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## The Commodification of Information and Social Inequality

Stephen Adair

*Central Connecticut State University*

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### Abstract

The commodification of information has contributed to the growth in social inequality over the last 30 years. An ideal type of an information commodity describes the features of a political, social, cultural, and legal apparatus that became institutionalized in the mid to late 1970s. This apparatus permitted the collection of rents, established a new mode of capital accumulation, and diminished the apparent importance of labor, especially abstract labor, in the making of exchange value. The proliferation of celebrity, conceptualized as excessively valorized labor, is also a consequence of the apparent change in the commodity form.

### Keywords

abstract labor, celebrity, intellectual property, monopoly rents, valorized labor

### Introduction

At one point in time, conservative, liberal and radical theorists in the USA considered the possibilities of a post-scarcity society and an absolute end to poverty (cf. Bookchin 1971; Galbraith 1958; Marcuse 1971; Rostow 1960). Through the 1950s and 1960s, the size of the middle-income group expanded, the poverty rate in the USA had been cut in half, and while the rich did get richer, the rate of growth in family income for the upper 20 percent of the population was less than the rate for each of the other four quintiles (Mishel et al. 2007). The vision of a post-scarcity future only required extending the then current economic trends one or two decades out. For a brief time, Kuznet's (1955) inverted-U hypothesis of the degree of inequality in relation to the scale of economic development seemed confirmed.

The term 'post-scarcity' has nearly disappeared from our vocabulary, but promises of greater equality and prosperity with the advent of an 'information economy' stretch across the last three decades. In the mid-1970s, the growth in the service sector and the relative decline of workers in manufacturing helped to foster this view. Bell (1976) argued that in

an emergent 'post-industrial society', knowledge and education would become more important than wealth, inheritance, or relation to the means of production in determining social position. This idea that an information economy weakens the divide between capital and labor, diminishes class conflict, and yields greater social equality has been remarkably enduring (cf. Castells 2000; Drucker 1994; Thurow 1999; Toffler 1990). Robert Reich (1991) suggested that the wealth of nations increasingly depends on 'symbolic workers' who use educational resources to increase productivity, create flexible systems of production, and improve living standards. In Grusky's (2001: 8–12) widely used edited text on stratification, he claimed we have shifted from a 'class-based' industrial society, where the principal assets were economic to an 'advanced' industrial system, where the principal assets are rooted in human expertise and educational resources.

George Gilder (1989: 18), of supply-side fame, initiated a new ideological twist suggesting that the world was no longer tied to material things, as if we all had become avatars: 'The central event of the twentieth century is the overthrow of matter. In technology, economics, and the politics of nations, wealth in the form of physical resources is steadily declining in value and significance. The powers of mind are everywhere ascendant over the brute force of things.' Gilder described how this transition expands entrepreneurial opportunities and improves economic well-being. If, as Weber argued, good fortune wants to feel like legitimate fortune, then Bill Gates (1995) has little choice but to imagine the brightest of futures:

It [new technology] will relieve pressures on natural resources because increasing numbers of products will take the form of bits rather than manufactured goods ... Citizens of the information society will enjoy new opportunities for productivity, learning and entertainment. Countries that move boldly and in concert with each other will enjoy economic rewards.

Writing from a very different perspective, Hardt and Negri (2000) also lose touch with the material world, maintaining that the era of social classes associated with the industrial age has passed and that we have entered a new period characterized by immaterial labor that delivers services through affective and communicative networks. They (2000: 302) write,

The concept of private property itself, understood as the exclusive right to use a good and dispose of all wealth that derives from the possession of it, becomes increasingly nonsensical in this new situation ... The foundation of the classic modern conception of private property is thus to a certain extent dissolved in the postmodern mode of production.

The rhetoric abounds. In the virtual bounties of the 'new economy' of the late 1990s, images multiplied of a prosperous 'weightless world' no longer restricted by geography, gravity, or the conditions of industrial capitalism (cf. Cairncross 1997; Coyle 1997; Meyer and Davis 1998; Neef 1998; Quah 2001). Recently, Tapscott and Williams (2006: 17) argued we have entered a new era of 'Wikinomics' based on mass collaboration that will 'make governments more accountable and lift millions of people out of poverty.'

The most obvious reason for doubting the boosters of the 'information economy' is that the promised collective good fortune continues to recede beyond the horizon. In the last

30 years, we have not gotten any closer toward eliminating human want, transcending our general material needs, nor reducing the amount of social inequality. Instead, social inequities have greatly increased. In the USA in 1975, the top 1 percent of the population owned approximately 20 percent of the nation's wealth, which was just a bit less than the total wealth owned by the bottom 80 percent of the population. By the late 1990s, the top 1 percent owned more than 40 percent of the wealth, which was more than two and a half times the total wealth of the bottom 80 percent (Collins et al. 1999). The bursting of the stock bubble in 2001 resulted in a small decline in wealth inequality after the turn of the century, but wealth and income inequality subsequently continued to rise at least up until the recent crisis (Wolff 2004). Due to increases in productivity, technological development, and increases in the number of hours worked, the size of the pie (the total amount of wealth owned by the American population) has grown, yet 'the average wealth of the poorest 40 percent declined by 44 percent between 1983 and 2001'; meanwhile the 'top one percent received 33 percent of the total growth in net worth, 52 percent of total growth in financial wealth, and 28 percent of the total increase in wealth' (Wolff 2004: 23). To modify the clichés, over the last 30 years, the rising tide lifted the large boats, while swamping the little ones; wealth may indeed 'trickle down', but it has certainly been gushing up.

