Book Review:

Manuel Castells' Trilogy *The Information Age: Economy, Society and Culture*.
Volume 1. *The Rise of the Network Society* (Oxford: Blackwell, 1996), pp. xvii + 556.
Volume 2. *The Power of Identity* (Oxford: Blackwell, 1997), pp. xv + 461.
Volume 3. *End of Millennium* (Oxford: Blackwell, 1998), pp. xiv + 418.

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Manuel Castells' massive trilogy, "The Information Age", is rapidly becoming unavoidable (though not necessarily easy) reading for anyone trying to understand what Castells himself calls the age of "informationalism." The following review, which appeared in "Science, Technology, and Human Values" (official journal of the Society for Social Studies of Science) in the December 1998 issue, is by Steve Fuller of Durham University, England.

The critical response to this trilogy has so far betrayed signs of short-term historical memory loss of the sort associated with IT intoxication. For example, Anthony Giddens begins his review of the first volume in *The Times Higher Education Supplement:* "We live today in a period of intense and puzzling transformation, signaling perhaps a move beyond the industrial era altogether. Yet where are the great sociological works that chart this transition?" When this question was first posed a quarter century ago, the obvious answer was Daniel Bell's *The Coming of Postindustrial Society* (1973), the single work most responsible for displaying the impending social, political and economic relevance of information technology. Yet, despite Bell's clear historic significance, he remains a shadowy figure, typically written out of sociology textbooks and paid only lip service even in texts (such as Castells') specifically concerned with the "informatization" of society. An important reason for the silent treatment is that Bell underwent a highly publicized transformation from Trotskyism in the early 1950s, through a series of disillusionments with the American labor movement and leftist intellectuals, which culminated in a staunch defense of the universities in the face of student revolts in the late 1960s and early 1970s. The unpronounced verdict is that Bell betrayed the left and has since then refused to seek redemption. However, over the years, Bell suggested that the potential of computers to store, process and distribute knowledge was instrumental to his conclusion that a revolutionary vanguard with a distinct "proletarian standpoint" was obsolete. Soon, no genuinely valuable form of knowledge would be restricted to a particular class, and in any case, no class could be entrusted with producing genuinely valuable knowledge.

I mention Bell's career as an introduction to Castells because to admit—as both Bell and Castells do—that information technology has become the principal mode of production and perhaps even legitimation in today's world is to seriously challenge the Marxist proposition that emancipatory knowledge is integrally tied to class position. Not surprisingly, perhaps, over the past 30 years, Castells' own career has also metamorphosed quite noticeably. Beginning as a Marxist specializing in urban grassroots politics, Castells is now a highly sought after advisor on the world's changing socioeconomic order who is based in one of the U.S.'s premier universities. He has been a member of the European Commission's High Level Expert Group on the Information Society and, in 1992, was invited (along with three collaborators, one of whom is now president of Brazil) to advise Boris Yeltsin on political economic policy. To be sure, very much like Bell, Castells has taken pains to ensure the academic integrity of his activities (especially in terms of restricting the sources of his research income).

The plot structure of the 1500 pages under review is framed in terms of a dialectic that encapsulates "informationalism," which Castells defines as capitalism's final frontier. Volumes 1 and 2 of the trilogy usefully separate the "thesis" and "antithesis"—"network" versus "identity"—while Volume 3 offers less a resolution than a recapitulation and update of this tension. The prehistory of the dialectic consists of the efforts taken by the major nation states at the height of the Cold War to increase their surveillance and military capabilities. They constructed vast electronic information and communication networks, which with the decline of superpower hostilities have unwittingly provided the means to enable large corporations and, increasingly, special interest groups and private individuals to destabilize and even dismantle both state power and the norms of civil society. (The breakdown of the Roman Empire into feudal fiefdoms and free cities comes to mind as a historical precedent.) However, this electronic subversion of the social order has exacted its own toll from the subversives. Basically, the network mentality strips both firms and individuals of any secure sense of identity. Thus, we see the decline of career employment and the conversion of corporations to investment companies. Nothing can get done unless you become a node in a network, but once the job is done, new jobs force the nodes into new network configurations. Both human and corporate life thus comes to defined by the "project." The only way to check this reduced sense of identity is to extend the life of the project indefinitely, which serves to revive the fortunes of social movements that are fueled by a nonnegotiable sense of resistance or "identity politics." The various fundamentalisms, insurgencies, and lifestyles that pepper the political landscape of our times take full advantage of the network's flexible infrastructure to combat their oppressors, both real and virtual. But unlike culture-based resistance to global capitalism in the 19th century, these movements do not aim for territorial sovereignty backed by a strong state. Such a prospect is seen as undesirable as a future of force-fed McDonaldization. The communities defined by identity politics exist in virtual space and online time. Their presence is felt mainly in their ability to shape the code through which all network transactions occur. For, whereas the informational capitalists treat the network in purely strategic and instrumental terms, the new social movements rely on the network for their sense of solidarity and hence may turn out to be the gatekeepers of the network's democratic potential.

