” employees, Microsoft settled out of court in 2002 and immediately established hiring rules designed to restore the status quo ante by circumventing the new legal and tax regulations that applied to long-term serial temporary assignments. This revised policy has been widely copied throughout corporate America. Temps are now more carefully segregated within corporate culture, further distancing whatever IP-related claims they might have on the products of their labor. In addition, the permatemp case helped to spur corporate flight. Jobs hitherto assigned to pools of temporary workers were added to those of regular employees slated for overseas “knowledge transfer.”

But it is the entertainment industry and its hierarchy of craft unions that offers the clearest, single example of the stratification of creative labor. Indeed, performers, writers, and directors are commonly referred to as above-the-line employees. Their unions—the American Federation of Television and Radio Artists, the Writers Guild of America, the Directors Guild, the Screen Actors Guild, and the American Guild of Variety Artists—have negotiated successfully for residuals payments, basically “royalties” from rebroadcasts or reuse of film, TV, or commercials. That these talent unions can extract such fees from the Alliance of Motion Picture and Television Producers, which represents most studios and independent producers, is the source of their strength and their relative health. By contrast, below-the-line technician employees have been hit hard by a combination of de-skilling from new technologies and runaway production to non-union locations.  

Here we see two sides of the impact of globalization. As the entertainment industry has expanded its ability to distribute overseas through each new technological generation of media formats, the additional residuals have brought handsome benefits to those above the line. Below the line, however, the capacity to produce overseas or in right-to-work states has decimated the livelihoods of technicians, set designers, sound engineers, cinematographers, and grips. While no one, either above or below the line, enjoys full authorial IP rights, the ability of talent to piggyback on copyright for its claim on royalties has made all the difference between the two classes of employees. Clearly, the development of the new technologies has only accentuated the uneven distribution of income that is governed by the line.
Union Resistance

In the 1930s, the American Federation of Musicians took a militant last stand against technological automation, establishing a Music Defense League to combat the use of canned music in movie theaters. But the union soon made its peace with the motion picture and other entertainment industries in the form of collective bargaining contracts. The advent of “business unionism” in these industries ensured a new intimacy between the interests of owners and their employees. Accordingly, the resistance of unionized musicians to new technologies that reduced their employment prospects now ran in tandem with the resistance of corporate owners to new technologies that undermined their control over IP.

In the annals of IP scholarship, unions, when they appear at all, are almost always portrayed in the role of antimodernizers, instinctively set against the march of progress, rather like the fuddy-duddy folkies who famously booed and pulled the plug on Bob Dylan’s electrified set at the Newport Folk Festival. Let me recount just one example. In Copyright’s Highway, Paul Goldstein’s generous history of copyright, the printer and bookbinder unions are fingered as the chief lobbyists behind the blocking of efforts, in the early decades of the twentieth century, to conform the U.S. Copyright Law to the international standards of the 1884 Berne Convention. For their part, these unions were defending the favorable position their members had enjoyed as the chief beneficiaries of the trade in reproducing foreign titles during the golden age of American piracy. But Goldstein’s account sees the protectionism of organized labor as standing in the way of international cooperation, perceived as more enlightened. As a result of what we are then invited to interpret as union intransigency, Washington was forced to maintain its outcast status in the international copyright community for several decades.

Yet there is another way to interpret the anachronistic feel of the unions’ response. It reminds us that a variety of hands were once understood to have an equivalent stake in the production process. Martha Woodmansee has shown that, in Germany as late as the 1750s, the author was still regarded as “just one of the numerous craftsmen involved in the production of a book—not superior to, but on a par with[,] other craftsmen.” Under its definition of “book,” a dictionary of the time lists writers alongside papermakers, type founders, typesetters, printers, proofreaders, publishers, bookbinders, gilders, and brass-workers as equal beneficiaries of “this branch of manufacture.” The subsequent crusade to elevate the authors’ labor from that of craftsman to originator of special value was the heady product of Romantic ideology.
about the singularity of artistic creation. A multifaceted response to the onset of industrialization and commerce in culture, this ideology was expediently taken up to justify the generous rights extended to authors under copyright law. In the European legal tradition, these inalienable natural or “moral” rights are limited to flesh-and-blood authors and cannot be assigned to corporations. By contrast, in the American legal tradition, which seeks to balance the interests of copyright holders against the needs of consumers, real authors have no such moral standing.