The dramatic reversal of fortunes has drawn lots of scholarly attention (cf. Collins and Yeskel 2000; Danziger and Gottschalk 1995; Inhaber and Carroll 1992; Phillips 2002; Thurow 1987). Two decades ago, Bluestone and Harrison (1982) described the deindustrialization of the American economy as the 'Great U-Turn'. They suggested that the increase in inequality coincided with a deterioration and a stagnation in the economy, which could be viewed as a regression in development, which would therefore correspond to an upward movement along the inequality curve. This explanation perhaps seemed credible in the 1980s, but the continuing inequality in the midst of so much technological innovation suggests the need for alternative explanations. Several have been suggested.

Writing from very different perspectives, Phillips (2002) and Arrighi and Silver (1999) argued that the growing inequality is evidence of the beginning of the end of an American empire. They argue that there are long cycles associated with world powers, and at the peak of their economic and political dominance, financial speculators and investors find ways to accumulate without contributing to the production of real value. Their accumulation comes at the expense of the well-being of the population, which presages a collapse and a subsequent rise of a new hegemon.

Perhaps the most common explanation for the growing inequality attributes it to 'globalization'. Improvements in communication and transportation facilitate the internationalization of capital. As the relative cost of labor determines the place of production, the most vulnerable jobs in the USA become well-paying manufacturing jobs. The global shift in the division of labor, therefore, squeezes middle-income groups, while increasing the profits accrued by capital (e.g. Kloby 2004).

Others have argued that a complex array of institutional, political, and public policy factors have fueled the growing inequality (cf. Collins and Yeskel 2000; Danziger and Gottschalk 1995; Domhoff 2002; Hacker 2002; Levy 1998; Perucci and Wysong 2003). Perucci and Wysong (2003), for example, argued that the relative success of social movements through the middle decades of the 20th century momentarily strengthened

New Deal policies, the Great Society, and unionized labor. In response, the capitalist class expanded and concentrated its organizational and ideological resources to steer public policy to increase corporate privileges, to challenge labor, to dismantle the welfare state, and to bring 'tax relief' to investors. Public policy changes such as these have also been linked with a global restructuring of capitalism under the umbrella concept of neo-liberalism. In this argument, a crisis in capital accumulation in the 1970s precipitated a global restructuring that included the privatization of public goods, the reduction of tariffs, taxes and other hindrances for international trade and capital mobility, the shrinking of the welfare state and other public efforts at redistribution, a commitment to free markets, and the enforcement of 'austerity measures' to control inflation (Duménil and Lévy 2004; Harvey 2005).

Underrepresented in these arguments is a consideration of the qualities of the 'information society' itself. As Perelman (1998: 9) has argued, 'One common element in almost every popular treatment of the role of information in the modern economy is a willful disregard for the nature of class.' Perelman demonstrates that access to information, as well as the requisite education and skills necessary to participate effectively under current economic conditions is heavily influenced by social class. His work clarifies the mechanisms by which the 'digital divide' contributes to class inequality (see also Ebo 1998; McNutt 1998; Norris 2001). Others have additionally argued that a 'knowledge-based' economy has increased demand for educated workers, which has led to greater returns on credentials and exacerbated wage differentials (Powell and Snellman 2004). Schiller (2000) adds that digital communication has facilitated neo-liberal policies that have strengthened the position of transnational corporations. These arguments, however, focus on the disparities between the information haves and the information have-nots, rather than examining how the commodification of information itself has contributed to the massive shift in the distribution of resources.

Marxists have been particularly dismissive of the claims to a weightless world and the many formulations that equate post-industrialism or the information age with post-capitalism (cf. Henwood 2003; Huws 1999, 2003; Murdock and Golding 2002; Schiller 2000; Shandro 2003; Turl 2007; Wood 1998). This work emphasizes the materiality of the so-called 'weightless world' that produces and distributes real products and services, and results in the accumulation of real value through the exploitation of living labor. Huws (2003: 136), for example, writes, 'Michael Jordan may be earning considerably more, but his contribution to the value of the final produce is not different *in kind* from that of the little girls who posed for the Pears Soap advertisements at the turn of the century or the members of the royal family who give their official blessing and the use of the coats of arms to pots of marmalade.' I agree with Huws, but contend that the quantitative difference (as between Jordan and the Pears Soap girls) has yielded a qualitative change.

The Marxist critique of the 'information society' provides an important corrective, but ought to include an analysis of how the logic of accumulation and the commodity form are being reconfigured. Although the conditions and relations of production for material goods have not been superseded, an increasingly larger number of commodities do, in fact, take the form of bits that can be electronically reproduced (or otherwise copied or distributed to a large group of consumers with minimal additional labor) rather than being uniquely and individually manufactured as physical objects. At a surface level, this change ought to lead toward greater abundance for all, yet this has not

taken place. Moreover, information commodities *appear* to contradict Marx's (1967 [1867]) claim from the opening pages of *Capital*, that the exchange value of a commodity is based on an averaging of the socially necessary labor time required for its production. That is, the rapid growth of technologies that permit the simple replication of things of value would seemingly bypass the necessity of capital to employ living labor. Instead, the hidden obduracy of the law of value compelled capital to discover and implement new counteracting factors to curtail the prices of information commodities from falling. These factors condensed on the brink of a post-scarcity society into a social, political, legal, economic, and cultural apparatus that qualitatively altered the commodity form and brought about a new mode of accumulation. The very features heralded as the promise of the information society have been contributing factors in the growth of inequality.

