

The Political Economy of Computers and Composition: “Democracy Hope” in the Era of Globalization

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In a review of recent critical work in the field of computers and composition, Ken McAllister writes, “By and large, the history of the incorporation of computers into educational settings has been oppositional, the technophiles and the technophobes exchanging verbal barbs with too little attention paid to history and economics” (192). In academic journals, the opposition has been too often depicted as conflicting identities: on one side, the luddites (driven by modernist, humanist, or Marxist idealism) resist the brave new computerized world; on the other side, the cyborgs (inspired by theories of *différance*, language games, and simulacra) dive head first into the electronic stuff of our postmodern era. Both depictions are harmfully reductive because they ignore the historical complexity of each identity. The luddites of the early nineteenth century were much more than machine-smashers; their war on technology ensued only after their attempts to intervene democratically in economic and political agendas were frustrated (see Dinwiddy; Peel; Sale). The cyborg, as constructed by science-fiction writers and academic critics of scientific rationalism, experiences its machine/flesh condition through its implication in a multiplicity of political and economic contradictions (see Haraway). Luddites were not politically naive after all, and neither are cyborgs uncritically assimilated into the new economy.

Ahistorical and reductive depictions of luddites and cyborgs in scholarly literature help to reproduce the verbal barbs that McAllister cautions us against. However, in his review, he cites recent thinking that attempts to resist the reductive luddite-cyborg binary by taking into consideration the economic and political contexts of technologized pedagogy and the new technologized identities of the students who enter our classrooms. In this article, I add to this critical trend. Specifically, I analyze the pedagogies and proposals for political action laid out by Chris

Anson, James Berlin, David Downing, Charles Moran, and Cynthia Selfe, and I argue that each of their positions transcends the reductive binary and that each is aware that our classrooms and institutions are historically situated in economic and political structures. Of course, by stating that I will add to this work, I am also implying that something is lacking there. What is missing is the critique of capital, the systemic backdrop against which all discussions of identity, history, and politics must be staged. Consequently, I examine the technologizing of composition through the critical lens of political economy, a field of inquiry begun in the late seventeenth and early eighteenth centuries that investigates how wealth accumulates in capitalist economies.

Since the mid-nineteenth century, most analysis of political economy has derived from a Marxist orientation—that is, from the viewpoint of those who do not benefit from capitalist accumulation. Following Marx, I understand capital to be the dialectical identity of macro-systems and micro-practices. At the macro-level, capital embodies the absolute drive to create surplus value (profit) and has historically produced surplus value through four macro-systems: mercantilism, competitive capitalism, monopoly and corporate capitalism (imperialism), and global capitalism. Although each macro-structure predominates at different times in particular places, all of these forms can and do coexist, as Marx repeatedly argues: “Epochs in the history of society are no more separated from each other by strict and abstract lines of demarcation than are geological epochs” (492). At the micro-level, in contrast, capital embodies myriad, relative practices through which profit is generated: the creation of manufacturing systems to produce commodities for exchange; the creation of proletarianized people whose labor can be exploited; and the creation of state forms that enable these practices. Each of these components assumes a particular material form that is flexible and fluid (the phenomenon that Marx and Engels referred to in *The Communist Manifesto* as capital’s dynamic character); however, the drive to exploit for profit is absolute, inflexible, and foundational to capital. It is crucial, therefore, that we distinguish between absolute and relative surplus value when we discuss new technologies because technology only appears as relative surplus value; its appearance is temporary, ephemeral, and incidental. However, any particular technology, as with all forms of relative surplus value, is always identified in its dialectical relationship with its opposite: the absolute need to generate surplus value.

My contribution to the current body of critical work also leads me to different and somewhat contradictory conclusions than four of the five

authors I review. Berlin and Downing, although working from very different theoretical frameworks, support the premise that new technologies enable methods of work that help create a new democratic subject: the citizen-worker.¹ By importing new technologies into composition pedagogy, teachers can nurture the new democratic consciousness of the citizen-worker among their students. Moran and Selfe, in contrast, support the premise that there are no inherently democratizing characteristics or effects of new technology. Rather, technologies emerge within the social divisions already at work in the U.S. economy and culture. Therefore, both urge teachers, students, and members of local communities to use their positions as democratic subjects to lobby for equal access to new technologies for those currently excluded from it. Anson, however, premises his position on the logic of the capitalist economy—its drive for efficiency. This recognition leads him to propose political action substantially different from Berlin, Downing, Moran, and Selfe. He argues that political resistance should target the capitalist logic of efficiency.

I argue that the positions taken in each essay, with the exception of Anson’s position, share uninterrogated assumptions about capitalism. Specifically, they assume that it only exists as micro-practices not as a macro-system, that these capitalist micro-practices are not antithetical to the expansion of democracy, and that social antagonisms can be resolved through the regulation rather than the elimination of capital. These beliefs together constitute an ideology I call “democracy hope,” an ideology that always leads to the false promise that, if we just work hard enough for and through democracy, social inequality can be mitigated. As with all ideologies, democracy hope allows us to see certain things while blinding us to others. It allows us to see capital’s micro-practices, such as changes in forms of work or types of technologies, but prevents us from recognizing that capital is also a macro-system that mobilizes all of its micro-practices according to its drive for profit. Democracy hope allows us to recognize the existence of social divisions, but it prevents us from seeing how they are constructed as class antagonisms. In addition, it allows us to see the relative democratic privileges of the middle class, but it prevents us from seeing how these privileges are only realized through the exploitation, immiseration, and global expansion of proletarianized people.

To establish a basis for defining democracy hope and for offering a way out of it, I first explore Marx’s theory of absolute and relative surplus value. Next, I turn to an academic field of inquiry—the political economy of communication—that uses a Marxist theoretical framework to analyze

twentieth-century media and communication technologies. Because our own field lacks a thoroughgoing Marxist methodology, the political economy of communication offers us some instructive models for critique.² Finally, I argue that because the field of computers and composition has not yet rigorously considered the Marxist critique of capital, the ideology of democracy hope persists and distorts what we see when we look critically at the political implications of our practices with technology. This ideology reproduces the idea that some kind of social leveling can be achieved by our own democratic practice with technology through consciousness-raising and collaboration, expanded access to technologies, and democratic engagement with institutional, corporate, or state agendas. I concur that we should act at these sites, but to contribute to the struggle for social and economic justice for those at the bottom of the social hierarchy, we must refashion our discourse. We must expose the class antagonism at work. I conclude that we must name names and signify capital as the exploitative system that it is; in order to do this, we must shed assumptions about the role of antagonism in argumentation. We must be aware that as long as class formations are regimented by the macro-system of capital—its absolute drive to produce surplus value—democracy may be expanded to the middle class, but it will remain unavailable to proletarianized people.

Classical Political Economy and Marx's Critique

When questioned why he never cited Marx in his work, Michel Foucault responded that attributing historiographic concepts and methods to Marx is as unnecessary as citing Einstein in discussions of relativity:

It is impossible at the present time to write history without using a whole range of concepts directly or indirectly linked to Marx's thought and situating oneself within a horizon of thought which has been defined and described by Marx. One might even wonder what difference there could ultimately be between being a historian and being a Marxist. ("Prison" 53)

Foucault's point seems even more apropos if the historical inquiry undertaken is political economy, a field popularized in the West by eighteenth-century Scottish philosophers such as Adam Smith. From its inception, Vincent Mosco explains, this field merged three areas of knowledge—politics, economics, and ethics—and considered its work as praxis rather than pure theory. The discipline of economics, in contrast, was conceptualized and codified, along with many other disciplines at the end of the nineteenth century, to follow the empirical model of positivist

science and has restricted itself to quantitative inquiry (63-68). The creation of economics as a university-based discipline pushed political economy, with its tripartite structure, into the streets, where it informed the praxis of radical trade unionist, anarchist, socialist, and communist parties. Robert McChesney argues that when political economy was brought back to the academy by communications scholars, the field retained its traditional tripartite roots, but it was overwhelmingly dominated by Marx's reconceptualizations of it (3-12). Economics and political economy, therefore, are separate disciplines with distinct objects of inquiry. Mosco's and McChesney's claims about the impossibility of writing political economy outside of Marx's thought echoes Foucault's claim about writing history. In this section, I present a brief overview of Marx's theoretical break with classical political economy and argue that the Marxist "horizon of thought," within which political economists have since situated themselves, emerges from Marx's reworking of the Hegelian dialectic and his application of it to the concept of surplus value that is first developed in classical political economy.

