

# Mediations

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## Capitalism's Many Futures: A Brief History of Theorizing Post-Capitalism Technologically

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"The saga of capitalism," writes David Harvey, "is full of paradoxes."<sup>1</sup> One of the more pronounced, yet rarely enunciated, of such paradoxes involves two narratives currently informing capitalism's temporality. Despite their contradictory character, these two narratives circulate rather freely within contemporary discourses on capitalism and its imagined futures and, as I will argue, underscore the degree to which the epistemological fragmentation that largely defined the social field of Western modernity persists in the present day. If one of the preeminent epistemological conditions of late capitalism, as Fredric Jameson influentially argued, is a generalized "dedifferentiation of fields, such that economics has come to overlap with culture [and] culture has equally become profoundly economic or commodity oriented," then juxtaposing the two narratives informing capitalism's contradictory temporality works toward more refined investigation of the epistemological and political striae that persist within this generalized process of dedifferentiation Jameson identified over two decades ago.<sup>2</sup>

The first of the two narratives through which capitalism is currently rendered temporally intelligible is an explicitly political discourse whose success in hegemonizing the field of political common sense after the collapse of the Soviet Union has been a constant point of criticism on the left, despite — or perhaps precisely because of — the seeming felicity of its claims. Originally published in the American policy journal *The National Interest* in the summer of 1989, Francis Fukuyama's thesis on what he called "the end of history" attempted to revive an embattled Hegelian understanding of historical evolution by observing a remarkable global consensus concerning the legitimacy of the Janus-faced pairing of liberal democracy and market capitalism as an overall system of governance. "The most profound thinkers of the twentieth century," writes Fukuyama "have relentlessly attacked the idea that history is a coherent or intelligible process."<sup>3</sup> Yet the widespread consensus regarding the legitimacy of liberal capitalism in the post-1989 period indicates, argued Fukuyama, that we may have indeed reached a certain limit or end to the historical process as Hegel might have imagined: an end of history not in the sense that "important events would no longer happen," as Fukuyama put it, but in the sense that "there would be no further progress in the development of underlying [political] principles and institutions, because all of the really big questions have been answered."<sup>4</sup> While

Fukuyama's ostentatious claim continues to evoke widespread criticism, such criticisms (which generally proceed by qualifying Fukuyama's thesis rather than confronting it directly) are always tinged with a certain degree of anxiety or unease, undoubtedly due to the fact that at the empirical level at least, Fukuyama seems to have been correct. This is not to say that the spread of liberal capitalism after the collapse of the Soviet Union should be understood as the willing embrace of a self-evident political truth instead of the aggressive expansion of a politico-economic organism into new environments, but, nevertheless, there can be little doubt that the field of political discourse, especially in the West, has significantly narrowed over the past two decades in conformity with Fukuyama's thesis. While the conflicts between progressive and conservative forces continue to populate Western headlines as much as ever, these debates no longer hinge on fundamental organizational disagreements but are battles fought over more modest modifications to regulatory mechanisms, such as corporate taxation, environmental protection, immigration, and so on. As Slavoj Žižek is fond of reiterating, "it is easy to make fun of Fukuyama's notion of the 'End of History', but most people today are Fukuyamean, accepting liberal-democratic capitalism as the finally found formula of the best possible society, such that all one can do is try to make it more just, tolerant, and so on."<sup>5</sup> If one were then to articulate the mode of temporality with which Fukuyama's political narrative endows contemporary capitalism, it would surely be a kind of *stasis*: in accordance with the Hegelian legacy Fukuyama evokes, dialectical motion has all but ceased, and tinkering with a stable liberal-capitalist synthesis, rather than inciting violent and bloody revolution, has become the privilege of those who inhabit the spaces of the globe where History has finally ended.

Yet if liberal-democratic capitalism has been endowed with a static temporality at the level of official politics, it is simultaneously narrativized, even burdened, by an almost diametrically opposed temporality at the level of technological development. Far from having reached a point of finality or conclusion, the promise of new and ever-more sophisticated technics not only drives capitalist consumerism in the West but is readily evoked as a justification for exacerbating environmental degradation, under the pretence that new and as-yet-unimagined technologies will miraculously emerge at some future date to remedy problems that are perceived to be too difficult and expensive to address in present. From a technological perspective, then, contemporary capitalist society is witness to a strange stylistic inversion whereby the voice of the pragmatic and level-headed scientist has taken to enunciating claims that far outstrip anything that may have occurred to the most radical utopian philosopher. As popular physics writer Michio Kaku asserts with a surprisingly anachronistic Enlightenment cadence, human abilities within one hundred years will be such that the species will more closely resemble the "gods of mythology" than the more modest collection of natural subjects that informed the political philosophy of Locke or Rousseau:

By 2100, our destiny is to become like the gods we once worshipped and feared. But our tools will not be magic wands and potions but the science of computers, nanotechnology, artificial intelligence, biotechnology, and most of all, quantum theory... Computers, silently reading our thoughts, will be able to carry out our wishes. We will be able to move objects by thought alone, a telekinetic power usually reserved only for the gods. With the power of biotechnology, we will create perfect bodies and extend our life spans. We will also be able to create life-forms that have never walked the surface of the earth. With the power of nanotechnology, we will be able to take an object and turn it into something else, to create something out of nothing. We will ride not fiery chariots but sleek vehicles that soar by themselves with almost no fuel, floating effortlessly in the air. With our engines, we will be able to harness the almost unlimited energy of the stars.<sup>6</sup>

The conflicting temporality of the present age thus becomes outright paradoxical when examined in terms of the ontological assumptions informing a politics of stasis amidst technological revolution. At the political level, the impossibility of further innovation at any fundamental level is built on the solid ontological foundation provided by the (recently discovered) species *homo oeconomicus*: our fixed political and economic consensus is little more than the pragmatic resignation that, as Jacques Rancière puts it, “[only] the growth of consumer narcissism puts individual satisfaction and collective rule in perfect harmony” and thereby defends society against the excesses of substantive democratic rule.<sup>7</sup> Given, however, that the political excesses that are thought inherent to truly democratic life cannot be simply erased from the equation but must be balanced off by an opposing consumerist excess — which is best produced by a system that, to paraphrase Marx, must constantly revolutionize the objects of consumption — then the present moment is witness to a truly paradoxical and disjointed scenario: if it has already been said of our age that it is easier to imagine the end of all life on earth than the seemingly more modest task of imagining a different organization of production, then it is similarly the case that it seems infinitely easier to imagine the categorical transformation of the biological species through scientific marvel than to consider the seemingly far more remote possibility that a correlative notion of human nature might somehow shift enough to embrace a different mode of politics outside the current consensus.