This brings us to the end of Volume 2. Readers of Castells' last major work, *The Informational City* (1988), may justifiably wonder what *The Network Society* Castells' designation of the Mexican Zapatistas as an "informational guerilla movement" (Vol. 2, p. 79) has already become grist for the social theory mill (see P. McNaughten and J. Urry, *Contested Natures*, 1998). After all, the Zapatista strategy of winning the war of global public opinion by the Internet—and that victory affecting the outcome of the flesh-and-blood war at home—goes a good way toward remediating Jean Baudrillard's remarks about the "simulated" character of the Persian Gulf War. But a more significant feature of this volume is Castells' remarkably evenhanded treatment of "new social movements." For such social theorists du jour as Ulrich Beck, these movements constitute the locally fragmented successors of world socialism. In contrast, Castells readily includes fundamentalist Islam and Christianity in their number, thereby complicating the political implications of the resistance to global informationalism. Instead of reducing fundamentalism to traditionalism, Castells, to his credit, highlights how the tools of the putative oppressors can be used for liberatory ends. However, the ease with which Castells removes the distinctly ideological character of these movements from his analysis—by defining them in terms of their common relationship to information technology—suggests a level of detachment that may have dulled his political sensibility. This point turns out to have a special poignancy, given Castells' own recent efforts at advising policymakers.

Having read the first two volumes of *The Information Age* six months before the third, I did not expect Castells to conclude the trilogy on a downbeat note. Rather, I supposed that he would continue to sustain the dialectic between network and identity, perhaps blandly predicting that pockets of resistance would thrive in the midst of global capital expansion. However, any whiff of "have your

cake and eat it" is quickly dispelled in the Introduction to *End of Millennium*. Here Castells makes clear that he originally underestimated the ability of a globally networked criminal economy to pick up the slack left by a downsized and debilitated system of nation states. The breakdown of law and order in the former Soviet Union is his personal case in point, which returns us to the advice that Castells and his colleagues gave Yeltsin in 1992. Unfortunately, this crucial point for understanding the trilogy's normative orientation is buried in Chapter 3, footnote 39. Here we learn that Castells told Yeltsin that if legal and other institutional safeguards were not first put in place, a privatized economy would return Russia to a veritable state of nature. But because Yeltsin's economic advisors seemed to associate such safeguards with a continuation of the dreaded socialist regime, they unintentionally opened the door to the mafia culture that currently holds Russia in its grip, typically with help from abroad. And this may be only the beginning. Much of Volume 3 is spent conjuring up the intriguing, albeit horrific, spectre of information technology enabling the coordination of criminal cartels that shadow, penetrate and ultimately elude the regulation of capital flows, to which everything else is becoming connected. The resulting picture looks very much like the Manichaean struggle between the Forces of Good and Evil that have framed so many action hero plots since the Great Depression. The likes of Batman rarely battled an alternative regime, but rather an anti-regime that thrived on disorder. However, the 21st century Batperson will need to be more than a hacker with extraordinary cryptographic and computational skills; he or she will also require considerable political skills, since the decline of welfare provision will remove any overriding reason for those left behind by the informational revolution to support existing governments. This emerging "fourth world," in Castells' terms, is the wild card that holds the fate of the next century.

I find this picture quite compelling, but it would be easy to see how a reader of just *The Network Society* could be left with the impression that Castells endorses the illusory neoliberal future that Yeltsin's advisors embraced. For, while Castells says early on (Vol. 1, p. 9) that the state is the greatest determinant of technological change, he more persistently observes that the sovereignty of the nation_ state is perhaps in irreversible decline. Moreover, since Castells manages to tie changes in virtually every dimension of social life—from intimate relations to financial flows—to the innovation and diffusion of information technology, his self-styled "circumspection" (Vol. 3, p. 359) on political matters can leave the impression that not much can be done at the level of public policy to alter the forward momentum of technological change. Indeed, he even claims that the specific origins of the latest wave of the IT revolution in Silicon Valley, California, has anchored the revolution's subsequent development (Vol. 1, p. 5).