It is unlikely that the printers and bookbinders who opposed the U.S. move to join Berne were acting out of some high-minded principle about the maldistribution of copyrights benefits. They were simply holding on to a good racket. But their formal claim on the trade, and the considerable influence that it carried for so long, demonstrates how union power can be used to effectively represent workers whom copyright law does not recognize as author-worthy contributors to cultural production.

In other contexts, union resistance can be a useful and persistent reminder that industrial technologies, especially those served up with a supersized helping of utopian modernization, are developed and programmed to control the labor process in every way possible. For the harried employee, new technologies in the workplace are invariably the bearers of speed-up and ever more sophisticated forms of managerial surveillance. They are packaged and introduced with the warm promise of job enrichment, but are more likely to be deployed as a way of de-skilling or disciplining a workforce.

In the case of creative technologies, this dark side is more difficult to distinguish, especially when the results are vaunted as important advances in the arts. Simon Reynolds, the pop music critic, once told me that the British musicians’ union launched a campaign against the synthesizer in the 1980s, at a time when electronic dance music had begun its mercurial ascent to the status of a mass cult in European pop. The threat was clear enough, and, indeed, the subsequent reign of dance music proved to be a long, cruel season for performers of live musical instruments. In many quarters, they were as uncool and obsolescent as an eight-track tape; no one wanted to book them, especially if they came in the form of guitar bands.

As a devotee of the genre, I could certainly count myself among those who believed that its inventive use of drum machines, samplers, and sequencers ushered in a quantum leap in musical progress. Indeed, it took some convincing to persuade me that the result had anything remotely in common with the worker layoffs that came with automated factories. Yet whenever I asked no-name working musicians who depended on live club and bar bookings
what they thought of DJ music, I was guaranteed to get an earful. There was no question in their minds that owners of live venues welcomed and encouraged a DJ-based economy of prerecordings or musical acts because it cut their overheads and labor costs by eliminating drummers, keyboard players, guitarists, and vocalists. Killing off live music may have been sold to fans as a worthy crusade against the pretensions to “authenticity” of the rock aristocracy, but it was also a serious labor problem.

Labor concerns were also an issue in the early hip-hop scene. High-minded advocates of vinyl-based sampling argued that it was a way of paying homage to the ancestral archive. In the black musical tradition, according to this view, ideas, phrasing, and melodies were more likely to be seen as common property than as a matter of personal ownership; a version of someone else’s people’s music was a tribute, not an act of plagiarism. Even after the commercial introduction of the MIDI digital interface in 1982, which transformed hip-hop into a reliable, recording industry product, the ancestor-worship theory endured as a worthy rebuttal to accusations that sampling was just a virtuoso form of theft. But sampling was just as likely to be viewed as disrespectful by the very elders who were supposed to be recipients of the homage. In addition, for every layperson’s casual dismissal—“it’s not real music”—there was a musician who saw DJ-based hip-hop as a threat to his or her livelihood as a contract performer. Nor did it help when leading rap producers declared war on musicians. Listen to Hank Shocklee, from Public Enemy’s Bomb Squad, the most formidable crew of sound engineers working in the 1980s: “We don’t like musicians, we don’t respect musicians. . . . We have a better sense of music, a better concept of music, of where it’s going, of what it can do.”