In *Reading Capital*, Louis Althusser and Étienne Balibar explain that classical political economy sought to determine how wealth accumulates under capitalism. Eighteenth-century political economists witnessed the moment of nascent capitalist production and exchange and were in awe of the speed and ubiquity of its effects on the total social order. They noted that wealth was beginning to be acquired in previously inconceivable ways. They correctly theorized that the accumulation of wealth characteristic of feudalism—a very visible, quantitative acquisition of land and resources—was beginning to be replaced by a more invisible and dynamic accumulation brought about by capitalist mercantile and manufacturing practices. In this new form, wealth seemed to be created rather than accumulated; they noticed that a value in excess of what could be physically quantified and visibly identified existed at the end of the production/exchange process that did not exist when the process began. This value came to be called surplus value.

Althusser and Balibar note that Marx, writing a century after Smith, witnessed a different moment in the history of capitalist production: the shift from craft/workshop methods of production to large-scale machine-based industry. The shift set the stage for Marx to break radically with classical political economy. In the industrial factory, hundreds of workers were socially organized; their work practices were dramatically changed from crafting commodities in workshops (which required both mental and manual labor) to manipulating machines, which removed the workers'

minds from the process of crafting and disciplined their hands and bodies in increasingly repetitive and deskilled regimes of mind-numbing motions. Because classical political economists lived prior to the invention of mass production, they remained influenced by the quantitative accumulation model, even though they sought to discover the new forms in which capital creates wealth. They identified three sources of surplus value: value derived from labor, value derived from property (in the extraction of rent), and value derived from capital itself (in the extraction of interest). Althusser and Balibar explain that because Marx witnessed the production of surplus value in large-scale industry, he was able to problematize the accumulation of wealth. At the level of the problematic, old disciplinary frameworks break apart and new theory develops that redefines, as Foucault argues, what falls “within the true” (“Discourse” 224). In his break with classical political economy, Marx theorizes that all surplus value, regardless of the appearance of its source (be it profit, rent, or interest) is the product of human labor. For Marx, human activity alone creates value, and, more profoundly, human consciousness creates the concept of value itself.

Althusser and Balibar argue that by introducing the problematic, Marx changes the object of inquiry of political economy from the collection of empirical data regarding the accumulation of wealth to the functioning of surplus value itself (147-57). Marx applies his reconception of Hegel’s dialectics to this new object of inquiry, allowing him to divide surplus value into two. He theorizes that surplus value is not an economic fact; rather, it is a relationship that only exists as the dialectical tension of its two forms: the universally abstract form (absolute surplus value) and the physically concrete and constantly changing form (relative surplus value).

Mosco contends that Marx’s application of the dialectic to classical political economy represents a shift not only in his economic vision, but in his political and ethical vision as well. The decision of classical political economists, he argues, “to define labor along with land and capital” as the source of surplus value “also reflects a certain moral vision, however implicit, that people are interchangeable with capital” (36). Marx, in contrast, shows how human beings are the sole agents of making history “albeit under conditions that are not of their own making” (Mosco 44). By specifying labor as the sole creator of value in all its concrete and abstract forms, Marx is able to identify the historical emergence of capital as a new type of social relation. Marx consciously uses the word *capital*, rather than *capitalism*, to refer to this new social relation because *capitalism*

implies that the new method of producing surplus is merely a preferred way of generating surplus value, not a foundational practice of the new economic system. As a social relation, capital raises new political and ethical problems, the heart of which is its foundational reliance on the existence of a new class, the proletariat, from whom surplus value is directly extracted. In *The Communist Manifesto*, Marx and Engels define this class as “laborers, who live only so long as they find work and who find work only so long as their labor increases capital . . . who must sell themselves piecemeal, are a commodity, like every other article of commerce, and are consequently exposed to all the vicissitudes of competition, to all the fluctuations of the markets” (29). The proletariat is constructed in the same way the products of its labor are: as a commodity to be traded in the marketplace. Its value is set abstractly, not concretely. Proletarians are not paid by the concrete hours or even by the various concrete skills they bring to the workplace. Rather, as a commodity on the market, the price of proletarian labor is set according to the absolute minimum necessary for this class to sustain its ability to work and its ability to stay alive and produce the next generation of workers. The implications of the foundational role of the proletariat in Marx’s theory of value cannot be overemphasized: as long as there is capital, there is also a class of people who must live at a minimal level of subsistence—a level Marx called “immiseration.” This foundational principle of the Marxist theory of value is often completely overlooked or rejected outright by academic Marxists. In my view, this principle still holds, and it will hold as long as capital exists as the definitive social relation. Furthermore, this principle is central to my argument against democracy hope.

In sum, many different relative class formations and technologies may come and go, but the production of proletarianized people is required in order to produce surplus value in each of its increasingly consolidated forms: mercantilism, competitive capitalism, imperialism, and global capitalism. Each new technique, each new technology, each new class formation does not bring an end to the constant production of the proletariat. In *Capital*, Marx chillingly captures nineteenth-century factory life and the role of new technologies in creating this life: the mutilation of bodies tied to machines, the severing of the mind from labor, and the sacrifice of human life on the altar of the market. These conditions, I might add, are presently proliferating in the Third World, as well as inside the capitalist centers in the post-Cold War “globalized” economy.

I have described the dialectic between absolute and relative surplus value because Berlin's and Downing's positions promise that a potentially flourishing democracy may emerge from the micro-practices of new technologies and their associated regimes of work. Based on my reading of *Capital*, however, I argue that this is an impossible hope. As relative surplus value, technologies and the changing class formations they generate do not act independently of capital's absolute drive for surplus labor (Marx 432, 645). The democratizing effect of new technologies in one sector of the economy must be accompanied by the further imposition of tyrannical control over workers' lives in other sectors. Otherwise, surplus value cannot be extracted from human labor. For the purposes of analyzing Anson's, Moran's, and Selfe's positions, it is more helpful to turn to Marx's discussion of the relationship between the capitalist class and its state, and the attempts of the managerial and professional middle classes to allay the degradation of the proletarian class through democratic state forms. Moran and Selfe seek reform of administrative and governmental educational policies at the local, state, and national level. They want the growing gap between the technological haves and have-nots—the phenomenon the Department of Commerce has labeled the “digital divide”—to be closed.³ Moran and Selfe propose that teachers, students, and others become involved in the democratic process and focus their arguments on the need to lessen the digital divide in education. Again, based on my reading of *Capital*, I argue that Moran and Selfe also harbor an impossible hope. Anson, however, does not. He also advocates that political action be taken, but he does not focus his attention on reforming the digital divide. Instead, he argues that political action should expose the logic of efficiency behind the rapid technologizing of education. The distinction between these two political positions—reform of capitalism versus exposure of capitalism—suggests ways to avoid democracy hope.

Marx offers a way of understanding this distinction in his discussion of the role of the state in maintaining the interests of the capitalist class in the face of middle-class movements to reform the egregious conditions of proletarianized life. One of the social reform movements in Marx's day emerged from a public outcry in England over child labor and the rising death rate among working-class women and their children. The movement that coalesced against this degradation in the early nineteenth century instigated the passage of the British Factory Act in 1844, which purported to regulate child labor. Marx analyzes the social effects of this reform on the proletariat by comparing the

conditions of women's and children's lives before and after the Factory Act was passed:

Before the labour of women and children under ten years old was forbidden in mines, the capitalists considered the employment of naked women and girls, often in company with men, so far sanctioned by their moral code, and especially by their ledgers, that it was only after the passing of the Act that they [British capitalists] had recourse to machinery. The Yankees invent a stone-breaking machine. The English do not make use of it because the “wretch” who does this work gets paid for such a small portion of his labour that machinery would increase the cost of production to the capitalist. In England women are still occasionally used instead of horses for hauling barges, because the labour required to produce horses and machines is an accurately known quantity, while that required to maintain the women of the surplus population is beneath all calculation. (516-17)⁴

Marx is making two important points here about reform movements that emanate from the professional and middle classes. First, the drive for absolute surplus value always delimits the technologies and class formations that appear as relative surplus value. In his example, mine owners only incorporate new stone-breaking machines into the production process once it becomes more profitable to exploit the machinery rather than to exploit the bodies of women and children. Specifically, mine owners deemed those machines to be profitable only when a law curtailed the older, more directly exploitative forms of extracting surplus value from workers' bodies. New technologies, therefore, may be invented, but they are only used once their exploitation becomes cheaper than the exploitation of human labor, or once the state intervenes in the regulation of industry.