The remainder of this article is divided into four sections. The first develops an ideal-type for information commodities, which is contrasted with traditional, manufactured commodities. The second outlines how the logic of information commodities requires a political apparatus to collect monopoly rents, which contributed to the massive accumulation that took place at the top of the class structure in recent decades. The third section considers how changes in the form of commodities create growing inequality within labor (especially through the creation of a small slice of labor that is excessively valorized as celebrity), raises some questions and considerations regarding changing class relations, and briefly addresses some emerging sites of resistance that are indicative of a new class politics associated with the production, copying, and circulation of information commodities. The final section briefly reviews the origins of the new commodity form and suggests that a configuration of technological, social, political, economic, legal, and cultural innovations combined in the mid to late 1970s to create a new mode of capital accumulation.

## An Ideal Type of Information Commodities

Information commodities, like 'traditional', manufactured commodities, refer to things that are bought and sold in a market and contain both a use value and an exchange value. Unlike manufactured commodities, however, information commodities can be copied with little or no labor. The exchange value of information commodities appears to stem from the labor and creative work in the making of the initial design or display, although there is much that is illusory about this appearance. Computer software, along with anything that can take a digitized form, would conform closely with the characteristics of the ideal type (i.e. pure type). A manufactured commodity refers to an item that is physically produced, and as such, the human activity that produces it is transformed into an objective quantity of value that is contained within it. Manufactured commodities would include fabricated items as well as packaged materials, such as bushels of corn and quantities of iron that might not be considered 'manufactured' in a restrictive sense of the term. A coat will be used as an example of the ideal type.

Five distinctions between manufactured and information commodities identify the characteristics of the ideal types.

*1. The Value of Information Commodities Is Depleted through Obsolescence, rather than Consumption or Use*

Computer software is not consumed. If it were somehow damaged through repeated use, it could simply be recopied and returned to its original state. Over time, a coat wears out – the zipper breaks, the lining becomes undone, the wool deteriorates. Its use value, and with that, its exchange value, disappears.

Information commodities have short shelf-lives. Computer software, like fashion, must be constantly refined and updated. A high cultural priority is placed on ‘newness’ and the ‘latest’. Older versions have little or no value and are typically destroyed or remaindered with deep discounts. Professional baseball games have little value the day after they are played. On occasion, some information commodities (e.g. *The Godfather* films, recordings of *Superbowl* games) can be repackaged, remarketed, and updated so as to extract additional revenues from an otherwise obsolete product. In contrast, the coat does not become obsolete unless fashion dictates that we donate it before wear warrants disposal. (Because of the pressures of fashion, perhaps, an item such as a shovel or a bushel of corn would be a purer example of the manufactured type, although even here one could imagine a manufacturer promoting a new shovel design that reputedly increases efficiency or a new strain of corn that stays fresh longer.)

*2. The Size of the Potential Market for Information Commodities Is Not Limited by Productive Capacity*

In efforts to become the market standard, software companies have at times given away millions of copies of a program. While the realization of a large market may require additional support and technical staff, relatively small increases in the amount of labor may be sufficient to meet great increases in demand. In contrast, limitations on productive capacity for manufactured items significantly restrict the size of the market. At the beginning of the 20th century as advertising, mass markets, and branding emerged, industrial producers had to increase the scale of their operations through significant capital investment to create the efficiencies necessary to meet the demands of a national or global market. The making of the assembly line to produce the *Model T* at Ford Motor Company is the most paradigmatic example.

*3. The Price of an Information Commodity Is Justified as Compensation for the Creative Labor That Went Into the Design or Creation of an Original, even though a Copy Is Purchased*

For information commodities, the innovation necessary to create an original design is perceived to be difficult and dependent on special skills or expertise. This skill or expertise appears to justify the price, and is typically represented so as to support an added premium or a tribute. With a software program, the costs associated with the production of the

physical object that one might purchase in a store (i.e. the actual CD, the packaging, the manual, etc.) constitutes a small portion of the costs expended to bring the program to the market. If a software purchase is simply downloaded, then the actual production costs for a single version are close to zero. In manufactured commodities, the cost compensates for the labor required to make each unique object, and the labor power that is embedded in the material object itself. Typically, only a small fraction of the cost is attributed to the creative effort required to make the initial design.

This difference between information and manufactured commodities is evident in the political discussion regarding the protection of intellectual property. Although some try to equate 'pirating' software with theft, there are important differences. If one steals their neighbor's coat, the neighbor is deprived of a use-value and stays cold in the winter. If one copies their neighbor's software, no one is deprived of a use-value. The people who are presumably deprived are the programmers (not the packagers) who would have been compensated if it had been purchased. No one would ever imagine that the laborers who produced my neighbor's coat, much less the designers of it, were being deprived with the theft.

#### *4. The Price of Information Commodities Is Influenced More by the Size of the Market or the Quality of the Labor, than by the Quantity of Labor Embedded in the Item Purchased*

For all commodities, prices appear to fluctuate with supply and demand and what the market will permit, yet, the pricing of information commodities behaves differently than that for manufactured goods.

Within industrial capitalism, mass production established efficiencies of scale, so that large producers often achieved lower production costs and drove out smaller competitors. The differences between large and small producers indicate that for manufactured commodities, the size of the market influenced price, but this effect was relatively small, as both large and small producers paid for the costs of labor that went into production and were not free to raise prices to the consumer without risking market share. Under competitive market conditions, as Marx (1967 [1867]: 52) argued, the price of a commodity is typically close to its exchange value, which is based on both an averaging of the amount of labor time required to produce it and an averaging of the differences in the qualities, which he refers to as 'abstract labor'. Thus, the pricing of coats of comparable quality may vary slightly by the size of a market because large producers may realize greater efficiencies of scale, but a coat is a coat and each one carries with it an average amount of labor time. For coats of differing quality, the higher quality coat (and thus, the higher priced one) is assumed to require more labor hours.