The Labor Theory of Value

If those who labor are routinely neglected in the field of IP law, the concept of “labor” has hardly been absent from it. Indeed, one of the fundamental philosophical precepts informing the field is the labor theory of value that took its most canonical form in John Locke’s influential views on property. For Locke, property rights accrued to individuals as the fruits of their labor upon resources that were held in common, or that were unclaimed. For example, these property rights could be earned by improving an object of nature. This was the doctrine notoriously applied to justify the legal appropriation of commonly used native land by colonist settlers; Native Americans who had a view of land-use rights more akin to usufruct were stripped of these rights when they signed agreements bound by European laws that honored exclusive individual
property rights. Locke also argued that labor was a property of personhood, and that individuals had a right to own whatever they “mixed” with that labor. If the resources worked upon were held in common, and “if there is enough and as good left in common for others” after the appropriation, then the result could justly be regarded as a natural property right.

This latter proviso was a serious consideration for any attribution of physical property rights (about which Locke himself was writing), but appeared to be less consequential in the field of creative property, where ideas and facts are “nonrivalrous” goods whose value is not diminished, in principle, by their shared use by others. It was this acknowledgment, by Jefferson and others, that creative property was not like real property that led to the special provisions made for IP in the Constitution. Though it was a relatively uncontroversial observation, it was destined to be abused in a market civilization wherein monopolists depend on artificially imposed scarcity to generate wealth. No would-be monopolist will pass up the opportunity to exploit public confusion about the difference between physical and intellectual property or relinquish the invaluable, moral stigma attached to theft and piracy in order to do so. The development of IP-driven technologies has directly strengthened the hand of those in a position to profit from the outcome.

Industry gatekeepers like the MPAA’s Jack Valenti, the voice of Hollywood’s vested interests for several decades, could be depended on to never concede an inch on this distinction—VCR owners, for example, who copied a TV show in the home were no less felons than the stick-up artists at the local drugstore. Prone to grandstanding, Valenti often went much further. Indeed, in the 1984 case (*Sony v. Universal Studios*) that established the legality of the VCR, he testified to Congress that “the VCR is to the American film producer and the American public as the Boston strangler is to the woman home alone.”

It was also Valenti who declared that the duration of copyright terms should be “forever minus a day.” By perfect contrast, in a British parliamentary debate in 1841 about a proposed extension of the British copyright term, Thomas Macauley argued that any form of monopoly is an evil, and “the evil ought not to last a day longer than is necessary for the purpose of securing the good.” Copyright, in his view, was “the least objectionable way of remunerating” writers. It is difficult to imagine what possible labor theory of value could bridge the positions of Valenti and Macauley, and yet the indeterminate labor proposition that underpins copyright law has been able to do so.

On the one hand, Valenti and other hired corporate PR guns shamelessly cite the labor of poor struggling artists in their efforts to expand the bundle of rights assigned by IP law. Celebrity actors and musicians are needed to front
the corporation’s cause, though, like striking baseball players on multimillion-dollar salaries, the stars run the risk of exhausting public credibility by claiming that their livelihoods are sufficiently harmed by unlicensed access to their performances. But the risk is easily borne because the Romantic concept of the artist as a neglected genius still holds sway over a sector of the public imagination. Its staying power overrides what people know about the distinction between the creative labor of authorship and the copyrighted ownership of the product—which is primarily in the hands of a corporate entity. Indeed, invocations of the underpaid proprietary author were a charade in the eighteenth century—since most authors signed over copyright to publishers before publication—and are even more so today, when for legal purposes, the entity that paid to have the work created is regarded as the author, rather than the real author. Still, copyright’s reward is a highly visible formal expression of the Lockean principle that individuals are not only naturally entitled to the fruits of their labor, but also that property is an appropriate, if not inviolable, part of the reward.

On the other hand, the moderate view of Macauley leans toward a much more limited definition of just desserts. Creative work is not a special category of labor, deserving of extensive rights to collect rents. On occasions when authors have no other means to eke out a living, then limited copyright monopolies are justified to ensure some modest reward. Though the industrial economy of his day was characterized by wage slavery, Macauley’s position resonates with the liberal ethos of a society of possessive individuals. Property rights in such a society are easier to reconcile with another favorite rationale for copyright—the utilitarian injunction to maximize net social welfare. Indeed, this harmonious balancing act is the default position today of liberal opposition to the corporate IP fundamentalists. For pragmatic advocates of the public interest, the goal is to ensure just compensation for the honest labor of individuals but not at the cost of the broadest public benefit from that labor. In their view, careful copyright observance in statutes and case law was the key to preserving that balance for two centuries, and it must be restored.