For Marx, legislation, like new technology, is nothing more than a technique of relative surplus value; it is in thrall to the absolute drive for surplus value. The Factory Act was supposed to end the kind of degradation that was common in mining—at least for children. But as he traced the twenty-three year interim between the passage of the Factory Act to the publication of *Capital Volume One* in 1867, Marx found that the degradation of children did not change—only the particular form of degradation changed (517-26). Marx poured over scores of documents written by factory inspectors (the nineteenth-century equivalent of OSHA), studies by professionals in medicine and education, records of governmental commission hearings, and parliamentary debates over proposed

legislation. He discovered that, indeed, more children, in accordance with the Act, were attending school; however, because the Act did not abolish child labor but only restricted it by requiring laboring children in selected industries to attend at least three hours of school per day, children's lives became more defined by the needs of capital. The school system established by the law provided education seasonally, in accordance with an industry's production schedule rather than with a daily consistency that allowed for retention of what was learned. In addition, most of the schools established were only capable of providing a place to store children, since they were no more than small rooms stuffed wall-to-wall with children's bodies and, often, with "instructors" who could neither read nor write. The Factory Act benefitted the image of the capitalists, who appeared to support the education of the children they employed, but it failed to provide any real educational benefit to those children.

Another effect of the Factory Act was that infant mortality skyrocketed. By 1864, twenty years after the Act was passed, the "Sixth Report on Public Health" referred to Dr. Henry Julian Hunter's 1861 study entitled, "Excessive Mortality of Infants in Some Rural Districts of England" (Marx 521-22). Dr. Hunter's report concluded that higher death rates were due to the fact that more mothers were working in factories to make up for the diminution of total family income created by the Act's restriction of the hours that children could work. The absence of mothers from the home left no one to care for their infants. Older siblings who may have cared for these infants were also less available because they were farmed out by their parents to work all day in the industries that did not fall under the Act's schooling requirement. Dr. Hunter noted that desperate women who could not care for their babies turned to infanticide by opiates as the only available means of dealing with their new predicament. Marx concludes that although many from the middle and professional classes demanded reforms of the factory system, the type of reforms produced by the state enabled the capitalist class to continue producing surplus value by merely shifting the burden of producing it from one section of the working class to another. This observation must be taken to heart by all well-intentioned professionals who presently struggle for state reform of capitalist micro-practices. The double jeopardy that proletarians face after reforms become realized in law is commonplace in the contemporary discourse of democratic reform movements. Contemporary reformers often observe that once having obtained the reform they demanded from the state, new, unforeseen, and unwanted consequences result. For the proletarian class on behalf of whom the struggle for reform

was fought, the consequence of reform is as detrimental on the whole as the situation prior to reform; for the reformers, however, the consequence is satisfaction for a job well done, and preparation for yet another struggle to get it right the next time.

In sum, organizing society absolutely and universally for the production of surplus value is more than an arbitrary, temporary, or reformable condition of life. Rather, the extraction of surplus value is the fundamental law of capital that must extend itself into every fiber of world society until every human being, every human experience, every human act, and every human desire has been commodified and brought into the social relation of capital. Toward this end, the dynamic forms of relative surplus value are put into motion through the creation of new technologies, new class formations, and new governmental regulations. It is this relative form of producing surplus value that the field of the political economy of communication examines, but always within the framework of the production of absolute surplus value. This model is the one that I propose we adopt in our critical work in computers and composition.

The Political Economy of Communication

Mosco notes that as a field the political economy of communication developed in response to a profound change in how capital produced surplus value at the macro level—the shift from primarily competitive to primarily corporate capitalism. This shift began in the late nineteenth century, rapidly expanded in the years prior to World War I, and resulted in increased corporate control of the content and technologies of mass media. Scholars began to investigate the social effects of the corporatization of mass communication and have identified four central areas of investigation: the causes of the shift from individually owned to corporately owned communication media; the emergence of a mass consumption economy that accompanied this shift; the entry of the state as the regulatory agent of communication media; and the tendency of western imperialism to impose its culture on colonized people by exporting its communication media (17-21).

If scholars in rhetoric and composition were to develop a corresponding field—the political economy of computers and composition—our starting point would be to identify the macro-systemic shift that has created the urge to incorporate digital technologies into writing and writing instruction. Richard Ohmann's most recent work, *Selling Culture: Magazines, Markets, and Class at the Turn of the Century*, offers us a model of this kind of inquiry in communications studies. This book is

a study of the birth of the corporately produced and distributed magazine. Around the 1890s, hundreds of locally owned publications that competed for readership in the capitalist market begin to disappear. Given their dispersed character, these competing publications provided people with relatively heterogeneous interpretations of news, issues, and culture. The market for these locally and individually owned publications, however, was undermined by a new corporatized communications technology: the nationally distributed news, information, and human-interest magazine. In order to analyze this phenomenon, Ohmann first identifies the macro-systemic change that allowed for this sea change in publication practices as the tendency of the European and American economies in the late 1800s to shift from competitive to corporatized and monopolized forms of capitalism, a form Lenin called imperialism. Monopoly capitalism developed, Lenin explains, to consolidate and maximize profit as well as to solve the overproduction crises that ravaged the western economies throughout the latter half of the nineteenth century. Ohmann argues that monopolized and corporatized publications helped to solve the overproduction crisis by creating mass desire for overproduced commodities through new techniques of marketing. A by-product of these new marketing techniques, according to Ohmann, is the appearance of mass culture—the mass production and distribution of a standardized national identity through a nationally homogenized interpretation of cultural and political events.

Following Ohmann's model, the political economy of computers and composition would first have to identify why digital technologies have become an object of inquiry in composition studies. Political economists have already identified that phenomenon as yet another shift in how capital produces surplus value—the shift to globalized accumulation. In this shift, capital attempts to solve its profit crisis by lifting international restrictions on trade. Communications scholars currently analyze the social effects of new, globalized communications technologies. They argue that these new technologies primarily function to extend the social relation of capital by mobilizing previously untouched facets of the cultural life of the world's people into the production of surplus value. They warn that instead of democratizing socioeconomic relations, the new globalized technologies enable more social division through this mobilization.

If the political economy of computers and composition were to follow the communications model, we would also take globalization as our starting point. We would explain the emergence of digital technology in

writing instruction as a relative micro-practice of the macro-systemic shift to globalized forms of accumulating surplus value. The work in computers and composition that already takes economics and history into account, however, still lacks a thorough critique of globalization as its starting point, and, thus, makes claims about democratic possibilities that are fundamentally illusory. In what follows, I critique texts by Anson, Berlin, Downing, Moran, and Selfe in order to argue for the necessity of this starting point so that our pedagogical and political activity resists becoming imbricated in globalization. I posit that in the contradictory tendencies of digital technologies to democratize or centralize micro-practices, centralization is the predominant aspect, and this is so because within the social relation of capital, technologies are primarily developed, funded, produced, and distributed to serve the drive for absolute surplus value.⁵ Accordingly, the kinds of social practices and relationships that emerge in the social use of these technologies are also primarily determined by capital's drive for absolute surplus value.

Citizen-Workers, Democratic Subjects, and Democracy Hope

In his thinking about the role of composition studies in the twenty-first century, Berlin asks compositionists to embrace, albeit critically, new technologies. Following David Harvey's *The Condition of Postmodernity*, he argues that inflexible regimes of work associated with Ford's assembly line method of industrial production have given way to flexible regimes of work. In the Fordist period, commodities were produced from beginning to end in individual factories. In the post-Fordist framework centralized manufacturing yields to decentralized commodity production: parts of a single commodity are manufactured in various parts of the world and are only brought physically together at the moment of final assembly.