Consider how Castells handles the deepening of global class divisions resulting from the polarization of info rich and info_ poor. (Vol. 1, p. 220ff). For the first two volumes, Castells accentuates the positive side of this development. The growing number of highly skilled workers in most nations—including those of the Third World—leads him to conclude that, gloomy forecasts notwithstanding, informationalism does not impose any additional barriers to social mobility and may even remove some traditional ones, especially as defined by the boundaries of nation states. Certainly, informationalism must be credited with the rapid economic growth experienced by certain parts of India and East Asia. However, the transnational nature of networking also means that the rich are more than ever capable of shutting out the concerns of the poor in their own countries, as their interests are increasingly tied to the efforts of fellow elites in other parts of the world. Castells catches this point—an extension of dependency theory—in Volume 3.

However, what Castells completely misses is that the overall increase in high skilled labor means that the value of being highly skilled declines, which in effect makes any given member of the "elite" more dispensable than ever. Matters are hardly helped by the accelerated drive for technological innovation that is generally celebrated by Castells. That merely threatens to render obsolete the very

idea of skills that can be profitably deployed over the course of a lifetime. In that respect, informationalism's openness to "lifelong learning" backhandedly acknowledges the inability of even the best schooling to shelter one from the vicissitudes of the new global marketplace. Education, though more necessary than ever, appears much like a vaccine that must be repeatedly taken in stronger doses to ward off more virulent strains of the corresponding disease—in this case, technologically induced unemployment. If there is an adaptive group in this environment, it is those who endure the entire gamut of the educational system without taking it too seriously. Not surprisingly, informationalism's entrepreneurs are drawn precisely from this group. It would seem that the time is ripe to reinvent Thorstein Veblen's critique of the "learned incapacities" of academic class.

The sheer magnitude of ambition and achievement of Castells' trilogy has led Giddens in his THES review to compare *The Information Age* to Max Weber's unfinished masterwork *Economy and Society*. Marx's three volume Capital also has also been invoked (by Castells' former Berkeley collaborator, Peter Hall) as a reference point. Moreover, Castells himself invites comparisons to both (Weber in Vol. 1, p. 195 ff; Marx in Vol. 3, p. 358). It would be presumptuous to assess such comparisons now, not least since Marx and Weber were themselves dead before their own works acquired classic status. Nevertheless, some remarks are in order about changes in the material conditions that enable someone like Castells to emerge as a potential successor to Marx and Weber in the "grand theory" sweepstakes at the end of the millennium. Here we must return to that institution whose absence from Castells' "encyclopedic" account of our times is most conspicuous: the university. Castells' example demonstrates that the social sciences have caught up with the natural sciences in requiring considerable economic capital in order to accumulate what Pierre Bourdieu calls "symbolic capital". As economists might say, the "entry costs" for grand theorizing have become so high that most people are shut out from the outset. To put it in Castells' own terms, universities are increasingly divided into the "info rich" and the "info poor," and Castells clearly belongs to the former, which is tantamount to the theorizing class. Aside from his access to underlabouring graduate students and colleagues, Castells has acquired an ability to travel to most of the places he talks about, which cannot be reciprocated by most of the residents of those places. No doubt many of them would like to know how informationalism has affected his practices, but their inability to find out constitutes an epistemic asymmetry that enables Castells to enjoy the materialist equivalent of a transcendental standpoint on the world's affairs.

All the more interesting, then, that Castells turns Marx's Eleventh Thesis on Feuerbach on its head by saying that philosophers of the future should interpret the world differently rather than trying to change it (Vol. 3, p. 359). Interpretation turns out to be much more expensive than action in the information age. Thus, the reader should presume only a false modesty when Castells says, "Theory and research, in general as well as in this book, should be considered as a means for understanding our world, and should be judged exclusively on their accuracy, rigor, and relevance" (Vol. 3, p. 359). Given the costliness of judging Castells by the first two criteria, I suppose that we shall have to concentrate on the third, and here Marx's Eleventh Thesis may still come in handy.

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