It is through the narrative parallax opened by these two logically conflicting, yet empirically coterminous accounts of contemporary capitalist society that the theoretical interrelationship between technological development and political theory warrants more refined attention than it has often received. This is not to say that the tradition of Marxist thought has ignored the possibilities that technology offers the political: Jürgen Habermas’s two-volume magnum opus *The Theory of Communicative*

*Action* took up this problematic explicitly (though it is generally agreed that this work signalled Habermas's departure from his earlier Marxist orientation for a more liberal stance) and some of the most innovative work over the past decade, most influentially the work of Michael Hardt and Antonio Negri, has been dedicated to studying the ways in which the transition from industrialism to post-industrialism — specifically the economic ascendancy of information and communications technologies in the advanced Western economies — poses serious challenges with respect to some of the basic mechanisms of capitalist accumulation. As part of a dialogue with this prior work, this essay aims to construct (or begin constructing) a more refined, or at least differently calibrated, means of theorizing the unassuming political implications of technological development by, in this instance, examining a discourse on the idea of a technologically-induced state of “post-capitalism” that pre-dates the current critique of post-industrialism or post-fordism. For while it is common, and not inaccurate in most respects, to identify the twentieth century as a golden age of capitalism in terms of sheer growth and stability — such that Giovanni Arrighi thought it appropriate to describe 700 years of capitalist development with the phrase “the long twentieth century” — it is telling to observe that twentieth-century literature on the topic of economics and technology, from the most renowned economists of the century, was uniformly convinced that the saga of capitalism was fast drawing to its conclusion.<sup>8</sup> According to this literature, advances in industrial technology and mass production, particularly in relation to efficiencies associated with economies of scale, meant the gradual but irreversible decline in the importance of the market in economic development and policy, and thus the end of capitalism in any essential terms. Examining this earlier discourse of technologically-induced post-capitalism not only provides greater conceptual clarity with respect to today's critique of post-industrialism or post-fordism, but also highlights the specific ways in which contemporary notions of culture, technology, and politics continue to stand in relief against one another and within the more general process of dedifferentiation with which Jameson (and others) characterized late or post-industrial capitalism.

### **Theorizing Post-Capitalism Technologically**

Of course, the idea that advances in industry and technology were producing an economy or society that was tending toward what could be called post-capitalism extends back to the beginnings of the industrial revolution itself, and found perhaps its first and richest resource in the work of Henri de Saint-Simon.<sup>9</sup> Yet where Saint-Simon's forecast of the planned industrial society is in large measure a utopian exercise that gathers up the entirety of the social into its formal parameters in an attempt to map out or construct, in great detail, how the future industrial society will be governed *in toto*, the principal object of this brief genealogy would be a more discrete and focused literature that understands technological advances during the twentieth century to have developed in contradiction to the laws of capitalist

accumulation, such that industrialization in general was thought to be producing a condition of post-capitalism. From across the political spectrum, twentieth-century economic thought manifests a remarkable consensus in which the principal effect of the progressive advance in scientific knowledge and its application in industry would be the demise of the market as the principal arbiter of value and allotter of resources in the industrial system. Capitalism, it seemed, was destined to become increasingly socialistic as technicians and managers wrested control of economic enterprises from the touted bourgeois entrepreneurs of the classical liberal age and, from this, ushered in a new programmed or managerial society of the future.

In methodological terms, this consensus was grounded in Marx's analysis of the laws of capitalist development in *Capital* (Vol. 1), specifically Chapter 32, "The Historical Tendency of Capitalist Accumulation," in which Marx describes what he calls the "centralization of capitals."<sup>10</sup> While many of the twentieth century's most renowned economists tended to balk at Marx's wild political imagination, almost none questioned the validity of Marx's contention that the laws of capitalist development compelled increasing capital concentration and the concomitant impoverishment of the market for appropriately allocating resources. In his widely read *Finance Capital* (1910), for instance, Rudolf Hilferding argued that the centralization of banking and credit, what he called "cartel capitalism," not only biased the impersonal and objective mechanisms of the market but actually worked counter to the general tendency of reification otherwise thought inherent to capitalistic governance:

In credit transactions the material, business relationship is always accompanied by a personal relationship, which appears as a direct relationship between members of society in contrast to the material social relations which categorize other economic categories such as money; namely, what is often called "trust". In this sense a fully developed credit system is the antithesis to capitalism, and represents organization and control as opposed to anarchy. It has its source in socialism, but as been adapted to capitalist society.<sup>11</sup>

While Hilferding's thesis that the socialization of the capitalist economy was based in the increasing role of credit and banking in the industrial economy may strike the contemporary reader as especially counterintuitive, what is germane in Hilferding's account is that the organic growth of what he calls "cartel capitalism," in which the principal economic actors are large organizations rather than enterprising individuals, necessitates an abandonment of the impersonality of the market and, in this sense, a counterforce against the general reification associated with capitalist development as a whole. If capitalism was defined by Marx as a system in which things or objects mediated and thereby disguised relationships between actual living subjects, the rise of credit and central banking de-reified capitalism by reuniting

these subjective agents within the economic process itself (though, it should be noted, Hilferding's conception of the personalized nature of this system was more similar to the economy of exchanges represented in *The Sopranos* than the association of free men Marx had imagined).