Berlin argues that the present post-Fordist economy creates new regimes of work that require "new forms of cooperation in production, distribution, exchange, and consumption that encourage democratic arrangements throughout the workplace" (224). He understands that these work regimes function dialectically: on the one hand, they enable methods of work that serve capitalist exploitation; on the other hand, these methods can also be turned into their opposite and act to restrict capitalist exploitation. Therefore, in order to assure that democratic interpretations are inscribed in these new methods of work, intellectuals who work within their various disciplines and fields must develop a college curriculum that not only prepares students for work, but does this "within a comprehensive range of democratic educational concerns." In such a curriculum,

“Students must learn to locate the beneficiaries and the victims of knowledge, exerting their rights as citizens in a democracy to criticize freely those in power” (223). For Berlin, a new material condition has come into being as a result of new technologies—specifically, a new regime of work that moves the control of decision making from capitalists (who stand above the point of production) to workers who are situated at the site of production. According to this argument, because workers and work sites are dispersed, workers are more able to see their work and discuss their work as it affects human lives. In Marxist terms, workers would become less alienated because their work is more visibly tied to its social purpose. The displacement of decision making from corporate concerns for profit to worker concerns for human lives, therefore, provides the material basis for a democratizing of workers’ consciousness.

Many scholars from the field of the political economy of communication, such as Peter Meiksins, have considered the kind of claims that Berlin makes. According to Meiksins, some political progressives claim that “we have entered an age of ‘flexible specialization’ in which new technologies support loose networks of autonomous producers and create a workplace populated by autonomous, skilled workers” (152). However, Meiksins contends that most progressives see that new technologies “extend employer control over workers, even over long distances, and . . . create automatic systems that can replace the judgement and discretion of expert employees” (152). Meiksins agrees that both aspects of the contradiction do exist and are in struggle, but the working out of this contradiction is influenced by other contradictions of capitalist production. In his view, the contradiction between centralized and dispersed decision-making practices exists within the overarching “conservative character of capitalism, its tendency to frustrate progressive social change” (152). Following Marx’s placement of technology as an always relative formation that is primarily subordinant to the formation of absolute surplus value, Meiksins concludes that the “capitalist relations of production constitute technology as a way of controlling and replacing labor, and impede the possibility that technology might democratize the workplace” (158).

To make this case, Meiksins offers a number of studies of new technologies and new dispersed work sites that place decision making in the hands of the workers or managers themselves. In each study, Meiksins notes the same trend. In the dialectical struggle between dispersed and centralized forms of decision making, the need to centralize overwhelmingly dominates and disciplines the dispersed practices by bringing them

back into the central domain. One example, at the managerial level, is Silicon Valley. It is often claimed that in Silicon Valley new cooperative relationships among companies and their suppliers are breaking down traditional corporate culture. Information sharing, aided by electronically mediated information exchange, is replacing competition between firms. However, as Bennett Harrison argues in *Lean and Mean*, it becomes evident that over time smaller supplier firms tend to be subordinated by the larger companies they supply. Meiksins explains that “cooperative networks of firms . . . turn out to be vulnerable to the emergence of dominant firms or to intrusion by giant corporations from outside” because the dominant need for the efficient production of surplus value always determines why these practices are developed and maintained in the first place (155). Control from the top reasserts itself because decisions about profitability and productivity supersede any other decision. New technologies must serve profitability; democratic decision making at the managerial level, therefore, exists only so long as it works toward this fundamental goal. As soon as it interferes, the democratized practices are rescinded.

In contrast, among highly paid workers (such as machine operators in the machine tool industry), capital uses new technologies very obviously and unapologetically to deskill these workers and make them redundant for the sake of productivity and profitability. One of Meiksins’ studies is particularly salient here. He analyzes the introduction and repercussions of the CNC (computerized numerical control) lathe in the machine tool industry. Equipped with computerized feedback loops, CNCs are able to map electronically and remember the adjustments that workers make in their movements. This mapping allows their skill and knowledge of how to manipulate the lathe to be programmed into the machine, thus eventually making the workers redundant. Once their knowledge is possessed by the machine, the workers are no longer considered to be the creators of that knowledge. In the machine tool industry of the late 1970s and 1980s, the companies using CNC technology promised to move the workers who were made redundant by their own knowledge into even higher levels of skilled work as programmers. However, as Meiksins reports, this promise has not been realized in a corporate culture that is habituated to using machines to save on labor costs, remove troublesome workers, and separate mental from manual labor. Meiksins concludes that the presence of new technologies and the new regimes of work they enable will not change the way that capitalism is organized “as a mode of production based on exploitation and control of labor” (163).

This brief review of Meiksins' research counters Berlin's hope that a new democratic culture could potentially arise from the new work regimes of post-Fordism. As Meiksins suggests, the problem with Berlin's view is that he focuses on the emergence of one new, and very contradictory, micro-practice of relative surplus value: the seeming expansion of cooperative decision making at the managerial level. He isolates this one micro-practice of capitalism from its dialectical relationship with the macro-system: the absolute drive of capital to create surplus value through the creation of proletarianized people. In so doing, Berlin can paint a picture of new democratic possibilities while ignoring the class antagonism between the proletariat and the capitalist class that absolute surplus value requires. Meiksins recognizes that changes in the various forms of relative surplus value do not mitigate the effects of capital's absolute drive for surplus value that require the exploitation of labor. However, he only examines the ways exploitation occurs in the work practices of middle and lower managers and those sections of the working class who are paid above the level of subsistence. In this sense, his refutation of claims about the democratizing effects of post-Fordism does not take into account exploitation as a process of proletarianization. Nevertheless, Meiksins illustrates that in the era of globalized capital, those who receive the brunt of the exploitation may shift, but the exploitative nature of capital continues to be a social fact. When class antagonism is completely unaddressed, as with Berlin, the ideology of democracy hope takes over, diverting our attention from those most exploited by capital.

Like Berlin, David Downing, a proponent of neo-pragmatist pedagogy, also sees the culture of the classroom as the site where new technologies can be used to promote a new democratic consciousness. Downing, however, following John Dewey, is more wedded to the view that new democratic forms emerge out of the new technologies themselves rather than out of the new practices of work these technologies enable, as Berlin suggests. Although Dewey's democratic-socialist political and pedagogical vision failed, Downing attributes Dewey's failure to the failure of the machines on which the philosopher based his vision. Downing argues,

The electrical/telegraphic print environment . . . still fostered individualism and hierarchy rather than cooperation and collaboration. There was, of course, no way for Dewey in 1894 to predict the potential of cyberspace and virtual reality environments made possible by fiber-optic and micro-

chip technology to so alter the classroom and the media in many ways that would be compatible with his own social and political beliefs in collectivity and participation. (186-87)

In Downing's view, Dewey's plan to achieve a truly democratic society failed because the kind of technology required to carry out the plan had not yet been invented. He assumes that "we are going through a cultural revolution in the shift from print to electronic environments as great and significant as the shift from oral to literature cultures 2000 years ago" (193). While Downing notes that the shift in technology is taking place, he fails to situate it within the shift from corporatized imperialism to globalized imperialism.

Ken Hirschkop's work in the field of the political economy of communication cautions against the kind of democracy hope at the heart of Downing's pedagogy. In "Democracy and the New Technologies," Hirschkop analyzes two claims that see democratic possibilities as ultimately depending on the new transmission and information potentials of cybertechnologies themselves. The anarchist view emphasizes the transmission potential and is captured in the identity of the hacker who claims that electronic transmission technologies are inherently slippery forms that, in the hands of skilled technicians, can be used to penetrate and thus to open up systems that were originally designed as closed systems for "military command and control . . . that could survive a thermonuclear attack" (212).⁶ Downing's view, however, does not belong to this anarchist/hacker perspective. It belongs instead to the second view analyzed by Hirschkop: the liberal democratic view that is captured in the identity of the electronic referenda democrat. According to this view, the general populace for the first time has limitless access to knowledge and the ability to transmit it; therefore, people can organize this knowledge in order to produce popular power in opposition to corporate power. Only the new cybertechnologies make this possible; thus, democracy is able to function for the first time. "The clear implication," Hirschkop argues, "is that if all could have roughly equal access to these new resources, then the consequences would indeed be democratic . . . [A] better informed citizenry could, given the communicative possibilities of the Internet, wield power through more frequent and more thorough forms of consultation" (214).