Yet any demotion of creative work to an ordinary social status opens the door to other kinds of challenges. For one thing, the worth of that toil is now subject to a wider pool of critiques of the labor theory of value. Some of these are based on a more frank assessment of the relative worth of creativity. Many critics, for example, see no reason for retaining a system of individual ownership that enshrines notions of originality that are increasingly implausible and unworkable in an age of ubiquitously networked information. The abundant availability of information, ideas, and data makes it more and more transpar-
ent that “creators” really only add something to what their predecessors have thought or done. At times, what they add can be said to be truly original, but most of it is staggeringly mundane and almost entirely derivative of the public domain of ideas. In any event, this value hardly justifies granting an exclusive monopolistic property right, which can then be assigned to a multinational corporation, for up to ninety-five years, on average.

Other critiques are less ethnocentric. In non-Western societies where Anglo common law and the continental legal systems were colonial impositions, the property traditions that these codes honor are not always the best fit. Individual IP rights do not resonate well in cultures in which creativity and knowledge are more likely to be considered a collective characteristic or expression. Western efforts to impose IP regimes on China for example, have repeatedly foundered on a combination of Confucian legacies and pastoral rule on the part of the state. In India, analysts like those in the Sarai new media group are striving to conceive how new forms of information networking can resonate with communal traditions to form a working basis for economic policy in developing countries. Relatedly, the assumption of usufruct, rather than property, rights has been proposed as a more suitable way of handling creative works.

A third source of opposition stems from the acute embarrassment generated by laws that are quite simply untenable. Mass use of peer-to-peer technology is crumbling the ground beneath existing IP laws. No legal arrangement can subsist for long when it makes outlaws of most citizens. Legislators feel uncomfortable when their laws are so out of synch with customary practice, and so, increasingly, those appointed to legitimize the social order will feel the need to find a practical substitute.

The General Intellect

Notwithstanding the travails of IP law in the age of digitization, one might fairly ask of the entire Lockean tradition why private property should be the reward of labor, of any kind. Why would we expect to own what we had mixed our labor with? Most workers, in any case, have not come anywhere near to exercising that privilege. As James Boyle notes, copyright presents us with the blatantly unfair proposition that “property is only for the workers of the word and the image, not the workers of the world.” Nor is there any reason why work, in and of itself, should have to be ennobled, except, of course, to legitimize it to those already burdened with loathsome toil.

Those who helped to idolize work in the nineteenth century were, by and large, middle-class intellectuals, such as Thomas Carlyle, Horace Greeley, Wil-
liam Ellery Channing, and, of course, Marx himself. Yet it was Marx who saw most clearly that the labor theory of value, pioneered by Locke, Smith, and Ricardo, should be viewed in the context of social division of labor as a whole rather than as an explanation of individual acts of exchange, as classic liberalism prefers. Accordingly, he had a system-level response to the notion that labor earned the right to property. Only collective forms of ownership could dissolve the exploitative inequalities that private property promotes.

Of necessity, Marx had much more to say about the direct labor of producers than about forms of input we would recognize as intellectual in nature. Nonetheless, his thoughts, in the Grundrisse, on what he called “the general intellect,” have been a stimulant to recent debates about property formation in a knowledge economy. As the capitalist use of science developed apace, Marx saw that the generation of profit would depend less on direct labor time and more on the harnessing of mental powers and knowledge resources—"the general productive forces of the social brain." Technology, in the form of fixed capital, would be the most efficient way for owners to coordinate and absorb mental labor. Yet to the degree to which the general intellect is a collective entity, production would become more and more social in nature. Ever alert to evidence of the bourgeoisie digging its own grave, Marx imagined that this latter development might lead to the dissolution of wage labor and private ownership along with capital itself.