The price of an information commodity behaves differently, as it is influenced more by market size. Because the price for an information commodity is justified by the creative labor and the costs of reproduction are minimal, a large market widely distributes the costs of that creative labor. For example, a consumer can purchase a high-quality, two-hour DVD of a Hollywood film for a tenth of the cost of a one-hour, medium quality, educational



video, even though the price of production for the Hollywood film may be several thousand times greater. The pricing of computer software behaves similarly. Large sums may be paid for custom-designed software that works moderately well, while high-quality programs that are distributed nationally or globally may be a small fraction of the price. The number of hours of programming time that went into the writing of the large-distribution software might also greatly exceed the custom-designed software.

For some information commodities, market size may appear to increase price, e.g. football games, pop music, bestselling novels. In *all* such cases, fame and celebrity are either conditions or consequences of sustaining prices as markets expand. Celebrity creates a sense of exclusivity, and appears to restore value to commodities that might otherwise be cheapened by reproduction. This is discussed in greater detail below.

### *5. Information Commodities Retain an Exchange Value through a Political Process That Creates Scarcity and Exclusivity*

Unlike manufactured commodities, which obtain a value as embodied labor, information commodities can be copied with minimal labor. If the price was determined by the amount of abstract labor, then the price for mass-marketed items would be minimal. File sharing, for example, decommodifies recorded music because it allows for the circulation of use values without the application of additional labor. To reclaim recorded music and all information commodities as a means of accumulation requires political interventions to create scarcity and/or to maintain perceptions of exclusivity. Several overlapping interventions are used to accomplish these objectives.

- 1) The creation and enforcement of intellectual property laws establish reproduction rights that restrict the availability of use values. The use of copyrights, patents, trade secrets, trademarks, and licensing contracts have become more extensive as capital has grown more dependent on information commodities (Lessig 2001; Shulman 1999). Persistent corporate lobbying efforts have also led to additional legal changes (i.e. The Digital Millennium Copyright Act of 1998) to stiffen enforcement and increase penalties for those who circumvent technological measures that prevent unauthorized copying (Samuelson 1999). Intellectual property is now America's largest export (Posner 2002), and the US Government has pushed particularly hard in recent years to strengthen intellectual property laws internationally (Braithwaite and Drahos 2000).
- 2) Digital security, signal scrambling, and secure coding complicate, retard, and prevent the process of copying. The effort to protect sequences of digital code is identical to the logic that has come to include ownership over natural systems of reproduction. Delta and Pine Land Co., a subsidiary of Monsanto, received a patent in 1998 for its 'Technology Protection System' (TPS). TPS prevents seeds from germinating, and thus requires farmers, who typically use part of a crop to supply seeds for the subsequent year, to purchase new seeds yearly. The US Department of Agriculture (USDA) has

sought to develop legal support for TPS, viewing it as necessary to 'protect investments made in breeding or genetically engineering these crops' (USDA, 2001: 3)

- 3) The strengthening of intellectual property laws has been coupled with normative changes. Halbert (1999) has identified and described the social construction of hackers and pirates as new brands of criminals that violate intellectual property laws.
- 4) Constant innovation toward an ever moving horizon also contributes toward the making of scarcity and exclusivity. Similar to the continuous revisions of computer software, pharmaceutical corporations routinely modify effective drugs so that premiums can be collected on patented medications. Fashion, likewise, creates exclusive sensibilities by continuously moving cultural boundaries so that premiums can be extracted for those who are able to display proper taste (Ewen 1990). Fashion and technological innovation diminish the value of copies. By the time copies can enter the market, changes in fashion may have already rendered them obsolete.
- 5) Branding, advertising, logos, trademarks, and trade secrets create exclusivity by defining the 'real thing'. Although branding and advertising have been important for many decades, Klein (2000) has documented how many corporations since the late 1980s no longer manufacture products, but instead sell 'images of brands' and then contract with small independent producers to supply goods. Under such arrangements, the actual prices of production are typically only a small fraction of the costs of promotion. The selling of retail franchises, e.g. *Subway*, *Dunkin' Donuts*, Bikram Yoga establishments, is a variant of this same strategy. The corporation sells trademarks, logos, trade secrets, copyrighted material, and name recognition through national advertising, while small business owners absorb the risks associated with the local operations. The national corporation may supply much of the product, but here too, the supplies are often out-sourced. Many franchises, therefore, are information commodities that are copied at the particular sites of production and distribution by the small investor. The franchising sector, at least up until the present economic crisis, had been the fastest growing sector of the US economy, adding more than 1.2 million jobs between 2001 and 2005 (International Franchise Association 2005).
- 6) Finally, celebrity endorsements and promotions create exclusivity. Unlike the aristocracy, capital cannot demand tribute for its own sake or solely on grounds of ownership. Instead, tribute is claimed for labor, but it must be a special form of labor, which is valorized as celebrity, artist, or expert. That is, recording companies challenge file sharing in the name of musicians, software corporations fight 'piracy' to protect programmers, publishers protect authors, and pharmaceutical companies defend the interests of scientists at work in research and development. When use values can be copied with little or no labor, then valorizing labor (i.e. constructing a value for labor that exceeds socially necessary labor time) may be the only counteracting factor available for capital to prevent prices from falling to a level determined by the commodity's exchange value. Celebrity represents a supersaturation or an excessive valorization of labor, which is realized as a tribute extracted for the special skill.

