

# From “Post-Industrial” to “Network Society” and Beyond: The Political Conjunctures and Current Crisis of Information Society Theory

Marko Ampuja, Juha Koivisto

*Department of Social Research, University of Helsinki, Finland, [marko.ampuja@helsinki.fi](mailto:marko.ampuja@helsinki.fi),  
[juha.u.koivisto@helsinki.fi](mailto:juha.u.koivisto@helsinki.fi)*

**Abstract:** This article critically discusses the intellectual and conceptual shifts that have occurred in information society theories (and also policies) in the previous four decades. We will examine the topic by focusing on the work of Daniel Bell and Manuel Castells, arguably two of the most important information society theorists. A key element in the academic shift from “post-industrial” (Bell) thinking to the discourse on “network society” (Castells) is that it has brought forward a different way of understanding the role of the state vis-a-vis the development of new information and communication technologies, as well as a new assessment of the role of the state in the economy and society at large. Against the Keynesian undertones of Bell’s ideas, Castells’ network society theory represents a neo-liberally restructured version of “information society” that is associated with the rise of flexibility, individuality and a new culture of innovation. We argue that these changing discourses on the information society have served a definite hegemonic function for political elites, offering useful ideals and conceptions for forming politics and political compromises in different historical conjunctures. We conclude the article by looking at how the on-going global economic crisis and neoliberalism’s weakening hegemonic potential and turn to austerity and authoritarian solutions challenges existing information society theories.

**Keywords:** Information Society, Daniel Bell, Manuel Castells, Innovation, Entrepreneurship, State, Ideology, Conjuncture, Neoliberalism

## 1. The Origins of “Information Society”

Discourses concerning “information society” have had a major influence on sociological thinking and also policy-making in the previous four decades. In this article we will analyse such discourses from a critical perspective, that is, by examining the ways in which the notion of “information society” has been formulated in different times, in response to changes in the political-ideological conjunctures of advanced capitalist countries. We will begin the article by looking at the emergence of “information society” as a key concept. This will be followed by a more detailed consideration and critique of the work of two important information society theorists, Daniel Bell and Manuel Castells. Their works have served hegemonic functions for political elites across the capitalist world, providing them with ideals and conceptions for forming politics and political compromises in recent decades. Yet, in the last part of the article we will discuss how the on-going global economic crisis and the concomitant weakening of neoliberalism has challenged the effectiveness “information society” as a tool for creating and maintaining global capitalist hegemony.

The notion that “information” or “knowledge” somehow dominates societies has a real foundation in the needs of developing capitalism regarding the organisation of large-scale production and exploitation of labour, the efficient movement of raw materials and goods by transportation, and the collection of information regarding market successes and failures, all of which are dictated by the imperatives of capitalist economic competition. According to Beniger (1986), the evolution of modern means of mass production, energy creation and transportation between the late nineteenth and early twentieth centuries generated a ‘crisis of control’ that led to pressure to develop adequate methods of management and information pro-

cessing. This created a need for increasing armies of engineers, managers, statisticians, mathematicians, physicists and other scientifically trained experts, who, by working in state administration or private corporations, have sometimes even been perceived as the new class of modern industrial capitalism, even more powerful than property owners.

Already in the early nineteenth century, the French aristocrat Henri de Saint-Simon, influenced by the French revolution, envisioned a new type of society ruled by industrialists, technocrats and scientists who embodied the emerging principles of meritocracy, industrialisation and scientific progress that he conceived as forces benefitting society as a whole. Saint-Simonism had a direct influence on later discussions on the information society that became prevalent in the 1960s and early 1970s (see Mattelart 2003; Steinbicker 2011a). However, as Preston (2001, 63) rightly notes, due to the different uses and definitions of the concept of information society and other closely related notions, such as post-industrial society or knowledge society, “any linear search for [its] precise origins is somewhat pointless” especially since information society discourses emerged simultaneously in North America, Western Europe and Japan. In the socialist countries, this issue was discussed under the heading of “scientific and technological revolution”, promoted in the Marx-inspired work of Radovan Richta et al. (1969).

The main impetus for the overall interest in information technologies came from states and major companies that were keen to develop new, more effective infrastructures and forces of production, which were considered as crucial factors determining their international competitiveness. Such economic considerations were combined with military reasons. The concept of “infrastructure” itself was promoted by NATO’s strategic planners during the early decades of the Cold War (van Laak 1999, 280–285). The intensification of state-funded military research and development – the creation of “permanent arms economy” in Mandel’s (1975) terms – led to accelerated technological innovation and also provided “opportunities on an unprecedented scale for “profitable” investments (Mandel 1975, 484–485). In general, after the Second World War, the state became more active in coordinating and planning the economy, including the development of information and communication technologies, in advanced capitalist countries (Mandel 1975, 474ff.; Hobsbawm 1994, 96, 273–274). A particularly significant moment in the spread of information society discourses was a search for productivity growth that had stagnated in the 1970s in advanced economies and the expectations that new information technologies would lead to a new upward trend (Garnham and Fuchs 2014, 118).