That moment is not yet upon us, but it is plausible to conclude that the conflicts manifest in the IP wars are, in large part, a consequence of the potential harbored within the general intellect. Efforts to administer an effective division of labor within the knowledge industries increasingly depend upon control over the IP inside employees’ heads and the capacity to affect “knowledge transfers” without too much friction. Information monopolists have undertaken a massive property grab to prevent leaks in the system. But the leaks are being sprung nonetheless, and the Internet, which teems with unauthorized content, is the most porous of all public entities. Corporate managers bent on disciplining rogue users, through the use of electronic locks or other forms of Digital Rights Management (DRM), are now in a running battle with the ever-proficient hackers of the technocratic fraternity. Punitive policing among the general population runs the risk of adding to the record of case law that supports fair use and casts doubt on the legitimacy of all-out privatization.

No one can doubt that these coercive efforts will continue apace. IP-driven industries—from microchips and biomedicine to multimedia entertainment—stand at the commanding heights of a rapidly globalizing economy, and their
owners are bent on hammering out a property regime that will keep them there for decades to come. As always, their ability to shape and create their own opposition makes it easier to recruit their enemies. At least two generations of hackers have agonized over accepting lucrative offers of employment within corporate or government IP security. That is hardly the model of job creation or income security that we need. But it is clear that we do need one.

The cooperative labor ethos of the FLOSS initiatives has not yet become a practical inspiration for those without the resources to survive in a gift economy. Moreover, the burgeoning corporate interest in the open source alternatives to proprietary software is testing the clarity of FLOSS idealism daily. Open source software is no longer a fringe option for corporate America. The outstanding technical performance of Linux (built with the volunteer labor of 3,000 engineers in over ninety countries) has attracted the patronage of multinationals. Yet few can doubt that this interest in nonproprietary standards is not driven by the opportunity to take advantage of unpaid, highly innovative labor.

As for the free software movement, for all its admirable political advances, it has done little to address the suspicion that a predominantly volunteer labor model poses a threat to the livelihoods of future engineers. Nor have Free/Libre Culture contestants in the IP wars made a priority of thinking about the bread-and-butter interests of lower cohort employees in the knowledge industries, let alone those of workers whose service labor supports the knowledge economy. Neither the reformists—petitioning to rescue the IP system from the monopolists—nor the abolitionists—dedicated to alternative forms of licensing—have so far been able to link their issues to the needs of those further back in the technology race.

In part, this has been due to the need to keep eyes on the prize. But if the IP wars are not a single-issue skirmish—if they are about altering the relations of production rather than just restoring the status quo ante—then it is time to ask questions about how the prize is to be distributed. How can we ensure that the interests of those who fall “below the line” are more fully represented in the resolution of disputes? How can the campaign for a free information domain take up the challenge of conceiving a sustainable income model? What kind of state action is required to ensure that inequalities in the private sphere are minimized by the establishment of a public sphere that is knowledge rich and monopoly free? Which new technologies and policies are best suited to furthering these goals? These are not easy questions, but the ability to answer them should not be beyond the conceptual limits of a technologically advanced people.
Notes


3. James Kraft estimates that by 1934, 20,000 theater musicians—“perhaps a quarter of the nation’s professional instrumentalists and half of those who were fully employed”—lost their jobs as a result of the talkies. Exhibitors “saved as much as $3,000 a week by displacing musicians and vaudeville actors.” Stage to Studio: Musicians and the Sound Revolution, 1890–1950 (Baltimore: Johns Hopkins University Press, 1996), 33, 49.


25. For example, it was a group of AOL employees who created Gnutella. The program “escaped” into the public domain in the course of the few hours it was posted on the AOL Web site before managers took it down.


30. See the AAUP position papers on contingent faculty and intellectual property (www.aaup.org).


32. Goldstein, *Copyright’s Highway*, 151.


38. The activities and research programs of Sarai are archived at www.sarai.net.