Downing articulates this view when he argues that in a print environment, critical exchange is forced to follow a temporally and linearly bound process; however, new telecommunications technologies allow

that process for the first time to be “presented in dialogical form and made available to other researchers without the time lag required of print processes” (198). Instant access to information, therefore, enables democracy; new technology, for the first time, gives everyone this access. According to Hirschkop, both the anarchist/hacker view and the democratic/electronic referenda view are fundamentally joined in the belief that unlimited access to information and the ability to transmit it equals political power. Hirschkop, however, argues that in the history of the democratic struggle, access to information has never been the problem. Therefore, any technology that extends access to information cannot provide the material basis for democratic development. He explains:

The fundamental inequity of political power does not rest on inequality of information: those who rule do not rule because they know more, . . . but rule whether they know what they are doing or not. Capitalist corporations may well feed information to political representatives and bureaucrats, but their ability to influence them does not depend “in the last instance” on the quality of the information, but on their ability to give or withhold support for state projects or for particular political groups. Private business institutions and their quasi-public associates have financial power and management structures; the state has juridical institutions and the ability to wield coercive force when necessary. (214-15)

The problem, according to Hirschkop, lies in the logic of capital itself: “the imperative of profit” (217). If our information does, on occasion, denude capital of its cover, some change in the relative social relations and forms of production may be adjusted; however, the absolute social relation of surplus value is not adjusted—nor can it be. The class antagonisms inherent in this social relation continue to be reproduced.

Heather Menzies’ critique of post-Fordist theory also challenges its claims about the democratizing effect of capital’s most recent commodity: information. However, she also points out a more pernicious effect of post-Fordist theory: the erasure of the proletariat as the class forced to live at the level of subsistence. In her study of new work regimes in Canada, *Whose Brave New World? The Information Highway and the New Economy*, Menzies presents a compelling ethnographic investigation of how work practices designed for the production and distribution of information in the globalized economy still require thoroughly proletarianized people. Like Meiksins, she argues that “the ideology of monopoly capitalism” continues to drive the new practices. But her study also identifies the growing divide between the middle class and the proletariat.

She defines this divide as that between “the overworked rich with a host of powerful information tools at their disposal” and “the barely working poor on the other side of this income and digital divide” who work “as the hands and voice box of intelligent systems which dictate everything about the job to be done, and monitor every aspect of its performance,” such as telemarketers, one of the fastest growing sections of the workforce (“Challenging” 95). In Menzies’ view, the new, flexible post-Fordist worker transcends old class boundaries; this new worker can be an upwardly mobile technician or a manager of information systems or a non-industrial proletarian who helps to produce, serve, distribute, and market information as a commodity in the globalized economy. Unfortunately, Menzies’ study does not analyze the continued existence of proletarianized industrial workers and the effects of globalization on them.

But recent social movements against overseas sweatshops and against the role of state institutions (such as the International Monetary Fund and the World Trade Organization) in economic deprivation have helped to raise awareness of the continued existence and, indeed, expansion of the industrial proletariat, whose conditions of life and work are straight out of *Capital*. Radical activist groups have continued to pay attention to the existence of proletarianized people, and leftist newspapers and magazines often publish investigative reports on their lives. As an example of this investigative work, I’d like to summarize a well-documented, two-part report from one of these newspapers, *The Revolutionary Worker*, on the living and working conditions of the industrial proletariat in Silicon Valley. The writers show an awareness of post-Fordist theory; however, they apply these new theories without setting aside Marx’s claim that capital necessarily rests on the exploitation of laboring people whose lives are valued according to the absolute minimum required for them to subsist.

The article begins with the testimony of Lani Hironaka, the Executive Director of the Santa Clara County Center for Occupational Safety and Health (SCCCOSH), before the California State Senate. Hironaka, playing the same role as the factory inspectors in nineteenth-century England, identifies “overcompetitive subcontracting” as the primary employment practice of Silicon Valley’s electronic assembly plants (“Living”). For Silicon Valley’s workers directly employed in the electronics industry, this employment practice means “poverty-level wages, piece-rate compensation, chemical and ergonomic hazards, routine health and safety violations, no medical benefits, retaliation, and an immigrant, largely

female, non-union work force.” She concludes that these elements comprise “what the public commonly refers to as sweatshop conditions” (“Living”). The article notes that subcontracting—a practice characteristic of the flexible, post-Fordist service industry—has also been adopted in industrial assembly plants where commodities are produced for sale in the traditional market. This flexible practice is euphemistically referred to as “outsourcing” and is explained by economists as the normal function of economy to “find” cheaper labor. But the word “find” implies that this cheaper labor is already there. When looked at more carefully, outsourcing or subcontracting functions to create cheap labor, and Silicon Valley serves as a prototype of this process.

The article in the *Revolutionary Worker* goes on to report that in addition to the 100,000 industrial proletarians who work in these sweatshops, an additional 200,000 non-industrial proletarians also work either as service workers in the related industries that electronics requires or as servants to the professional and managerial middle class that the electronics industry has spawned. All 300,000 of these proletarians live in the condition that Marx refers to as immiseration. Given the cost of living in Silicon Valley, even workers earning \$50,000 a year can’t afford to rent or purchase property in which to live (“Living”). This lower section of the middle class, in other words, finds it difficult to live at the minimum level to which that class is accustomed. Proletarians, who earn much less than these middle-class workers, commonly rent a corner of someone’s living room floor at the rate of \$150 to \$200 per month in exchange for eight hours of daily sleep time. Many are homeless and sleep on city buses. The article claims that luckier proletarians stuff up to twenty or more members of multiple families into rented single-family homes, or they rent exorbitantly priced garages. For example, a Latina mother of three who works as a night-shift janitor for a large, electronics corporation pays \$750 per month (out of her salary of \$954 per month) to rent a garage. During the day, when she should be sleeping, she works at the Convention Center to provide for the rest of her family’s expenses. These conditions of life are described by Marx as immiseration because proletarianized people whose labor has been valued at the minimum subsistence level live below the minimal standards of comfort established in the society. In the case of contemporary U.S. society, comfort means a balance of work, leisure, and sleep time; a place to live that costs no more than twenty-five percent of a worker’s wages with an adequate amount of space for some level of privacy; and a sense of security in knowing where the next meal is coming from, how family members will be clothed, how health problems will be

dealt with, and how the family will transport itself routinely to work, school, stores, and so on. When the cost of labor is set at the minimum, the everyday life of those maintained at this level cannot conform to even a minimum standard of comfort. The state, of course, assists capital in assuring that large numbers of proletarians will be available to live at subsistence level by establishing the minimum wage—not in the name of assuring their immiseration, but in the name of protecting them from corporate greed.

The article also details the myriad ways that capital withholds from proletarianized labor not only the most advanced techniques of good labor relations but also the most advanced safety technologies. In the area of labor relations, some of the largest and most capitalized U.S. corporations have severed themselves from having any social responsibility for those who make their commodities. Fortune 500 corporations have made good use of changes in labor law, which since the 1970s has sanctioned subcontracting with its socially irresponsible techniques of managing labor, such as paying laborers “by-the-piece,” creating home-based work, and eliminating pension and job security. One Manpower employee interviewed by reporters explains that this subcontractor obfuscates its social irresponsibility in the way that it offers its employees the option of medical insurance. The cost of this insurance is \$400 per month, a cost that only managerial personnel who are paid above the cost of reproducing life at the minimum level can afford (“Silicon”). According to its public image, however, the corporation seems to be meeting its social responsibilities to all of its employees. Working for essentially unregulated subcontractors also renders the most advanced safety technologies unavailable to the industrial proletariat. Workers are exposed to extremely dangerous working conditions, including toxic chemicals. For example, the article reports that a recent explosion at MMC Technology’s CD-ROM plant in San Jose sent a splash of nitric acid into the air, and only a trace of this acid needs to be ingested to cause people to “literally vomit [their] guts out” (“Living”).

Finally, the article illustrates that labor laws against discrimination have had no impact on the corporate practice of subcontracting. In Silicon Valley, over eighty percent of the industrial proletariat is comprised of immigrant women from over thirty different countries. Karen Hossfeld of San Francisco State University, who has been studying the lives and working conditions in Silicon Valley for twenty years, found that human resource managers are extremely frank about why this is the case. One told her: “I have a very simple formula for hiring . . . small, foreign and female.

... These little foreign gals are grateful to be hired—very, very grateful—no matter what” (“Living”). Hossfeld was told by another manager that “they won’t hire Black people under any condition” (“Living”). Hossfeld’s research reveals that ethnic discrimination has as much to do with employers’ perceptions of who is least likely to resist as with their racist notions of natural superiority. In this case, African Americans are being excluded, even from the worst jobs, because of their long history of resistance.