Arguments about a shift from industrial to information society first appeared in studies that examined the growth of informational activities in the economy and the share of employment in different sectors of production (e.g. Machlup 1962; Porat 1977). These studies were based on a three stage theory of economic history assuming a move from agricultural production through industrial manufacturing to a service economy (e.g. Fisher 1935; Clark 1940; Fourastié 1949; Schettkat and Yocarini 2003). Machlup, an Austrian-born economist who had studied under Ludwig von Mises, argued that knowledge production, especially high-quality scientific and technical education (but not excluding schooling and college education), was becoming more and more important economically for the U.S. He called for the recognition of universities as “knowledge industries”, which, over time, would become more central for economic growth than industrial manufacturing (Machlup 1962).

Soon, other writers joined Machlup’s ranks, commenting on the coming of ‘knowledge society’ and the dawning of an “information age” (see Crawford 1983). Management consultant Peter Drucker claimed in his *The Age of Discontinuity* (1968, 40) that “a new economic reality” based on computers and information industries had emerged. He argued that “knowledge has become the central economic resource” and that this required a completely new set of policies and management strategies aimed at getting rid of “deeply entrenched practices of our industrial society” and promoting the application of knowledge and skills as the main source of productivity (Drucker 1968, 40–41). Most of the early studies that envisioned the emergence of knowledge economy were founded on statistics that dealt with the U.S. Besides Machlup’s work, these studies included Edwin B. Parker’s (1975) long presentation in an influential OECD conference and his pupil Marc Porat’s (1977) report on the centrality of

information activities for the U.S. national economy. Further studies within the OECD in the 1980s that adopted a statistical approach (OECD 1981; OECD 1986) showed the same interest in information and knowledge production and their economic centrality.

Besides producing similar statistical analyses of occupational changes and the information economy, sociological studies of the information society proper have focused on the deployment of new information and communication technologies as a key indicator of social change. At the same time as these studies have offered empirical observations concerning the rise of new kinds of economic activities, occupations or technologies, they have also presented politically and ideologically grounded claims about shifts in social power relations. In other words, instead of offering merely neutral descriptions, sociological studies of the information society have displayed distinctive politics and visions. However, these visions have not remained stable over time. To obtain greater insight into these politics and their historical shifts, we need to pay attention, in particular, to the ways in which different writers on the rise of the information society have conceived the relationship between the state and the market in their discussions of the rise of information society.

With this in mind, we will next focus on the work of two influential authors of information society, namely Daniel Bell (whose key works on the subject were published in the 1970s) and Manuel Castells (whose work has enjoyed wide popularity since the late 1990s). Despite many similarities in their arguments, a reading of their work suggests that a major political-ideological shift has occurred in theories of the information society. This feature has been overlooked, for instance, by Steinbicker (2011b) in his comparison of their work and by Bisky and Ohm (2004) in their pivotal critical overview. We argue that the political-ideological shift can be understood as a response to the conjuncture of neoliberalism as the leading political project of global capitalism. Therefore, from the point of view of a Gramscian-inspired conjunctural analysis (see Koivisto and Lahtinen 2012), Bell's "post-industrial society" and Castells' "network society" must be understood as two different conceptions of how "information societies" are organised in relation to political and economic power, which is now facing considerable challenges because of the severity of the current global economic crisis and the consequent weakening of neoliberalism's hegemonic potential.

## 2. The Subordination of the Economy to Political Order: Daniel Bell and the Post-Industrial Society

Daniel Bell's key ideas were formed in the context of American liberal sociology in the 1950s and 1960s that reflected the triumphant mood of U.S. elites at the time. In 1960, Bell published a major collection of essays titled *The End of Ideology*, which argued that American-style liberalism had won the battle against "totalitarianism" in the West and that rising living standards, the achievement of political citizenship by the labour and the "managerial revolution" in the economy (Burnham 1941) had paved the way to a more stable society where ideological struggles over fundamental political goals had faded (Bell 2000/1960, 402-403). Even if in the larger global arena a battle was still raging between the Soviet Bloc and U.S.-led capitalist countries, Bell thought that the latter offered a more appealing political and economic model for developing countries than socialism. Indeed, in the discourse of American postwar liberal sociologists, "ideology" translated as "fervent leftism of communist or socialist sort" (Gilman 2003, 60), a form of political passion that would become redundant once a country had achieved a successful transition to 'modernity'.