In sum, the five distinctions between manufactured and information commodities are presented as contrasting types, but most commodities today reside somewhere on a continuum between the contrasting types. Most manufactured commodities are overlaid with a symbolic value created through branding, advertising, endorsements, fashion, and franchising as a means to extract a price that exceeds what might otherwise be set by a competitive market. Nike sneakers, for example, must be physically produced, but the costs of promotion greatly exceed the costs of production (Klein, 2000), and as such, Nike extracts a tribute for the logo, the endorsements by Tiger Woods and Michael Jordan, and the heavily promoted 'innovations' in design. Pharmaceuticals, also not a pure type, would be closer to the software end of the continuum than the Nikes. Medications must be materially produced, but the use of intellectual property law to protect patented drugs, the cultivated sense of constant innovation in the field, and the valorization of the 'R and D' scientists mark them as a type of information commodity.

Taken together, the rapid obsolescence, the continuously changing fashions, the extensive branding and advertising, the strengthening of intellectual property laws, the making of celebrity, and the securing of code are features of a social, economic, legal, cultural, and political apparatus that has altered the commodity form. The features create a virtual value for commodities that *appears* to diminish the importance of abstract labor in the determination of price.

### Information Commodities and the Collection of Monopoly Rents

Some scholars have referred to the tightening of intellectual property laws and the commodification of information as 'a new enclosure movement' or a 'virtual land grab' that magnifies the economic importance of monopoly rents (cf. Boyle 2002; Posner 2002; Travis 2000). In economics, a 'rent' is not simply a fee that is charged for a rental, but it is a return on an asset that can be realized because an owner controls the supply. A rent is a type of premium or tribute that is imposed above the prices of production. To the extent that rents are included in the cost of a commodity, prices are more heavily influenced by the stability of a political apparatus than market conditions.

Marx (1981 [1894]: 910–11) viewed the collection of monopoly rents as a means to collect surplus profits and appropriate a 'tribute' because a price is set 'by the desire and ability of the buyer to pay, independently of the price of the product as determined by price of production and value'. His example was a vineyard, which due to virtues of soil and climate, produced wine of exceptional quality that sold at a price in excess of its production costs. The monopoly rent could be realized because other growers were unable to equal the quality. Thus, for Marx, uniqueness, particularity, and quality permit the extraction of a monopoly rent. Following this logic, Harvey (2002: 98) argues that the 'bland homogeneity that goes with pure commodification erases monopoly advantages'. Therefore, he maintains, global capital finds itself in a contradictory condition in which it must pursue the peculiar values that are realized through 'uniqueness, authenticity, particularity, originality and all manner of other dimensions to social life that are inconsistent with the homogeneity

presupposed by commodity production'. (2002: 106) Yet, Harvey fails to identify how the apparatus that has altered the commodity form has now largely surpassed the contradiction he describes. With information commodities, the ubiquity, the homogeneity, the branding, the celebrity endorsements, and the universality are precisely the conditions that have been embedded in the political apparatus for the collection of rents.

To visualize this apparatus in relief, consider *Star Trek* as a contemporary Robinson Crusoe economic fantasy. In *Star Trek*, the crew meets its material needs through the use of a 'replicator', which generates any material object the user requests by reproducing it at a molecular level. Captain Picard commonly asks for 'Earl Grey, hot,' and the cup of tea materializes in a moment. Although it retains a use value, the cup of tea is not a commodity, nor can it be transformed into one (like recorded music after file sharing). Because the cup of tea can be reproduced without any labor, it has no exchange value. No one would buy it. Indeed, in the *Star Trek* universe, class inequities have been eradicated, money itself has disappeared, and even the notion of an economy seems non-existent.

*Star Trek* first appeared in the late 1960s. The series, especially the initial one, depicted a social organization that was explicitly post-capitalist (although not post-bureaucratic or post-militaristic). The creators imagined that human control over the power of material reproduction would bring about a transcendence of scarcity and the commodity form (Well aged Scotch retained a monopoly value, as its unique qualities were beyond the replicator's capacity). They, however, fully ignored the process by which reproduced objects could be commodified. Today, the imagination need not be stretched to envision the patent holder of replicators, which are being constantly improved and updated, selling proprietary space in its data base to *Celestial Spices*, the owners of trade secrets, copyrights, trademarks, and patents on the molecular structures for a fine line of teas – teas that not only taste good, but reputedly reduce facial wrinkling and promote proper erectile functioning. The consumer at the point of replication would make payments to *Celestial Spices* as due compensation for the company's highly touted efforts to modify the molecular structure of teas to achieve these benefits. *Celestial Spices* would be obliged to promote their (re)products not only because they must earn a return to cover the costs associated with access to the database, but also because expanding their market would require no additional labor costs – imagine Picard receiving handsome tribute payments in exchange for his image appearing in Holodeck simulations wearing a *Celestial Spices* t-shirt. The stability of this system depends on the security of the database to prevent unauthorized tea replication.

The ability to reproduce commodities without the application of additional labor is a peculiar unfolding of the capitalist dream of endless accumulation without the practical and political problems of direct labor exploitation. Rayport and Sviokla (1995: 83) referred to the power to digitally reproduce commodities as a 'virtual value chain,' and advocated that firms control information assets so that they can be sold repeatedly through 'a potentially infinite number of transactions'.

Collecting rents on commodities that can be reproduced with little or no labor constitutes a new mode of accumulation that has been instrumental in the growing concentration of wealth. Within a week of taking Netscape Communications public in 1995, the majority owner, Jim Clark, became a billionaire with a company that had less than one

hundred employees. The unprecedented and immense fortunes amassed by Gates, Allen, and Ballmer at Microsoft, were built in a remarkably short span of time using the labor of a relatively small number of employees. Although a portion of their wealth may have been accumulated through the extraction of surplus value, the bulk rests on the collection of monopoly rents for a commodity that could be digitally reproduced for a large market.