The working and living conditions described in the report correspond point-for-point to Marx and Engels’ definition of the industrial proletariat. Not all workers experience proletarianization, but capital, as a social relation, requires proletarianization as its foundation. The proletariat sets the standard by which the cost of workers paid above the level of subsistence is gauged. When compositionists talk about the new work practices made possible by new technology, we must not forget that the foundational practice of proletarianization has not disappeared and is absolutely necessary to make the new technologies possible. Every piece of equipment our universities buy for our technologized writing labs has been touched at some point in the production process by proletarianized labor—a most plentiful, yet extremely invisible form of labor. In an address to the Cato Institute in 1997 on the pivotal role of industrial production in globalization, Alan Greenspan remarked, “A global financial system, of course, is not an end in itself. It is the institutional structure that has been developed over the centuries to facilitate the production of goods and services . . . the real side of economies” (244-45). Although he went on to explain that a “much smaller proportion of the measured real gross domestic product constitutes physical bulk today, than in past generations,” the real side of economics, which includes information as its newest commodity, has not yet been overtaken by the financial side of economics.⁷ It is also important to remember that at the time of his remarks Greenspan had been steadily raising the interest rate of the Federal Reserve for the expressed purpose of increasing the unemployment rate. This is in keeping with Marx’s observation that one of the factors that allows for proletarianization is the presence of a “reserve army of labour” (781-94). Industrial workers, it seems, are still with us, no matter how post-Fordist we get. We cannot erase them from our pedagogy and our politics.

Moran and Selfe attempt to include proletarianized people in their analyses of technologizing composition. They harbor no illusions that new technologies will give rise to a new democratic subject, as suggested

by both Berlin and Downing. They argue that technology acts in the context of an unjust economic system, a seriously compromised democratic politics, and some very dangerous ideologies. Each proposes that users of digital technology act as democratic subjects to counter the ways it has increased social inequality. Democratic subjects, therefore, must bring about new economic orders.

The contexts that Moran and Selfe bring into the discourse on computers and composition should not be ignored by anyone. Moran reviews the research of economists Paul Krugman and Lester Thurow that shows that the steady rise in per capita income following World War II came to a standstill in the 1970s, and it has regressed ever since then. Krugman’s figures show that since 1979, wealth has been redistributed from the poor to the rich, a process he calls “siphoning.” According to Moran, Department of Commerce figures up to the mid-1990s corroborate Krugman’s findings. Median income has declined in the last twenty years while, as Thurow’s research indicates, “the share of wealth . . . held by the top 1% of the population was essentially double what it had been in the mid-1970s” (216). Moran points out that the effect of the redistribution of wealth from the poor to the rich renders access to new technologies and the distribution of knowledge about them inherently unequal. In our pedagogies, therefore, the battle for equal access to technology is primary; otherwise, the work we do with technology is complicitous in reproducing social inequality. He urges teachers to resist the corporate hype to constantly invest in new technologies, and he urges researchers to launch studies on the social effects of unequal access and the ways in which teachers, students, and communities are coping with unequal access. He argues that this work must be critically undertaken using a Freirean approach that aims to bring the subjects of the research into the critical process of analysis.

Selfe also recounts how socioeconomic inequality is reproduced through the digital divide. However, unlike Moran, she illuminates the ways in which the politics of globalization is implicated in the reproduction of inequality. No longer embroiled in Cold War politics, the Clinton-Gore administration sought to reverse the slowdown in U.S. manufacturing and productivity and to counter threats to U.S. hegemony in the world market by investing in digital technology. Selfe points out that throughout the 1990s the state has enabled and directed the building of a digitalized infrastructure and the preparation of the workforce needed for a digitalized economy—an effort into which the administration has pulled educators at all levels. As a result, education has suffered. During this

period, funding to programs designed to increase the amount of student-teacher contact has been cut and reallocated for the purchase of hardware and software. These expenditures are justified and sold to the public in the name of making educational institutions fit to train students for the new economic order.

Selfe argues that through these expenditures public monies also directly support the expansion of digital industries themselves by supplying them with a sure market in which to dump their goods, regardless of their efficacy. Ideologically, the notion is disappearing that education has any other purpose outside of serving the economy. The Clinton-Gore administration, for the most part, convinced educators to value student contact with technology over student contact with human beings by creating yet another literacy crisis—the technological literacy crisis—that has mobilized educators to restrict all educational goals to only those that will help produce the new technologized workforce. While the administration promised that social leveling will result if only educators would goose-step in this war on technological illiteracy, Selfe notes that “this project is likely to support persistent patterns of economically-based literacy acquisition because citizens of color and those from low socioeconomic backgrounds continue to have less access to high-tech educational opportunities and occupy fewer positions that make multiple uses of technology than do white citizens or those from higher socioeconomic backgrounds” (423). Like Moran, Selfe argues that in our pedagogies, as well as in our political practice, the battle over access to new technologies should be primary. This effort would mean combating the racist overtones that always accompany “literacy crises” with local decision making about which technologies students and communities actually need, while engaging in a critical pedagogy that asks students to understand their relationship to technology—not only as consumers, workers, and users, but in a way that helps them to see “the complex relationships between humans, machines, and the cultural contexts within which the two interact” (432).

Both Moran and Selfe argue that, acting as democratic subjects, we must attempt to narrow the socioeconomic gap by expanding access to technology and the knowledge of how to use it. Both advocate that teachers engage in school and public policy debates over access to technology while also using technology critically in their classrooms. But the macro-systemic capitalist structure disappears from both of their visions. Moran dispenses with the need to acknowledge how capitalism is at work. Although he asks us to address the taboo subject of “the

distribution of wealth and of social class” and to acknowledge that “computers are, like other goods and services in our economy, available to those with money, and not available to those without money,” our descriptions of these social relations should not be too precise, he contends, because this will leave the audience incapable of taking political action (206).

In contrast, Selfe does not seem to be shy about describing the social relations at work. Her stinging critique of the governmental and technocorporate sectors reveals their special interests. She argues that the Clinton-Gore administration publicly funded the expansion of the electronics industries at the expense of other industries and they did this outside of the democratic process in order to “jump-start the international effort . . . required to exploit emerging world markets” (426). She also points to the antagonistic relation of capital and labor inherent in the expansion of this industry:

The economic engine of technology must be fueled by—and produce—not only a continuing supply of individuals who are highly *literate* in terms of technological knowledge, but also a[n] ongoing supply of individuals who fail to acquire technological literacy, those who are termed “*illiterate*” according to the official definition. These latter individuals provide the unskilled, low-paid labor necessary to sustain the system I have described—their work generates the surplus labor that must be continually re-invested in capital projects to produce more sophisticated technologies. (427)

Finally, Selfe does not hedge in implicating the role of the Clinton-Gore administration in using the educational system—again, outside of the democratic process of open and public debate—as a conduit for spreading alarm about the crisis of technological literacy in order to push through its economic restructuring. Yet, even though all of her well-documented evidence points to the identity of governmental and technocorporate interests that have subverted the democratic process, Selfe evades the conclusion her own evidence so powerfully points to: the state serves capital, not the whole people, and capital benefits the few at the expense of the many.

Selfe stops short of critiquing the capitalist state, and, in effect, mirrors the same well-intentioned work of professionals who fought against child labor and the oppression of women in Marx’s day. Reforms of capitalist practices can only reshuffle the burden of producing surplus value from one sector of the people to another. In the case of the present

drive of capital, Third World people have primarily taken on that burden, along with expanding numbers of proletarianized workers in the capitalist centers. Capitalism's exploitation of proletarian people to create surplus value and the state's legal sanctioning of this exploitation are absolutes; political decisions, the promotion of one sector of the economy at the expense of another, and the shift in who benefits at what time are always relative and subordinate to the fundamental drive for profit. Acting as democratic subjects to struggle for more access to technology on behalf of those currently excluded ignores the fact that all sectors of the world's people are already (or are in the process of) being mobilized into the work of producing surplus value for capital through the full-scale wiring of the world.⁸ *How* they are mobilized to do this depends on their class location. Moran's and Selfe's calls for equal access, though well-intended, will result in little more than a shift in the composition of the middle class. Unfortunately, in a capitalist regime, any economic gain made by one sector of the people must be paid for by the increased exploitation of other sectors. Conceptualizing democracy solely as a political category is at the heart of what I call democracy hope. It is inherently problematic in its underlying assumption that social antagonisms are always temporary and relative to specific questions and issues rather than permanent formations of the capitalist structure. When economic relationships are fused with the political, however, it becomes clear that certain social antagonisms cannot be resolved through the political process alone because there is an ethical divide embedded in the economy that cannot be bridged. Although Moran has argued that making naked assertions about economic exploitation paralyzes people politically, I argue against that premise and suggest that we refashion our discourse to include expressions of ethical antagonisms.