According to Brick (2013, 95), "the main stem of the end of ideology thesis [...] grew from the kind of sentiments [...] that all hitherto standard ideological divisions paled before the necessity of Western liberals to unite in the anti-communist cause". The wide circulation of the expression "the end of ideology" itself was initiated by Raymond Aron who used it in the 1955 Milan meeting of "the Congress for Cultural Freedom, an organization that had been formed in the early postwar period (with financial help from the CIA) to rally intellectuals worldwide against the Soviet Union's postwar ideological offensive" (Gilman 2003, 58). Intellectual supporters of the organisation, such as Bell, Edwards Shils and Seymour Martin Lipset quickly appropriated the expression and catapulted it into a "phrase of the day" (Brick 2013,

97), differed in the degree to which they believed in the power of the “free market”, but they all endorsed capitalism on the grounds that it was the only viable and rational social system and that any radical opposition to it was pure idealism (Allen 2004, 8–9). Bell argued (in explicit contradistinction to pioneering neoliberal economist Milton Friedman) that the social costs created by private corporations warranted strong public policy, or what he called the dominance of “sociologizing mode” over the “economizing mode” (Bell 1974, 286–294). As McKenzie (2013, 98) points out, it is “the significance of Keynesian economic theory to Bell’s work” and “his concern with ameliorating the effects of economic capitalism” that distinguishes Bell “from other conservatives”. For Bell, the proposition that the state should have a strong role in economic planning did not refer to a utopianism of the future. He considered that the leading elites in Western societies had already accepted such propositions as facts and that there was no need for radical social changes. As a result, political decision-making and social sciences in support of it, shunned normative debates in favour of instrumentally rational assessments concerning the most efficient means for achieving already agreed goals.

Bell’s “postindustrial theory coincided with a massive upsurge in government support for research and development” (Schiller 1996, 164) in the 1950s and 1960s. With this, the ties between social scientists and U.S government became closer, to the extent that the American post-war social research effectively became an adjunct of U.S. foreign policy (Latham 2000; Gilman 2003). Yet for Bell, the increasing public importance of intellectuals and scientists had broader significance: it signalled the emergence of a wholly new type of social formation which he set out to analyse in his most influential work, *The Coming of the Post-Industrial Society* (1974). This “immensely popular book” (Crawford 1983, 381) crystallised the claims according to which industrial society was superseded by another kind of society where “what counts is not raw muscle power, or energy, but information” and where “the central person is the professional, for he [sic] is equipped, by his education and training, to provide the kinds of skills which are increasingly demanded” (Bell 1974, 127).

For Bell, all the major new aspects of post-industrialism followed from the increasing importance of human capital and “the centrality of theoretical knowledge” (Bell 1974, 112, 118). These formed the resources and the “axis around which new technology, economic growth and the stratification of society will be organized” (Bell 1974, 112). With the “older problems” of industrial society (i.e. the struggle between capital and labour) having been “muted if not ‘solved’” (Bell 1974, 116), the more consensus-driven post-industrial society was facing a new set of problems. The most pressing of these was “the organization of science” because the prime power source of countries was scientific capacity rather than heavy industries such as steel (Bell 1974, 117). In contrast to industrial society, which was organised around the co-ordination of machines and human labour for producing goods, the post-industrial society “is organized around knowledge, for the purpose of social control and the directing of innovation and change” (Bell 1974, 20). It is also a service economy where human interactions (in sales, health services, leisure industries, etc.) between employees and customers are becoming more important than traditional blue-collar work.

Bell’s key analytical point was that “the character of knowledge” (Bell 1974, 20) had changed and that this constituted the “new determining feature of society” (Bell 1974, 112). Although innovation and knowledge were important already in industrial society, the distinctive characteristic of post-industrialism is the prominence given to “theoretical knowledge”. This meant that innovations in technologies of mass production, energy and communications were no longer created by “inspired and talented tinkerers who were indifferent to science and the fundamental laws underlying their investigations” (Bell 1974, 20). Instead, the processes of innovation had become much more systematic and more organised, linking science and technology closer together.