Yet it was not only economic theorists of a Marxian persuasion that had begun to draw the conclusion that capitalism may be working itself out of a job. In his polemical *The Road to Serfdom* (1944), Friedrich von Hayek focused more narrowly on the anti-market effects of technology, though Hayek is somewhat unique in this literature insofar as he fundamentally denied that the market's decline had anything to do with internal or infrastructural tendencies toward concentration: "the myth is deliberately cultivated," argued von Hayek, "that we are embarking on [a] new course not out of free will but because competition is spontaneously eliminated by technological changes which we can neither reverse nor should wish to prevent.... Monopoly and planning is not the result of any 'objective facts' beyond our control, but the product of opinions fostered and propagated for half a century."<sup>12</sup> Remarkably idealist in its execution, Hayek's argument simply asserts that those wielding political influence (in England predominantly, which was the context of his analysis) have failed to understand properly the efficiency of the market's means of resource allocation and are therefore supporting increased state planning out of sheer ignorance or naivety: "it is because everybody wants it that we are moving in this direction...the intellectual history of the last sixty or eighty years is indeed a perfect illustration of the truth that in social evolution nothing is inevitable but thinking makes it so."<sup>13</sup>

More influential than Hayek's ideological polemic, however, is Joseph Schumpeter's widely read *Capitalism, Socialism, Democracy* (1942), in which Schumpeter approaches the analysis of capital from a surprisingly Marxian vantage given his politically conservative orientation, and concludes that the death knell of liberal capitalism would be sounded with what he viewed as the inevitable obsolescence of the entrepreneur, or more precisely the entrepreneurial function within the larger system.<sup>14</sup> For Schumpeter, the essential characteristic of capitalism, or rather the spirit of capitalism to borrow Weber's phrase, is entrepreneurialism: "though entrepreneurs do not *per se* form a social class," writes Schumpeter, "the returns on which the [bourgeois] class lives are produced by...the success of this more or less active sector....Economically and sociologically, directly and indirectly, the bourgeoisie therefore depends on the entrepreneur and, as a class, lives and will die with him."<sup>15</sup> Given the steady pace of technological development, Schumpeter thus argued that the mid-twentieth century onward would almost certainly see the steady transition from capitalism to socialism, and at the forefront of Schumpeter's considerations one finds Marx's assertions about the concentration of industrial magnates and the growing obsolescence of the entrepreneur and small businessman:

It has been pointed out that the very success of capitalist enterprise

paradoxically tends to impair the prestige or social weight of the class primarily associated with it and that the giant unit of control tends to oust the bourgeoisie from the function to which it owed that social weight. .... On the one hand, the capitalist process unavoidably attacks the economic standing of the small producer and trader. What it did to the pre-capitalist strata it also does to the lower strata of capitalist industry... On the other hand, the capitalist process also attacks its own institutional framework — let us continue to visualize “property” and “free contracting” as *partes pro toto* — within the precincts of the big units. Excepting the cases that are still of considerable importance in which a corporation is practically owned by a single individual or family, the figure of the proprietor and with it the specifically proprietary interest have vanished from the picture. ... Thus the capitalist process pushes into the background all those institutions, the institutions of property and free contracting in particular, that expressed the needs and ways of a truly “private” economic activity... The capitalist process, by substituting a mere parcel of shares for the walls of and the machines in a factory, takes the life out of the idea of property.<sup>16</sup>

As the capitalist process becomes increasingly concentrated and automatized, argues Schumpeter, the function of private property, and the concomitant element of entrepreneurial risk that propelled capitalism beyond the fetters of feudalism, is subsequently emptied of its substance as salaried managers and technocrats are increasingly tasked with economic command. As a result, economic decisions no longer tend to reflect narrowly the best interests of the businessmen, which is to say the profitability of firms to the exclusion of all else, but invariably begin to take into account the larger concerns of the professional class of decision makers, such as the importance of a general condition of social stability or harmony. It is in this sense that Schumpeter contends that the concentration of capital, in and of itself, tends to produce the very socializing effects that Marx more dramatically asserted would be the result of political revolt. The socialization of capitalism in the twentieth century, for Schumpeter, thus has its roots in two interconnected processes, one socio-psychological (as he puts it) and the other more properly economic. In the first instance, Schumpeter argues that the critical edge that allowed capitalism to spread the spirit of rational, logical, and empirical thought to all spheres of modern life has at last begun to undermine capitalism itself: “we have finally seen that capitalism creates a critical frame of mind which, after destroying the moral authority of so many other institutions, in the end turns against its own. The bourgeois finds to its amazement that the rationalist attitude does not stop at the credentials of kings and popes but goes on to attack private property and the whole scheme of bourgeois values.”<sup>17</sup> Secondly, the tendency of capitalism toward greater and greater concentration invariably

dilutes economic decision-making to the point where a socialistic logic pervades industrial capitalism not through an exogenous political process but by means of an immanent economic evolution:

Destruction may not be the right word after all. Perhaps I should have spoken of transformation. The outcome of the process is not simply a void that could be filled by whatever might happen to turn up; things and souls are transformed in such a way as to become increasingly amenable to the socialist form of life. With every peg from under the capitalist structure vanishes an impossibility of the socialist plan. In both these respects Marx's *vision* was right. We can also agree with him in linking the particular social transformation that goes on under our eyes with an economic prospect as its prime mover....In the end there is not much difference as one might think between saying that the decay of capitalism is due to its success and saying that it is due to its failure.<sup>18</sup>

The idea that control of capitalist enterprise was being transferred from the owners of the means of production to a new class of technicians and managers was similarly asserted in James Burnham's best-selling *The Managerial Revolution* (1941), in which Burnham contributed greatly to the still-pervasive discourse that state planning is a form of totalitarianism, though for Burnham the source of this totalitarianism was not corrupt politicians but scientific and technological management. A prominent American Trotskyist who would later become one of the United States's most prominent conservative thinkers, Burnham argued that the rise of the managerial society "is part of the general process of social transition...analogous to what happened in the transition from feudal to capitalist society."<sup>19</sup> The coincidence of New Deal America, Soviet Socialism, and German Fascism all provide evidence that even starkly divergent political societies are conforming to a general economic trend in which the reign of capitalism is not becoming more socialistic in the strict sense of workplace democracy, but was rather moving toward what he called the "managerial society":

We are now in a period of social transition...a period characterized, that is, by an unusually rapid rate of change of the most important economic, social, political, and cultural institutions of society. This transition is *from* the type of society which we have called capitalist or bourgeois *to* a type of society which we shall call *managerial*...The managers will exercise their control over the instruments of production and gain preference in the distribution of the products, not directly, through property rights vested in them as individuals, but indirectly, through their control of the state which in turn will control the instruments of production...and that will be quite enough to place them in the position of the ruling class.<sup>20</sup>