Refashioning Our Discourse

Anson's critique of computers and composition demonstrates what an articulation of ethical antagonism looks like. He situates the technologizing of composition in the larger project of corporatizing the university. When we engage in public discourse about the various phenomena that claim our attention, he suggests, we must understand that we are entering a terrain in which one set of values is pitted against another. His argument is constructed around a series of antagonisms and the oppositional ethics behind these antagonisms. He argues that new technologies have primarily been imposed on humanities faculties rather than introduced by us, and he asks us to reject the logic of efficiency that lurks behind the

drive to wire everything. University administrators are allocating more and more funding for the development of a wired infrastructure in response to "economic, occupational, and technological" pressures external to the university (262). These pressures stem from "the overriding goal of creating economic efficiencies" to generate "increased revenues" for the university, and some of the actions we are asked to take "frequently clash with some of our basic beliefs about the nature of classroom instruction" (263). Thus, institutional goals are increasingly corresponding to the corporate goal of efficient production. The admittedly inefficient practices that have accompanied the university's pedagogical mission—such as one-on-one interaction between students and teachers in a shared physical space—are being replaced by distance education; standardized Web classes; cut-and-paste reading, writing, and research practices; and standardized multimedia lectures, lessons, and assessment. I would add that through these practices college graduates, as commodities, can be produced more efficiently, and they can be prepared ideologically for the new flexible workforce.

Anson identifies an irreconcilable contradiction between the inefficient pedagogical practices of the traditional university (with its ethics of dialogic discussion and reflection) and the efficient practices of the corporatized university with its delimiting of ethics to those serving the civil sphere only. Anson is not making a sweeping statement against the use of new technology in the classroom. He argues, however, that our pedagogy must not be subsumed by the larger economic drive for efficiency; rather, we must "take control of these technologies, using them in effective ways and not, in the urge for ever-cheaper instruction, substitut[e] them for those contexts and methods that we hold to be essential for learning to write" (263). His language reflects a social antagonism at work; the larger economic drive threatens to "take control" of what our better judgment tells us to do. He does not imply that it is impossible for teachers to act as agents and to resist the way our classrooms are being subsumed by corporate ethics, but he most definitely implies that unless we consciously understand that the technologies are overwhelmingly implicated in the corporate ethic, our work with technologies will be determined by that ethic. His argument, as I read it, is that teachers should identify themselves as antagonistic to the corporate ethic. An identification of this sort produces teachers who will not compromise their ethics when corporations or corporatized administrators try to impose their agendas on them; rather, they will resist those agendas and attempt to politicize others in the process. In this way, a political rhetoric

that articulates the ethical antagonisms at work in the economy does not (as it is often assumed in the traditional rules of rhetoric) shut down the possibility of further argumentation, praxis, or consensus building. It does, however, elucidate the ethical divide between competing socio-political interest groups who continue to act even while vying for power.

Anson also warns us that when we uncritically embrace the technologizing of the university as a whole, we are complying with the unethical labor practices that are overtaking our universities (and, I would add, all our institutions). He notes that the drive for efficiency “may lead to even greater exploitation in the area of writing instruction” (263). New technologies have enabled administrators to replace faculty lines with proletarianized adjuncts who are pressured to deskill their work by standardizing instructional material and methods. The use of adjunct labor also allows the university to replicate the highly proletarianized labor practices of piecework and homework—practices that alienate the body and mind of the teacher/worker from students by placing the teacher on a television screen or converting the teacher into the disembodied voice of e-mail.⁹ The drive for efficiency results in the increased alienation of the teacher/worker or the student/worker from the product of his or her work. Anson reminds us that these alienating practices are not empowering workers, nor are they breaking down class, gender, and racial distinctions. I would add that the lives of many if not most of the temporary, contract labor that the university employs can be easily characterized as immiserated in that the value of their labor has been set at the level of subsistence. Anson calls for specific political action to restore the educational mission of the university by demanding that the interests of business and industry not be privileged over the scholarly pursuits of teachers and students. He encourages academics to conduct critical research on the impact of the drive for efficiency on teaching and learning. His argument identifies a class antagonism that can only be resolved by reversing the corporate labor practices of the university. He strongly implies that unless we pay attention to the class antagonisms involved in the labor practices of the university, we cannot restore the educational mission of the university or the academic freedom it requires.

The antagonistic ethics attached to this class antagonism is clearly exemplified in the eruption of the movement of adjuncts and graduate students to unionize.¹⁰ But even though political struggle that directly addresses class antagonism has broken out on campuses, the class antagonism embedded in issues surrounding technology has, for the most

part, been ignored. A case in point is the failure of the professoriate to forge a national movement or coalition against the rapid push toward distance education that is being established under the University of Phoenix model. Again, I argue that until the antagonism between corporate and educational ethics enters the discourse, the kinds of compromises over distance education that are being struck between departments and individuals and the highest level of administrators and their boards of regents will go unchallenged. This is a movement that is yet to begin, but it is a movement that, if it does emerge, will directly confront the deployment of technology in the service of the globalization of capital.

Discourse that recognizes the existence of class antagonism and its accompanying ethical opposition has been making its way back into the American political sphere, and it is often planting itself squarely on the front lawns of universities. The Students Against Sweatshops (SAS) movement has often used antagonism as a warrant for its claim that the university must sever its contract with corporations who hide their complicity in the creation of immiseration by outsourcing their labor to local contractors and tyrannical governments while at the same time claiming that globalization is raising everyone’s standard of living. When SAS started, the proletarianization that is the fabric, so to speak, of the Nike clothing that is donated to college athletics programs was completely invisible. In a few short years, the class antagonism represented in almost all of the clothes we wear has now been made so visible that Nike, as one of the most targeted corporations, has rescinded its contracts with at least two universities rather than comply with the standards of labor practices that those universities eventually adopted. Nike’s action suggests that a proletarianized population is an absolute requirement for the creation of surplus value. Clearly, in order for the capitalists who own Nike to continue living at the standard to which they have become accustomed, the people who make their shoes and jerseys must continue to live and work at the level of subsistence that Nike determines and controls. Class antagonism and its accompanying immiseration is just as embedded in the machines that seem so innocently and neutrally perched on the desks of the computer labs where we teach composition. Before we make claims about what these machines allow *us* to accomplish—claims about nonlinear thinking, reading, and writing and about how those practices have decentered *us* as subjects, somehow freeing *us* from the bonds of the rational world view—and before we make claims that if only more of America’s people could have access to these technologies somehow a social leveling would occur, let us first consider not only the presence of

the programmer laboring over all those zeros and ones in our machines, but also the presence of the minimum-wage worker who could have died making the CD we just popped into our machine. So long as there is class antagonism, more democracy *for us* is always extracted at the cost of more immiseration *for them*. Also at the heart of our democracy hope is the hope that someday everyone will belong to the middle class. Seeing computers and composition through the lens of political economy will make this hope clearly untenable.

I have argued that in order to speak ethically compositionists who theorize the role of technology in writing instruction must not forget political economy. Electronic technologies, like all technologies of the capitalist era, appear temporarily and relatively only as they continue to serve capital's absolute drive to produce surplus value. The appearance of various classes in this production process is equally temporary and relative to the macro-systemic shifts that have taken place throughout the capitalist era. Only one class, the proletariat, is a permanent feature of capitalism. Globalization, which is increasingly dependent on new technologies, is only the latest macro-systemic shift developed to maintain capital as a social relation, albeit a more internationalized one. This shift has destroyed huge sectors of U.S. industrial workers who were being paid above a mere subsistence level, throwing them back into the commodity market where they have found their labor devalued, while allowing room for other ex-industrial workers to join the reconstituted middle class whose work has become increasingly defined as producers, distributors, and managers of information. But the globalized economy has also created, on a world scale, the largest number of proletarianized people that has ever existed in the history of capitalism. Our practices with new technology are inextricably connected to capital's proletarianization process. The theoretical lens of Marxist political economy does not allow us to divorce political ideals, such as democracy—or, for that matter, socialism—from real economic relationships. Once this connection is made, ethical dividing lines that reflect the class antagonism inherent in capital come into sharp focus.¹¹

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Notes

1. Trimbur reminded me of the term *citizen-worker*, which he coined in his review of Berlin's last book.

2. Mailloux has recently posited that rhetorical studies offers the opportunity for the renewal of interdisciplinarity between English and communications studies.