The fortunes built at Microsoft and Netscape are not unique, but are representative of a new mode of accumulation. The top 50 on *Forbes* 2008 list of the richest Americans includes Brin, Page, and Schmidt (Google), Ellison (Oracle), Ercan (Echostar), Omidyar (Ebay), Bezos (Amazon), Murdoch (News Corp), Kluge (Metromedia), Goodnight (SAS Institute), and Redstone (Viacom). Fortunes amassed through the collection of monopoly rents are not confined to the top 50 on the *Forbes* list. By my count, 90 of the 400 on the list had fortunes based on the collection of rents on information commodities (this compares to 110 whose fortunes originated from ownership of a corporation that produces a manufactured commodity; 112 through controlling interest of financial or investment assets; and 88 in the service, retail or real estate sectors). The *Forbes* list also categorizes whether fortunes are primarily 'self-made' or 'inherited'. Of those whose fortunes originated from the collection of rents on information commodities, 77 percent were categorized as self-made, which compares to 56 percent for those producing manufactured commodities, 75 percent of those based on financial assets, and 61 percent of those in service, retail or real estate. These figures illustrate the growing preponderance of rent collection on information commodities as a central sector of capital accumulation.<sup>1</sup>

In *Capital*, Marx went into the places of production to make visible the largely hidden social processes of capital accumulation. In the dream of values without labor, those hidden places move South, but with their disappearance, a political apparatus with a corresponding phantasmagoric display is constructed to create scarcity and to insure continuing accumulation in a world of plenty. The social basis of capital accumulation becomes less dependent on the extraction of surplus value at the point of production and more dependent on political and cultural processes that construct exclusivity and scarcity so as to demand tribute and perpetuate a method of economic extraction for the owning class.

### The Commodification of Information and Labor

Artists, athletes, actors, musicians, inventors, scientists, authors, architects, designers, marketers, researchers, programmers, advertisers, and to a lesser extent, managers and administrators are creative workers, who create 'products' that are transformed into commodities through processes of reproduction. Typically reproduction rights belong to capital and not to the creative worker. Capital, however, has never been able to create value without labor, yet information commodities can often be brought to market with little additional labor. The solution to this apparent contradiction is to valorize labor by esteeming it and privileging it so as to collect a premium. This solution developed over time and long before digital reproduction. Its roots extend back to the efficiencies created with mass systems of production that greatly reduced the amount of labor time required to

manufacture a product. The advent of Taylorism and the principles of scientific management enlarged the differences between mental and manual labor by extolling the virtues of the former, while denigrating the latter. Celebrities represent the distinction between mental and manual in the most exaggerated and visible form.

The labor of celebrities is distinct from most other forms of labor. In Marxist descriptions of class, celebrities are difficult to situate. Their position is conditioned by their relation to capital, in that they do not own the means of production, they sell their labor power to capital, and they unionize to protect their interests from the power of ownership; yet, to characterize celebrities, who sometimes earn hundreds of times that of an average worker, as proletarians makes little sense. Valorized labor is not typically exploited in the Marxist sense, even if the owner of reproduction rights gains substantially greater rewards than the creative worker. This difficulty corresponds with the larger problem of situating professionals and knowledge workers within the traditional understanding of the class structure. Some have argued, for example, that because of the rise of the information economy, professionals and knowledge workers were in the process of becoming 'the new class', which might come to challenge the power of capital (cf. Gouldner 1976). Hodges (2000) has, in fact, claimed that a new professional class of experts has already replaced the bourgeoisie as the dominant class. Yet, there is little about the contemporary 'information age' that has displaced the importance of capital accumulation. Thus, the problem is to situate the new forms of commodification within the general conditions of capital accumulation.

With the development of industrial capitalism, production was privatized and concealed from public view. Today, advertising never makes visible production processes of manufactured goods, and the global movement of the places of production increases this invisibility even further. In Marx's (1967 [1867]: 77–8) discussion of the fetishism of commodities, he states that 'articles of utility become commodities, only because they are products of labor [but] the specific social character of each producer's labor does not show itself except in the act of exchange.' The private spheres of production and the public spaces of exchange make social relations appear as material things, and make material things appear as social relations. Celebrities, however, engage in their labor in public spaces, and the quality of their labor is discussed, measured, evaluated, and esteemed by the public. Newspaper sports sections, in particular, are largely collections of quantified measurements of public performances, which rank the quality of the 'labor'. The labor of celebrities is particular, it is not average, and it cannot be reduced to simply another contribution to the socially necessary labor time in the determination of abstract labor. The unique, special, and public quality of celebrity labor augments the value of the labor itself. It valorizes it, such that is exchanged at a price that greatly exceeds the value it would be if it were deemed just another average contribution to the totality of labor time. Celebrity, therefore, exists as an antithesis to the privatization of production and as collective celebration of craft that has otherwise been reduced by an alienating process.

Significant inequality within labor between valorized and abstract (i.e. non-valorized) labor also has particular consequences. Since valorization is a relativizing concept, the privileging of some labor is coupled with the diminishment of others. Social inequality

likewise comes to be perceived as differences between the qualities of labor, rather than between labor and capital. Collins (2000: 23) has shown that the lower one's social standing, the more likely it is that one perceives celebrities as occupying the top positions within the class structure. This ideological shift limits the ability of labor to conceive and to realize solidarity across the differences of income and regard. How could labor become the new universal class, when it would rather dream of becoming valorized labor?