If Burnham was to some degree successful in associating technocratic rule with the notion of totalitarianism, then the importance of state planning and the efficiencies associated with economies of scale made possible by industrial technology was given a more benign inflection through the work of one of the more eloquent and influential supporters of rational planning in economic affairs, John Maynard Keynes. A student of noted nineteenth-century economist Alfred Marshall, Keynes's ideas about the necessary function of the state in economic planning would form the keystone of an economic consensus that would hold fast until the beginnings of the neoliberal revolution in the 1970s. In his early 1926 article "The End of Laissez-Faire," Keynes, like Schumpeter and Burnham, observed the tendency of large-scale enterprise to undergo a process of self-socialization as a function of the ascendancy of an intermediary class of managers and technocrats not driven solely by the profit motive: "one of the most interesting and unnoticed developments of recent decades," writes Keynes, "has been the tendency of big enterprise to socialise itself. A point arrives in the growth of a big institution...at which the owners of capital, i.e. the shareholders, are almost entirely dissociated from the management, with the result that the direct personal interest of the latter in the making of great profit becomes quite secondary."<sup>21</sup> While hardly a supporter of state socialism on the Soviet model, Keynes nevertheless opined that the sheer scale of industrial concentration suggested that "the battle of Socialism against unlimited private profit is being won in detail hour by hour."<sup>22</sup> In his most important work, *General Theory of Employment, Interest and Money* (1936), Keynes therefore advocated for the socialization of investment, to a certain degree, as not only a means of ensuring near full employment but as a means of directing markets toward ends more amenable to the general welfare. In theorizing what he called "the state of long term expectation," Keynes argues that "in former times, when enterprises were mainly owned by those who undertook them or by their friends and associates, investment depended on a sufficient supply of individuals of sanguine temperament and constructive impulses who embarked on business as a way of life, not really relying on a precise calculation of prospective profit."<sup>23</sup> Yet as a result of the concentration of the forces of production, which was accelerated by the growing importance of scientific or technical knowledge in advanced industries, investment decisions had shifted from the almost complete sovereignty of ownership to a more diffuse assemblage of managers and technocrats and thereby invariably began to take in a wider purview, which in turn necessitated increasing state organization of the economy:

For my own part I am somewhat sceptical of the success of a merely monetary policy directed toward influencing the rate of interest. I expect to see the State, which is in a position to calculate the marginal efficiency of capital-goods on long views and on the basis of the general social advantage, taking an even greater responsibility for directly organizing

investment.<sup>24</sup>

Keynes's influence in economic theory and policy during the mid-twentieth century can hardly be understated. Aside from constituting the theoretical bedrock of the welfare-state system in the advanced industrial economies, Keynesianism was also (it is sometimes forgotten) the dominant trend guiding World Bank policy which, until the 1970s, promoted "a relatively open, eclectic and pluralist position on many questions of development policy, tolerating if not encouraging government intervention, capital controls and even a limited measure of protection against manufacturing imports."<sup>25</sup>

As the 1960s drew to a close, mainstream economic thought held fast to the consensus that the combined effects of concentrated industrialization, the growing importance of scientific and technical knowledge in the production process, and the fundamental change to the class structure which Burnham influentially identified ensured that the future of economic development in the technologically advanced sectors of the globe would increasingly reject the market as its principal organizational logic or matrix. John Kenneth Galbraith's *The New Industrial State* (1967) can thus be taken as perhaps the last major work in economic theory to argue that the market would continue to take a backseat in matters of production and resource allocation in favor of state planning and technocratic authority. The predominant force in production for the twentieth century, according to Galbraith, will not be entrepreneurial enterprise or small business, but will rather be what he calls the *technostructure*: "in the past, leadership in business organization was identified with the entrepreneur...[but with] the emergence of the organization required by modern technology and planning and the divorce of the owner of the capital from the control of the enterprise, the entrepreneur no longer exists as an individual person in the mature industrial enterprise...there is no name for all who participate in group decision-making or the organization which they form. I propose to call this organization the 'Technostructure.'"<sup>26</sup> And following the trajectory of those before him, Galbraith understands the rise of the technostructure as fundamentally altering the system that economists have traditionally understood as capitalism to such a degree that perhaps the term no longer applies:

We have come to the...conclusion that the enemy of the market is not ideology but the engineer...It is not socialists. It is advanced technology and the specialization of men and process that this requires and the resulting of time and capital. These make the market work badly when the need is for greatly enhanced reliability — when planning is essential. The modern large corporation and the modern apparatus of socialist planning are variant accommodations to the same need.<sup>27</sup>

According to this vast consensus in the economic thinking, stretching from the late nineteenth century to the late 1960s, the advancement of technology in combination with increasing scalar growth in the size of industrial firms meant an increasing socialized economy for interrelated reasons having to do with changes to the class structure and the role of knowledge in the production process. The sheer size and complexity of these productive units meant that the entrepreneur could no longer adequately or competently manage these firms and in their stead emerged a new intermediary class of technicians and managers controlling production and distribution. It was accordingly inevitable that this intermediary strata would expand the purview of the “ends” of the enterprise, so to speak, beyond the immediate profits of shareholders to embrace larger social concerns and, relatedly, the state was bound to intervene in matters once society’s main production units became too big to fail. Efficiencies in economies of scale and the growing importance of accurate scientific knowledge in the production process correlated politically as a gradual democratization of the economic realm.

Yet it is worth recognizing that the mode of democratization that this configuration of knowledge and technology favored was of a limited kind, insofar as it was based on what Daniel Bell described as specifically *mechanical technology*.<sup>28</sup> As this economic consensus continually reiterates, growth and increases in production were no longer dependent on the risk-taking behavior of entrepreneurs, but on the competency of scientists and technicians wielding formal, codified knowledge. Therefore, an economic system defined by a mechanical technology invariably necessitates a certain democratization of the economic realm, but a process of democratization that manifests itself through the standardization of the work force and the assumed supremacy of neutral scientific procedure that merely works itself through a relatively diffuse cadre of managers and technicians. As Galbraith explains,

It is a common impression, not discouraged by scientists, engineers and industrialists, that modern scientific engineering and industrial achievements are the work of a new and quite remarkable race of men. This is pure vanity; were it so, there would be few such achievements. The real accomplishment of modern science and technology consists in taking quite ordinary men, informing them narrowly and deeply and then, through appropriate organization, arranging to have their knowledge combined with that of other specialized but ordinary men. This dispenses with the need for genius. The resulting performance, though less inspiring, is far more predictable.<sup>29</sup>