Science, universities and educated professionals were thus becoming more central for the advancement of post-industrialism, but Bell noted their ultimate subordination to the demands of ‘social control’. In Bell’s estimation, the bonds between scientists, economists and politicians and the “existing tendencies toward the bureaucratization of intellectual work” would continue to grow in the post-industrial society (Bell 1974, 43). The society would be more

technocratically organised, characterised by “more conscious decision-making” (Bell 1974, 43) and “the management of large-scale systems” (Bell 1974, 29). New technologies (especially the computer) were assisting such tendencies. They were also a key engine for more efficient production, a rising living standard, and the emergence of new modes of thought and social interaction (Bell 1974, 188-189). However, technological change was not an independent determinant for Bell. Like economic activities in general, the development of technologies and their societal effects required rational assessment, policies and management in the interest of the society as a whole (Bell 1974, 26).

Even if Bell (1974, 44) noted that scientists and intellectuals were ultimately subordinated to the goals of bureaucratic organisations (the government in particular), he nonetheless argued that they were fast forming the most powerful social strata: “If the dominant figures of the past hundred years have been the entrepreneur, the businessman, and the industrial executive, the ‘new men’ [sic] are the scientists, the mathematicians, the economists, and the engineers of the new intellectual technology” (Bell 1974, 344). Echoing Karl Mannheim’s ideas about ‘free-floating intelligentsia’, Bell idealistically claimed that scientists, as a composite class, had a remarkable capacity to rise above specific group interests, since science “has no ideology” but, instead, draws “moral strength” from an “ethos of a self-regulating commune” of “free men and women united by a common quest for truth” (Bell 1974, 379–380).

Based on these arguments, Bell considered that the whole basis of social power had shifted. Whereas in the earlier period property ownership and wealth were important sources of power, technical skill and education gave access to power in post-industrialist times, giving rise to a new meritocratic elite, “the technical and professional intelligentsia” (Bell 1974, 362). Bell argued that the very concept of ‘capitalism’ no longer adequately defined society. In his historic reading of capitalism and its alleged demise (which he supported by the theories of Werner Sombart, Max Weber and Raymond Aron), “full capitalism” with its emphasis on “the principles of profit and economic rationalism” (Bell 1974, 64–65) had been superseded by political control of the society and economic production. Technocrats and new social classes “based on skill” had replaced “the older capitalist class” and its dominance (Bell 1974, 79). Overall, Bell claimed in unison with other new class theorists that capitalist elements of life had waned: firms had become bureaucratized, rather than ruled by daring entrepreneurs. Thus, capitalist society was “undergoing change, but [...] not towards socialism but towards some form of statism and bureaucratic society” (Bell 1974, 80).

As “capitalism” or “ideology” no longer captured the social reality, the importance of Marxist social theory was waning in Bell’s mind, although Marx himself remained important for Bell as a thinker “to think against” (Beilharz 2006, 93). Bell (1974, 55) wrote confidently, “We have all become post-Marxists”. According to him, two changes had diminished the relevancy of Marx’s analysis of capitalism. First, although there still were political differences between the liberal-democratic Western and the Communist countries, all had become industrial or post-industrial, governed by managerial elites. Second, as social relations of production had become bureaucratically organised, this had made class struggle based on the ownership of the means of production less important. Bell argued that Marxists unduly emphasised the importance of the capitalist mode of production and capitalist class rule, failing to see the gradually increasing dependency of the economy on the state in its different political variations. Bell (Bell 1974, 297-298) noted that the U.S. was “moving away from a society based on a private-enterprise market system toward one in which the most important economic decisions will be made at the political level, in terms of consciously defined ‘goals’ and ‘priorities’”. As the model post-industrial country, the U.S. pointed to a future global condition. Thus, sociologists had to accept this fundamental proposition:

The decisive social change taking place in our time [...] is the subordination of the economic function to the political order. The forms this will take will vary, and will emerge from the specific history of the different political societies [...] But the central fact is clear: the autonomy of the economic order (and the power of men who run it) is coming to an end, and new and varied, but different, control systems are emerging. In

sum, the control of society is no longer primarily economic but political (Bell 1974, 373).

Bell's sociological theorisation paralleled policy planning at the time. Many policy proposals that took up the theme of the information society reflected the view of Bell regarding the necessity for a strong state role in the development of the information infrastructure and in related economic planning. A notable example was a French report published in English as *The Computerization of Society* (Nora and Minc 1980). It suggested that the introduction of more advanced information technologies, if done properly, would make France more economically prosperous and more democratic. The report, written for the president, was critical of the "hierarchy of power" (Bell 1974, 131) in the French government and the economy and noted how this would produce conflicts due to the de-centralising nature of new networked communication technologies ('telematics'). Yet the report (Bell 1974, 137) argued that "there is no spontaneity without regulation and no regulation without a hierarchical system". Nora and Minc proposed a "collective plan" for the organisation of the information society. This entailed "the sovereign state" as the site "where the collective plan will be established" so that "public authorities" would determine the "constraints to which society is subjected" and make sure that although the market may be used to advance the information society, the state and the authorities "must not retreat before a direct command" (Bell 1974, 140). This was necessary because a market-dominated information society would be reduced to "the single standard of commercial value" that would "conjure away" politics and democracy (Bell 1974, 133-134). Bell (1980, xvi), in his introduction to the English edition of the report, noted approvingly that it gave "the government a more active role" in the development of the information society than was the case in the U.S. In contrast, the U.S. was taking a more pro-market stance toward the information society, and it lacked a "unified national policy" (Bell 1980, xvi).