More importantly, the valorization of labor significantly weakens the apparent relationship between value and labor because the accumulation of capital from the sale of reproduced commodities is not primarily based on the appropriation of surplus value, but rather on a political apparatus that creates scarcity and exclusivity such that commodities can sell at prices above their value. Since the price of reproduced items depends more on the political apparatus to collect rents than on the qualities of abstract labor, a labor theory of value becomes less significant within common sensibilities. Throughout the 19th century, the generalized belief that each was entitled to the 'fruits of their own labor' served as a powerful ideological force that likely limited the degree of wealth concentration (Huston 1998). From an individual standpoint, it should follow that the size of one's rewards should be roughly commensurate with the extent of one's contribution to the totality of human effort. In a world where athletes make millions, corporations sell 'images of brands', and Microsoft fantasizes about the Chinese market, how could such an idea be sustained? In general, the excessive valorization of the labor of celebrities suggests that value is determined by the type of labor performed, rather than individual contributions to abstract labor. A perception that inequality follows from the type of one's contribution rather than a generalized system of exploitation weakens the political and moral strength of labor.

Despite the relative weakness of labor, the apparatus that supports the commodification of information is not without its opponents. File sharing continues despite the threats and efforts of the recording industry. Open source coding and the distribution of the LINUX operating system might still undermine Microsoft's monopoly. Many biologists and geneticists are publicly opposed to the patenting of new life forms and codes of genetic sequence. The Council for Responsible Genetics is calling for a new Genetic Bill of Rights. 'Cultural Jammers' seek to undermine the culture of advertising, branding, and celebrity promotion. The list of groups committed to maintaining a publicly available 'Digital Commons' is long indeed (Lessig 2001). Groups opposed in various ways to the commodification of information often display well honed political sensibilities and a depth of technical understanding of the issues involved. Whether they can coalesce and link with labor to challenge the growing inequality is a project that remains incomplete.

## On the Origins of Celebratory Capitalism

The apparatus that permits the collection of monopoly rents through the commodification of information did not suddenly emerge with the advent of digital technologies. Instead, the pace, ordering, and forms of the technological innovations that led to the



spread of computers and digital technologies would have unfolded differently if pieces of that apparatus had not already been established. That is, the development of intellectual property, the widespread use of promotion and advertising, the valorization of specific forms of labor were well institutionalized prior to the development of digital reproduction. Likewise, the shift from manufactured commodities to information commodities is still far from complete and places of production have not disappeared (even as they move to locations outside the purview of the Western media). The logic of manufactured commodities with all the attendant inequities continues to hold sway in many places and sectors, just as the origins of industrial capitalism did not bring about an end to mercantilism. When can we say that the quantitative increases have created a qualitative shift? No single piece of evidence can be indicative of a new dominant mode of accumulation. The origins of information commodities extend back at least until the late 19th century, although a clustering of homologous innovations in the late 1970s and early 1980s are suggestive of the fundamental shift.

Politicians, artists, and authors received considerable public renown throughout the 19th century, yet celebrities in the contemporary sense did not exist until the end of the century. Perhaps the two most well known, non-political figures of the late 19th century in the USA, Mark Twain and Thomas Edison, were both instrumental in strengthening intellectual property law. Twain sought to extend copyright protections until 50 years after the author's death – a provision that was eventually adopted in 1976 – and he tried to make ideas (not simply the specific expressions of ideas) matters of intellectual property (Vaidhyathan 2001: 38–80). Edison earned 1093 patents, which far eclipses anyone before or since, and he used the power of the patent to amass a very large personal fortune (Shulman 1999: 157–64). Thus, Twain and Edison both sought to restrict reproductions of their work. In so doing, they valorized their own labor such that it could not be averaged in as just another contribution to abstract labor. Their genius marked them as very special laborers, and their pursuit of copyright and patent protections were the specific legal strategies to insure continuing tributes.

Hardy (1988) has analyzed the origins of professional sports, especially baseball, in the late 1880s and early 1890s. He demonstrates that competing sporting goods manufacturers sought to become identified as the maker of the 'official ball'. To do so, they established official leagues to create rules and regulations that would be binding for a national market. As the leagues organized and performed games and charged admission, the skills and heroics of the athletes were valorized to promote the game itself and to endorse sporting goods.

As a commodity, performed baseball games have all the characteristics of information commodities: they are obsolete as soon as they are completed, they do not require any additional labor to meet a market of 50,000 than 200 (ticket takers, sweepers, and stadium builders withstanding), and they are protected by intellectual property laws. Most importantly, they create a dream for labor, which is not to become capital, but to become excessively valorized labor.

In the beginning of the 20th century, Taylorism and Fordism continued the movement toward the logic of information commodities by developing systems to manufacture identical items based on an initial design. Taylor's advocacy of time and motion studies



reduced workers to ignorant automatons, who simply had to repeat the identical activities based on the manager's educated design. This process was coupled with a privileging of the scientist, designer, engineer and manager over abstract labor, which was now deskilled. These political and cultural transformations of the manufacturing process corresponded with the development of mass advertising and branding to charge premiums for particular commodities (cf. Ewen 1978). After designing and producing the Model T, Ford was slow to learn the importance of continuing innovation, as he produced the same automobile year after year. His competitors, however, gained market share by initiating the practice of introducing new models each year. New models combine both elements of fashion and apparent technological advance to create obsolescence. Of course, each automobile requires an expenditure of labor to produce it, but the efficiencies of the assembly line precipitated new strategies to preserve profits.