Galbraith’s articulation of the specific configuration between technology and knowledge, emblematic of Bell’s notion of a mechanical technology, is based on a kind of knowledge that is uniform, standardized, linear, and gradual in its advancement

or development; it can be embodied within any individual agent, who is then slotted into a specific role within the technostructure functioning as a highly differentiated mechanical whole. In short, it is a form of technology that was precisely opposed by the spirit of '68, as it were, and is a kind of knowledge — and thereby a kind of socialism — in which culture, in both an ordinary and aesthetic sense of the term, is de-linked from economic affairs: while culture and cultural performance were crucial as a palliative for the physically deadening work of manual labor and the psychological monotony of the technostructure, cultural competencies had no direct applicability within the production process itself. However, with the return of market as an arbiter or matrix of economic organization after the 1970s, a new configuration of knowledge and technology would emerge that would not only incorporate cultural competencies into its logic, but would assign culture a hitherto unprecedented role in terms of its capacity for creating value. By examining the distinction between the mode of post-capitalist discourse that followed the neoliberal revolution from that which preceded it, it is possible to generate a more cogent notion of the way in which the synthesis of culture and economics under post-industrial conditions is mediated by technology and how this configuration of economics, culture, and technology might be alternatively theorized.

### **The Return of the Market**

In 1968, at just about the same time that Parisian students were revolting against the growth of the kind of techno-productivism (either socialist or capitalist) of which Galbraith spoke, the German Sociological Congress of 1968 took the concept of “Late Capitalism” as its annual theme. The object of the conference was to examine the degree to which the socialization of production in the advanced industrial economies, which included the significant role of state in economic decision making as well as the dampening influence of the market due to the increased role of scientific knowledge in the production process, had advanced to such a degree that the very concept of capitalism had become outdated. The keynote address at the Congress, given by Theodor Adorno and titled “Late Capitalism or Industrial Society?” precisely sums up the central concern of the conference in its opening remarks: the aim of the conference was to “ascertain whether the capitalist system continues to rule, albeit in a modified form, or whether industrial development has made the concept of capitalism itself, the difference between capitalist and non-capitalist states, and indeed the critique of capitalism, outmoded.”<sup>30</sup> Against the vast economic consensus that had prevailed in the West during the period of industrialization, Adorno was much more reluctant to view the advance of technology as itself sufficient to move society in a definitively post-capitalist direction. “According to [the current] thesis,” argued Adorno, “the world has been so thoroughly determined by an unimaginably-extended technology [*Technik*: technics], that the corresponding social relations that once defined capitalism, the transformation of living labor into commodities

and therein the contradiction of classes, is becoming irrelevant, insofar as it has not become an archaic superstition."<sup>31</sup> Against this predominant thesis, however, Adorno asked his audience to consider whether or not the impact of technology, as well as the increased role of the state in economic affairs, could not be better theorized as a strategy for the continuation of the logic of capital in disguised form. In other words, should we not consider, asked Adorno, if the increasing role of the state is merely a temporary solution, in the form of a displacement, to a specific crisis situation from which the market will then return rejuvenated:

Economic interventionism is not, as the older liberal school thought, something cobbled together from outside the system, but is rather system-immanent, the embodiment of self-defense; nothing could illuminate the category of dialectics with greater clarity. This is analogous to what became of the erstwhile Hegelian philosophy of law, wherein bourgeois ideology and the dialectic of bourgeois society are so deeply interwoven, in that the state, presumably intervening from beyond the reach of society's power-struggles, had to be conjured up out of the immanent dialectic of society in order to damper and police the antagonisms of such, lest society, following Hegel's insight, disintegrate. The invasion of that which is not system-immanent is at the same time also a piece of immanent dialectics, just as, on the opposite end of the spectrum, Marx thought of the overthrow of the relations of production as something compelled by the course of history, and nevertheless as something to be realized outside the closure of the system, as a qualitatively different action.<sup>32</sup>

Of course, it would take only another decade for the prescience of Adorno's remarks to become apparent. By the 1970s, the underlying contradictions in the Keynesian compact had become abundantly clear and it was argued, most forcefully by the newly renowned School of Chicago economists, Milton Friedman most predominantly, that only a grand liberalization of markets could solve the stagflation crisis plaguing the global economy. Yet while the return of the market in economic affairs in the late 1970s is a well-documented process from both a celebratory and critical perspective, two elements of this shift warrant particular attention in terms of grasping the new relationship between technology, culture, and politics under neoliberal and post-industrial conditions.

First, the original premise offered in Burnham's *The Managerial Revolution* on the altered class structure of advanced industrial capitalism began to take on a new valence. As mentioned above, Burnham argued that in the industrial economy, a new intermediary class of managers was rising between the two great camps identified by Marx, namely the owners and the workers. Following Burnham's lead, economists throughout the twentieth century believed that this managerial class, which included

industrial scientists and technicians, constituted a socializing force operating within the capitalist economy and foreshadowed a more socially stable, if less dynamic, industrial economy. By the 1970s however, a new literature on this subject appeared which argued that the advanced Western economies, as a response to stagnating growth and the inflationary tendencies associated with Keynesian planning, would be increasingly forced to globalize their production processes, primarily through the outsourcing of manufacturing, and this would definitively alter the way in which this former industrial-managerial class would fit into the new system. Paradigmatic of this shift in socio-economic theory is French sociologist Alain Touraine's *The Post-Industrial Society* (1971) and American sociologist Daniel Bell's *The Coming of Post-Industrial Society* (1973), both of which argued that the shift to what they tentatively called the "knowledge economy" signalled a new form of post-capitalism quite different from that discussed in the first half of the twentieth century. Touraine's *The Post-Industrial Society* begins, somewhat misleadingly, by describing the post-industrial society as a "programmed society" — which harkens back to the industrial age of technicians and scientists carrying out largely automated tasks — but Touraine soon hits upon the core distinction between the industrial and the post-industrial society in terms of its labor processes and its altered class structure. In the post-industrial economy, writes Touraine,

growth results from a whole complex of social factors, not just from the accumulation of capital. Nowadays, it depends much more greatly than ever before on knowledge, and hence on the capacity of society to call forth *creativity*. All the domains of social life — education, consumption, information, etc. — are becoming more and more integrated into what used to be called production factors. This is true of scientific and technical research, professional training, the ability to program change and regulate its elements, the management of organizations with multiple social relationships, and the communication of attitudes that favor mobilization and continual transformation of these production factors.<sup>33</sup>