3. The existence of such a gap is so widely accepted that the Department of Commerce has been collecting data to track its movement since 1994 in a series of reports entitled "Falling through the Net: Defining the Digital Divide."

4. In a footnote, Marx explains that he uses the derogatory term "wretch" because it is "the technical expression used in English political economy for the agricultural labourer" (517).

5. I analyze these claims using a dialectical methodology from the Marxist—and, particularly, Maoist—tradition. This methodology understands that the "life" of any phenomenon is characterized by a multiplicity of contradictions. Within any one contradiction, the oppositional aspects never have equal political strength or importance. Rather, one aspect may dominate the other for long periods of time. In addition, among the plethora of social contradictions emerging from capitalism in all of its forms, certain contradictions usually dominate others for long periods of time. While these two precepts of contradiction only begin to broach the body of Marxist dialectical theory, they are adequate for the present analysis.

6. Edwards traces the American origins of digital computation to military ballistics research during World War II, and he analyzes how the military doctrine of "command, control, communications, and information" is congealed in the computer and Internet. Haraway refers to his work in "Manifesto."

7. Schiller offers a compelling analysis of how information came to be produced, distributed, and owned as a commodity.

8. Drawing on the work of Foucault, Robins and Webster conceive of the current communications revolution as a continuation of the profound restructuring of "the micro-systems" of power evident in everyday life since the inception of Fordism. They challenge the idea that post-Fordism represents a break with the power relationships established by Fordism as a micro-practice. They reach this conclusion by "reinstating the concept of totality" to the study of everyday life by situating everyday life within the "historical trajectory of the search for capital accumulation and obstacles placed in the way of this endeavor" (47). They argue that with the onslaught of monopoly capitalism, all of cultural life, not just work life, becomes absolutely mobilized for the production of surplus value.

9. I want to stress here that using Web boards or e-mail is not in and of itself an inherently alienating practice; however, given that new technology is overdetermined by the corporate agenda, the majority of practices with it will be interpellated by that agenda.

10. Nelson and Watt provide ample evidence of how these class antagonisms are constructed within the entire structure of the university.

11. I want to express my appreciation to John Trimbur for his careful and gracious reading of this manuscript, and for the groundbreaking work of James

Berlin, without which I doubt my commitment to finding a place for Marx in composition studies would have persisted. I thank my colleagues Jean Kreis and Cathy Chaput for their invaluable criticism at key points in the drafting of this article, and Ken McAllister for all the lunches, coffees, and beers over which we conspired to out-think the machines.

Works Cited

- Althusser, Louis, and Étienne Balibar. *Reading Capital*. 1968. Trans. Ben Brewster. London: Verso, 1997.
- Anson, Chris M. "Distant Voices: Teaching and Writing in a Culture of Technology." *College English* 61 (1999): 261-80.
- Berlin, James A. "English Studies, Work, and Politics in the New Economy." *Composition in the Twentieth-First Century: Crisis and Change*. Ed. Lynn Z. Bloom, Donald A. Daiker, and Edward M. White. Carbondale: Southern Illinois UP, 1996. 215-25.
- Dinwiddy, J.R. *From Luddism to the First Reform Bill: Reform in England 1810-1832*. London: Blackwell, 1986.
- Downing, David B. "The Political Consequences of Pragmatism; or, Cultural Pragmatics for a Cybernetic Revolution." *Rhetoric, Sophistry, Pragmatism*. Ed. Steven Mailloux. Cambridge: Cambridge UP, 1995. 180-205.
- Edwards, Paul N. *The Closed World: Computers and the Politics of Discourse in Cold War America*. Cambridge: MIT P, 1996.
- Foucault, Michel. "The Discourse on Language." *The Archaeology of Knowledge and the Discourse on Language*. Trans. A.M. Sheridan Smith. New York: Pantheon, 1972. 215-37.
- . "Prison Talk." *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977*. Ed. Colin Gordon. Trans. Colin Gordon et al. New York: Pantheon, 1980. 37-54.
- Greenspan, Alan. "The Globalization of Finance." *Cato Journal* 17 (Winter 1998): 243-50.
- Haraway, Donna J. "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s." 1985. *CyberReader*. Ed. Victor J. Vitanza. Boston: Allyn, 1996. 372-412.
- Harrison, Bennett. *Lean and Mean: The Changing Landscape of Corporate Power in the Age of Flexibility*. New York: Basic, 1994.
- Harvey, David. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Oxford: Blackwell, 1989.
- Hirschkop, Ken. "Democracy and the New Technologies." McChesney et al. 207-17.
- Lenin, Vladimir I. *Imperialism, The Highest Stage of Capitalism: A Popular Outline*. 1917. New York: International, 1939.
- "Living on the Bottom of Silicon Valley: Proletarians in California's High-Tech Zone." *Revolutionary Worker* 1054 (14 May 2000): <http://www.rwor.org/a/v22/1052-059/1054/silicon.htm> (15 Dec. 2000).
- Mailloux, Steven. "Disciplinary Identities: On the Rhetorical Paths Between English and Communications Studies." *Rhetoric Society Quarterly* 30.2 (2000): 5-29.
- Marx, Karl. *Capital Volume One*. 1867. Trans. Ben Fowkes. New York: Vintage, 1976.
- Marx, Karl, and Frederick Engels. *The Communist Manifesto*. 1848. New York: Pathfinder, 1987.
- McAllister, Ken S. "Care or Cutting Edge? A Review of Three Books about Computer-Enhanced Pedagogy." *Rhetoric Review* 18 (1999): 192-99.
- McChesney, Robert W. "The Political Economy of Global Communication." McChesney et al. 1-26.
- McChesney, Robert W., Ellen Meiksins Wood, and John Bellamy Foster, eds. *Capitalism and the Information Age: The Political Economy of the Global Communication Revolution*. New York: Monthly Review, 1998.
- Meiksins, Peter. "Work, New Technology, and Capitalism." McChesney et al. 151-64.
- Menzies, Heather. "Challenging Capitalism in Cyberspace: The Information Highway, the Postindustrial Economy, and People." McChesney et al. 87-98.
- . *Whose Brave New World? The Information Highway and the New Economy*. Toronto: Between The Lines, 1996.

- Moran, Charles. "Access: The 'A' Word in Technology Studies." *Passions, Pedagogies, and 21st Century Technologies*. Ed. Gail E. Hawisher and Cynthia L. Selfe. Logan: Utah State UP, 1999. 205-20.
- Mosco, Vincent. *The Political Economy of Communication: Rethinking and Renewal*. London: Sage, 1996.
- Nelson, Cary, and Stephen Watt. *Academic Keywords: A Devil's Dictionary for Higher Education*. New York: Routledge, 1999.
- Ohmann, Richard. *Selling Culture: Magazines, Markets, and Class at the Turn of the Century*. London: Verso, 1996.
- Peel, Frank. *The Risings of the Luddites, Chartists and Plug-Drawers*. 1880. London: Frank, 1968.
- Robins, Kevin, and Frank Webster. "Cybernetic Capitalism: Information, Technology, Everyday Life." *The Political Economy of Information*. Ed. Vincent Mosco and Janet Wasko. Madison: U of Wisconsin P, 1988. 44-75.
- Sale, Kirkpatrick. *Rebels Against the Future: The Luddites and Their War on the Industrial Revolution*. New York: Addison, 1995.
- Schiller, Dan. "How to Think about Information." *The Political Economy of Information*. Ed. Vincent Mosco and Janet Wasko. Madison: U of Wisconsin P, 1988. 27-43.
- Selfe, Cynthia L. "Technology and Literacy: A Story about the Perils of Not Paying Attention." *College Composition and Communication* 50 (1999): 411-36.
- "Silicon Nightmares: What It's Like to Work in the High-Tech Sweatshops of Silicon Valley." *Revolutionary Worker* 1055 (21 May 2000): <http://www.rwor.org/a/v22/1052-059/1055/silic.htm>. (15 Dec. 2000).
- Smith, Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations*. 1776. Chicago: U of Chicago P, 1976.
- Trimbur, John. "Berlin's Citizen and First World Rhetoric." *JAC* 17 (1997): 500-02.
- U.S. Department of Commerce National Telecommunications and Information Administration. Reports, Filings, and Related Material. <http://www.ntia.doc.gov/reports.html> (19 June 2000).