These brief examples illustrate that long before anyone envisioned an 'information economy' some of the characteristics associated with information commodities had begun to transform industrial production, primarily as a means to collect premiums as a counteracting factor in an effort to prevent a fall in the rate of profit. Thus, there was no single historical moment or signifying event to identify when information commodities and the new mode of accumulation came to be. Instead, a gradual accumulation of elements had coalesced by the late 1970s to generate a qualitative shift in the strategies of accumulation.

Many anecdotal pieces of 'evidence' in the 1970s are indicative of the qualitative shift, although perhaps most important was the coming of age of the first generation that had grown up with national advertising, national brand names, and had learned the language of promotion. Several technologies of reproduction became widely available: The Sony Walkman was sold for the first time in 1979 (Du Gay et al. 1997: 8). The first home video games were available in 1972. Atari began introducing arcade video games in 1972, and *Pac-man* appeared in 1980 (Herz 1997: 12–24). VCRs were rapidly diffused throughout the late 1970s and early 1980s (Butush 1990: 217–18). The first personal computers appeared in 1974 and 1975, although it would still be a few years before they spread to most households and places of business. Microsoft was founded in 1975, and MS-DOS was available in 1981 (Microsoft 2008). The use of photocopy machines became commonplace by the late 1970s and by the early 1980s, photocopiers had replaced mimeograph machines. About the same time, professors began requiring packets of photocopied articles. There were additional institutional changes: Curt Flood won his Supreme Court case against Major League Baseball's reserve clause, which opened the way to free agency, and the mega-salaries for professional athletes (Flynn 2006). The Copyright Act of 1976 extended copyright protection to 50 years after the death of the author. The Copyright Clearance Center (CCC) was established in 1978. CCC is a protector of reproduction rights and is now the largest intermediary between copyright holders and users (Vaidhyathan 2001). The use of direct marketing to target specific consumers and the selling of databases with consumer information became a common strategy in the late 1970s (Feinberg and Eastlick 1997). In 1980, the US Supreme Court in *Diamond v. Chakrabarty* decided in favor of permitting patents on genetically altered life forms (Shulman 1999: 97–9). And in 1971, the great monument to mechanically reproduced experiences, Walt Disney World, opened.

Taken together, the innovations and new institutional structures are indicators of an underlying structural change in the modes of capital accumulation that occurred in the mid to late 1970s. This change continues to gain momentum. The rapid expansion of digital technologies, the mapping of the human genome, and the general consolidation of capital's control over the rights of digital and genetic reproduction reinforces the trends of the last three decades, and will likely do so, until new forms of contestation emerge to challenge this mode of accumulation.

## Concluding Discussion

The growing social and economic inequality within the USA over the last 30 years has drawn a lot of scholarly attention that has typically attributed it to globalization, neo-liberalism, a host of policy changes, or a concerted attack on labor. This article has not disputed any of these claims, but has maintained that at least a portion of the growing inequality is a result of the commodification of information.

Information could not and cannot be commodified in the same way as manufactured products, primarily because additional copies of information commodities may be created without the expenditure of additional labor. The contrasting set of ideal types for information and manufactured commodities identified the differences and illustrated the qualities of information commodities. Of central importance is that in the sale of manufactured commodities, capital grows (or is valorized) through the accumulation of surplus value, but in the sale of information commodities, capital grows through the imposition of rents and the collection of tributes. The massive fortunes built in recent decades by Gates, Allen, Ballmer, Brin, Page, Schmidt, Ellison, Ergen, Omidyar, Bezos, Murdoch and many others illustrate the importance of rent collection in this new mode of accumulation.

The full realization of information as a commodity required the institutionalization of a complex apparatus that relies on an interconnecting set of legal, political, cultural, social and economic conditions (i.e. mass advertising, branding, celebrity endorsements, spread of franchises, and strengthening of intellectual property rights). These conditions were initiated about a century ago, but did not become solidified into an apparatus to support a new, dominant mode of capital accumulation until about 30 years ago – a date that corresponds with the historical moment when capitalism achieved a level of efficiency and productivity to imagine a post-scarcity society. The apparatus has been a new force for accumulation and dispossession.

Marx maintained that capital was the embodiment of dead labor that could only be valorized by employing living labor so that additional surplus value could be accumulated. When commodities are reproduced without additional labor, use values become more widely available, but does the amount of exchange value actually increase? In the last analysis, the answer may well be no: all exchange value is produced by labor, such that it is nonsense to imagine that the reproduction of use values without the application of additional labor could actually create more value. Capital may dream of a condition of endless accumulation without the practical and political problems of employing living labor, but the dream can never be realized. The creation of celebrity as excessively valorized

labor, however, is a compromise between the dream and the reality because celebrity justifies the sustaining of a price as the actual contribution of labor power shrinks toward zero.

The commodification of information, then, is *merely* a means to accumulate surplus profit from a vast pool of surplus value extracted at material places of production. If so, the rate of surplus value being created at places of material production has grown very large, and arguably represents a disparity between actual wages paid and the value of abstract labor determined by a pooling across the global division of labor. If the law of value within capitalism is so, then the commodification of information demonstrates that the physical, social, cultural, and political distance between the sites of accumulation and the actual places of production of value has grown immense. This distance cannot be bridged politically, morally, or theoretically without a full understanding of the historical interventions that have made it so.

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### Note

- 1 My coding of the *Forbes* 400 is available on request.

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For correspondence: Department of Sociology MS 304, Central Connecticut State University, 1615 Stanley Street, New Britain, CT, USA 06053. Email: [adairs@ccsu.edu](mailto:adairs@ccsu.edu)