Building on his assertion that "creativity" is becoming an increasingly important factor in the production process, Touraine foreshadows the later work of Boltanski and Chiapello by arguing that it is not simply exploitation or immiseration that fuels political antagonism in the post-industrial economy, but rather *alienation* in a more expansive or cultural sense:<sup>34</sup> "Today it is more useful to speak of alienation than of exploitation...ours is an alienated society not because it reduces people to misery or because it imposes police restriction, but because it seduces, manipulates and enforces conformism."<sup>35</sup> In a similar way, Daniel Bell's account of the transition to the post-industrial society places special emphasis on the new ways in which knowledge becomes a productive force in its own right, but Bell turns the relation

between knowledge and property in a new direction: while Schumpeter and Burnham had argued that twentieth-century industrialism was hollowing out the driving economic essence of private property through of the ascendancy of a decision-making managerial strata, Bell argues that the knowledge economy also undermines private property, but that it does so through the inherent difficulty in the new processes of commodification, and thus private accumulation, itself:

In capitalist society the axial institution has been private property and in the post-industrial society it is the centrality of theoretical knowledge.... Culture has replaced technology as the source of change in society, and the tensions between the adversary culture and the eroded Protestant ethic have created a remarkable contradiction in the value system of American society....Politically, the problem of post-industrial society...is the growth of a non-market welfare economics and the lack of adequate mechanisms to decide the allocation of goods. For technical and conceptual reasons one cannot measure the value of such goods [creativity, education, knowledge] in market terms....It [has] become the task of the political system to manage these relations in response to the various pressures for distributive shares and social justice.<sup>36</sup>

There are a number of concerns packed into Bell's forecast concerning the social, economic, political, and cultural characteristics of the post-industrial society that necessitate exegesis. First, it is important to say something concerning the infrastructural shifts that motivated these commentaries. For as Touraine and Bell both intuited, knowledge and creativity would indeed play an increasingly important role in contemporary post-industrial society. The ascendancy of creativity as an economic force was not, however, a purely idealistic solution to the problem of stagflation in the Western economies, but was rather the inevitable corollary of the specific technological advances that made the return of the market possible in the first place. Amidst a growing suspicion on the part of economists that economies of scale may not offer the endless increases in economic efficiency they imagined, advances in telecommunications technologies, beginning in the 1970s but growing more intense in the 1980s and 1990s, increasingly suggested that the future of the capitalist economy might lie with smaller (or medium-sized) firms rather than larger industrial giants of twentieth century.<sup>37</sup> By the end of the 1980s, it was becoming increasingly apparent that the growth of information technologies was drastically reducing the costs of decentralized enterprise, which ate away at the efficiencies of vertical integration and industrial concentration by negating the older assumption that intra-firm exchanges were cheaper than inter-firm exchanges. This reduction in the cost of telecommunications and information systems spurred on a profound overall transformation to the industrial regime of accumulation, which David Harvey

perhaps best captures with the term “flexible accumulation.” These advances in communications and information technologies not only undermined the almost century-long consensus that the greatest efficiencies were found in economies of scale, but they led to a broader epistemological transformation whereby an intensive market or network logic began to pervade not only the capitalist economy, but capitalist society as well. In *The Rise of the Network Society* (1996), for instance, Manuel Castells observes that in addition to re-invigorating the market as an inter-firm matrix for economic development over the past three decades, innovations in information and communications technologies compelled firms to re-organize themselves *internally* along market lines: “to manoeuvre in the new global economy, characterized by endless flurry of new competitors using new technologies and cost-cutting capabilities, the large corporations had to become primarily more effective rather than more thrifty...to be able to internalize the benefits of network flexibility the corporation had to become a network itself.<sup>38</sup> And as Luc Boltanski and Eve Chiapello’s argue in *The New Spirit of Capitalism* (1999), it was not only capitalist enterprise that became isomorphically market-oriented in all its aspects, but even social movements opposed to the politics of austerity that accompanied the return of the market likewise adopted the network as their preferred form. Based on their analysis of contemporary social movements and activist politics (in France predominantly), Boltanski and Chiapello contend that

without leading to the formation of a party, [contemporary social movements] likewise have come to recognize themselves in the metaphor of the network. In this network circulate people who are very different in many respects, with divergent opinions in many cases, but are able to come together and aid one another in actions against exclusion based on a minimal definition of rights, which are often demanded with reference to a “citizenship” whose definition remains fluid....[W]e can [therefore] recognize the morphological homology between the new protest movements and the forms of capitalism that have been established over the last twenty years. This homology affords these highly mobile movements the opportunity to recover some purchase precisely where the traditional organizations [political parties, labour unions] have lost their footing.<sup>39</sup>

If, then, the specific configuration of knowledge and technology that dominated capitalism in the early to mid-twentieth century, and which is associated with an earlier version of the post-capitalist society, can be described as a *mechanical technology*, then the configuration of knowledge and technology that characterizes the neoliberal, post-industrial, networked economy is more aptly described, again by Bell, as an *intellectual technology*: rather than defined by a regime of formal, standardized, and codified knowledge wielded by managers and technicians, the configuration

of knowledge and technology that characterizes the neoliberal, post-industrial economy is based on a non-linear or dynamic concatenation of culture, creativity, and communication across highly complex and heterogeneous nodes within a variety of interlinked networks.<sup>40</sup>

While contemporary business and management literature on the topic of innovation thus tends unendingly to sing the praises of creativity as an economic virtue, this literature rarely points out the ways in which the shift from an industrial to a post-industrial economy, and from a mechanical to an intellectual technology respectively, also invites a new conception of post-capitalism. When Bell, as stated above, declared that “the problem of post-industrial society...is the growth of a non-market welfare economics and the lack of adequate mechanisms to decide the allocation of goods,” this is an acknowledgment that unlike the socializing effect of scientific knowledge in the industrial era, the centrality of knowledge in the post-industrial society pushes against the parameters of capitalist valorization from a different direction, namely, by virtue of the informal, uncodified, and communicative character of knowledge that produces growth under post-industrial conditions. Unlike the importance of scientific knowledge in the industrial economy, in which more or less automated technicians carried out tasks dictated by the iron laws of scientific necessity, the forms of knowledge that fuel the post-industrial economy, such as creativity, innovation, language, and cooperation, are all invariably impoverished when submitted to intensive formalization. As André Gorz explains,

This is one of the great differences between the workers of the early manufactories or the Taylorized industries and those of post-Fordism. The former group became operational only after they had been deprived of the practical knowledge, skills and habits developed by the culture of everyday life, and after they had been subjected to a thoroughgoing division of labour....By contrast, post-Fordist workers have to come into the production process with all the baggage they have acquired through games, team sports, campaigns, arguments, musical and theatrical activities, etc. It is in these activities outside work that their liveliness and capacity for improvisation and cooperation have been developed. It is their vernacular knowledge that the post-Fordist enterprise sets to work and exploits them.<sup>41</sup>

As Gorz and others thus recognize, the shift from a Fordist to a post-Fordist — or an industrial to a post-industrial — paradigm signals a fundamental shift in the relationship between everyday culture and economic production: where industrial production actively strips workers of their everyday cultural practices, competencies, and habits in order to integrate its workforce into a rigid, standardized division of labor, post-industrial capitalism places a premium on innovation, improvisation,

flexibility, and communication, and thus strives to merge culture and economy into a contiguous system of creative production. Yet this incorporation of “creativity” or “culture” into post-industrial capitalism is not without its challenges, particularly insofar as the same innovations in communications and information technology that made the neoliberal revolution possible also threaten to undermine some of the central mechanisms of capitalist accumulation as such. First, the principal production force of the post-industrial economy is no longer what Adam Smith described as *simple* or *manual labor*, whose economic value can be calculated through a linear equation of units of production per hour, but is rather described as *cognitive* or *intellectual labor* whose value, in economic terms, resists such simple forms of measurement or evaluation.<sup>42</sup> Second, the commodities produced by cognitive labor, as opposed to the physical commodities produced in an industrial economy, are generally defined by their immateriality: they are ideas, knowledges, affects, and social relations that are not only dynamic or non-linear with respect to the value they produce, but function contrarily to material commodities in terms of their economic accumulation. As Michael Hardt summarizes,

Private property in the form of steel beams, automobiles, and television sets obey the logic of scarcity: if you are using them, I cannot. Immaterial property such as brands, code, and music, in contrast, can be reproduced in an unlimited way. In fact, many such immaterial products only function to their full potential when they are shared in an open way. The usefulness to you of an idea or an affect is not diminished by your sharing it with me. On the contrary, it becomes useful only by being shared in common.<sup>43</sup>

We may conclude, then, that the infrastructural changes that define post-industrialism not only proffer a different version of post-capitalism, but a more intense version. Unlike the post-capitalism that inhered in industrial production, which was a formal phenomenon relating to the system’s class structure and the diffusion of decision-making therein, the iteration of post-capitalism that is borne through the shift to post-industrialism is situated more squarely in the very contents of capitalism itself: it is the very commodities that capitalism produces that threaten to exceed its grasp and unfold into a more inclusive cultural sphere fundamentally antithetical to the logic of private accumulation.

### Conclusion

While there may be a number of insights one might take away from this brief genealogy, I will, in conclusion, enumerate only a few. The first and more general conclusion would simply be to temper proclamations about the imminent demise of capitalism as a result of the differing technics associated with a post-industrial regime of accumulation.<sup>44</sup> As the twentieth-century economic literature on the subject of

capitalism's possible futures reveals, capitalism has been existing at the edge of the abyss for at least a century, and possibly longer. On a more substantial point however, I think this examination of the shift from industrial to post-industrial capitalism reveals, at least to some degree, that while the general process of dedifferentiation Jameson identified does indeed define the morphology of capitalism over the past several decades, especially where the previously discrete fields of "economy" and "culture" are involved, it is increasingly insufficient to leave matters in this general state. As the analysis of the infrastructural shift that underwrote the neoliberal revolution demonstrates — especially where information and communications technologies are concerned — it is not merely the case that culture and economy have amorphously collapsed into each other, rendering the two difficult to discern. While it is surely the case that the rigid hegemonic distinction between "work" and "leisure" that partially defined industrial society has, for instance, collapsed, the current comingling of the economic and the cultural process has not simply negated the concept of culture in relation to economics but has produced a new positive concept of culture as a source of value-creating activity in its own right — which George Yúdice calls a "social imperative to perform" — that conforms to the new conditions of economic production.<sup>45</sup> In other words, the general dedifferentiation of the spheres of industrial modernity did not simply produce an amorphous composite of heterogeneities in a confused postmodern present but, over time at least, new cultural and economic positivities began to cohere and assert themselves within this overall process of dedifferentiation based on new laws of production and distribution governing post-industrialism. And it is based on this recognition of the new positivity of culture in today's changing economic context that, I argue, considerably different political categories from those that circulated within Western industrial modernity become a real possibility. For while Jameson's thesis of dedifferentiation constitutes a crucial starting point for theorizing the changing politics of the present, much analysis and criticism has not only held fast to the discretely related categories of liberal industrialism — the individual, the public, the state, the economy, civil society, and so on — but has attempted to ascertain, anachronistically, to what degree the new technologies either solve or exacerbate the problems of liberal, industrial modernity. "The printed book," as Marshall McLuhan was fond of noting, "did not extend the older forms of [scholastic] education to a wider public — it dissolved the dialogue and created wholly new patterns of political power and personal association."<sup>46</sup> Analogously, it is increasingly important to expand our conceptual horizon beyond the categories that currently populate our political vocabularies and begin to consider to what degree this fundamental transformation in the current mode of production will dissolve the very dichotomous categories of the individual and society that have hitherto defined the politics of modernity, and from this, what new social forms and political categories will cohere within a new epistemological and political syntax.

### Notes

1. David Harvey, *The Enigma of Capital* (Suffolk: Profile, 2010) 120.
2. Fredric Jameson, “‘End of Art’ or ‘End of History?’” *The Cultural Turn: Selected Writings on the Postmodern, 1983-1998* (New York: Verso, 2009) 73.
3. Francis Fukuyama, *The End of History and the Last Man* (New York: Free Press, 1992) 2.
4. Fukuyama, *The End of History and the Last Man* 2.
5. Slavoj Žižek, *First as Tragedy, Then as Farce* (London: Verso, 2009), 88.
6. Michio Kaku, *Physics of the Future* (New York: Doubleday, 2011) 10-11.
7. Jacques Rancière, *Hatred of Democracy* (London: New York, 2006) 21.
8. Giovanni Arrighi, *The Long Twentieth Century* (London: Verso, 1994).
9. See Henri de Saint-Simon, *Social Organization, the Science of Man and Other Writings*, ed. and trans. Felix Markham (New York: Harper and Row, 1964).
10. Karl Marx, *Capital, Vol. 1*, trans. Ben Fowkes (New York: Vintage, 1977) 929.
11. Rudolf Hilferding, *Finance Capital: A Study of the Latest Phase of Capitalist Development* (London: Routledge, 1981) 180.
12. Friedrich von Hayek, *The Road to Serfdom* (London: Routledge, 1944) 32.
13. Hayek, *The Road to Serfdom* 35.
14. Unlike von Hayek’s superficial knowledge of Marxian or socialist economics, Schumpeter’s familiarity with Marx’s analysis of capital is extensive, to the point that *Capitalism, Socialism, Democracy* makes original contributions to the field of Marxian economics as such. Schumpeter was personally close to the school of Austro-Marxists that included Max Adler, Otto Bauer, and Rudolf Hilferding, whom he met in graduate school at the University of Vienna in 1905-1906. Accordingly, Schumpeter adopted much of Marx’s approach to his own study of modern capitalism, particularly when it came to the wider social and cultural — or superstructural — changes associated with the rise of capitalism. As K.W. Rothschild puts it in *Schumpeterian Economics*, “if we want to oversimplify we could say that while there exists any number of people who are regarded as non-Marxist socialists, there are very few specimens who can be regarded as non-socialist Marxists. Schumpeter is one of them.” See K.W. Rothschild, “Schumpeter and Socialism” in *Schumpeterian Economics*, ed. H. Frisch (New York: Praeger, 1981) 114.
15. Joseph Schumpeter, *Capitalism, Socialism, Democracy* (New York: Harper-Perennial, 2008) 134.
16. Schumpeter, *Capitalism, Socialism, Democracy* 139-42.
17. Schumpeter, *Capitalism, Socialism, Democracy* 143.
18. Schumpeter, *Capitalism, Socialism, Democracy* 162.
19. James Burnham, *The Managerial Revolution* (New York: Van Rees, 1941) 112.
20. Burnham, *The Managerial Revolution* 71-72.
21. John Maynard Keynes, “The End of Laissez-Faire.” *The Collected Works of John Maynard Keynes* (London: MacMillan, Royal Economic Society, 1972) 289.
22. Keynes, “The End of Laissez-Faire” 290.
23. John Maynard Keynes, *The General Theory of Employment, Interest and Money*. (London: MacMillan, Royal Economic Society, 2008) 96.
24. Keynes, *The General Theory of Employment, Interest and Money* 164.
25. M.C. Howard and J.E. King. *The Rise of Neoliberalism in the Advanced Capitalist Economies* (New York:

- Palgrave-MacMillan, 2008) 187.
26. John Kenneth Galbraith, "The Technostructure." *The Essential Galbraith* (Boston: Houghton Mifflin, 2008) 71.
  27. Galbraith, "The Technostructure" 33.
  28. Daniel Bell, *The Coming of Post-Industrial Society* (New York: Basic, 1973) xxx.
  29. Galbraith, "The Technostructure" 67.
  30. Theodor Adorno, "Late Capitalism or Industrial Society?" *Opening Address to the 16th German Sociological Congress, 1968*. <http://www.efn.org/~dredmond/AdornoSocAddr.html>
  31. Adorno, "Late Capitalism or Industrial Society?"
  32. Adorno, "Late Capitalism or Industrial Society?"
  33. Alain Touraine, *The Post-Industrial Society*, trans. Leonard Mayhew (New York: Random House, 1971) 5-6, emphasis added.
  34. See Luc Boltanski and Eve Chiapello, *The New Spirit of Capitalism* (London: Verso 2000).
  35. *The Post-Industrial Society* 9. Touraine's notion of alienation, it should be noted, is more Hegelian than this excerpt may make it appear. As Touraine writes, "a man is not alienated because his 'natural' needs are crushed by a 'dehumanized' society, by work on an assembly line, by urban congestion, or the mass media. Such expression only gives rise to vague moral philosophy. It is easy to understand why they irritate philosophers who have learned the more exacting use Hegel made of this notion. Alienation must be defined by social relationships. A man is alienated when his only relationship to the social and cultural directions of his society is the one the ruling class accords him as compatible with maintenance of his own dominance. Alienation means canceling out social conflict by creating *dependent participation*" (8-9).
  36. Bell, *The Coming of Post-Industrial Society* 115, 118, 119.
  37. As economist J. Quiggin observes, "for most of the 20th century, the cost of telecommunications services has declined at a real rate of 4-5% per year. For long-distance services, the decline was even more rapid — around 10% per year. Over a period of 100 years, the compound effect of these declines yields a reduction in costs by a factor of one million or more." See Quiggin, "The Rise and Fall of Economy: Finance." *Globalization: Australian Impacts*, ed. C. Sheil (Sydney: U New South Wales P, 2001) 25.
  38. Manuel Castells, *The Rise of the Network Society* (Oxford: Wiley-Blackwell, 2010) 164.
  39. Boltanski and Chiapello, *The New Spirit of Capitalism* 53.
  40. Bell, *The Coming of Post-Industrial Society* xxx.
  41. André Gorz, *The Immaterial*, trans. Chris Turner (Calcutta: Seagull, 2010) 9-11.
  42. For a theoretical exegesis of the concept of cognitive capitalism, see Carlo Vercellone, "From Formal Subsumption to General Intellect: Elements for a Marxist Reading of the Thesis of Cognitive Capitalism." *Historical Materialism* 15 (2007): 13-36.
  43. Michael Hardt, "Two Faces of the Apocalypse: A Letter from Copenhagen." *Polygraph* 22 (2010): 268.
  44. For an apt critique on this point see Slavoj Žižek, "The Revolt of the Salaried Bourgeoisie," *London Review of Books* 34:2 (January 2012): 9-10.
  45. George Yúdice. *The Expediency of Culture: Uses of Culture in the Global Era* (Durham, Duke UP, 2003) 40.
  46. Marshall McLuhan, "Pop Culture/Mass Culture: American Perspectives." *Understanding Me: Lectures and Interviews* (Toronto: McClelland & Stuart, 2005) 25.