### 3. Networks as the Gravediggers of Hierarchies: Manuel Castells and the Spirit of Informationalism

The idea that the state in one way or another forms, and should form, the commanding centre of information society development has since been rejected or strongly modified in sociological information society theory. The rejection is particularly striking in Manuel Castells' influential writings on network society that have earned him much praise. Although Castells' work on the network society has been commended for its breadth and conceptual originality, a substantial proportion of his work is founded on exactly the same theoretical premises that informed Bell. These similarities need to be established before we can focus on what is distinctive about Castells' information society analysis.

Both Bell and Castells arrived at theorising social change from the perspective of information society via a process of political de-radicalisation, though the exact nature of this was quite different between the two. Against a common misconception, in his youth in New York Bell was never a Trotskyist. Early on, he made "his political choice for the right-wing social democrats", though he was "not entirely happy" with them, partly because the "most stimulating discussions of theory and politics took place in the Trotskyist milieu" of his student years (Brick 1986, 60-61). Even with such intellectual interests, Bell's stance towards Trotskyism remained aloof: "he consistently and intensely opposed it" already in the 1930s (King 2004, 252) and during the Cold War years his position toughened to what has often been characterised as "neoconservative".

Castells was born in Catalonia in Spain and as a student activist he was forced to flee from the Franco government in the early 1960s. He took part in the in the May 1968 events in Paris and later held academic posts in France, Chile and Canada, working in the 1970s mostly in the field of Marxist urban sociology. In 1980 Castells published *The Economic Crisis and American Society*, examining the question of what kind of problems capitalism, as a social system based on exploitation and class division, faced in terms of its stability, reproduction and long-term social legitimation (Castells 1980). This book, perhaps the most theo-

retically informed by the author, proved to be the end of Castells' Marxist period. In the late 1970s Castells became a visiting professor in several American universities and his work took a more cultural turn. He published a new study, *The City and the Grassroots* (Castells 1983), which was again about urban social movements (such as the gay community in San Francisco), but this time uninformed by class analysis. Reflecting back, Castells (in Rantanen 2005, 137) has stated: "I ceased to be a Marxist when I realised that most of the questions I was interested in could not be understood by using Marxism. I could not understand, for example, gender, urban social movements, the differences between nationalities and languages by using class as my sole analytical tool". This would be truly absurd idea indeed: who in his or her right mind (Marxist or not) would choose such a crude and simplistic research strategy? Castells "grew out of Marxism" (Castells: in Rantanen 2005, 137) in California where he became fascinated by Silicon Valley with its "technological ingenuity, business innovation, and cultural change" (Castells and Ince 2003, 17). Castells next work, *The Informational City* (Castells 1989), reflected his newfound interest towards the spatial transformation not only of certain urban locations of production but of the economy at large, which he now assessed through the prism of information society theory and by emphasising the development of information and communication technology. *The Informational City* was a precursor to his most famous work, the 1500-page "Information Age" trilogy that has been published and republished many times since the late 1990s.

The most basic argument of information society theory is that knowledge production and brain power override the importance of industrial production and machine power in the economy and that this process is shaped by "intellectual technologies" such as computers and new telecommunications (Bell 1974, 27). The same technological shift is emphasised by Castells. In his view, industrialism has been replaced by informationalism, which is a novel economic paradigm that centres on "knowledge generation, information processing, and symbol communication" (Castells 2000a, 17). All of these are achieved with the help of new information and communication technologies that are 'general-purpose technologies' in a much more flexible way than before. They can be used in widely different sectors of economic production, making it possible for "organizations and institutions [to] be modified, and even fundamentally altered" (Castells 2000a, 71). "New information technologies are not simply tools to be applied, but processes to be developed" and because of this, "[f]or the first time in history, the human mind is a direct productive force, not just a decisive element in the production system" (Castells 2000a, 31).

Like Bell, Castells believes that the level of scientific and technological development dictates epochal change, resulting in different stages of overall capitalist development. In this regard their theories do not have substantial differences, despite the different concepts that they use to denote a shift from industrialism to another social formation (Webster 2014, 132). Thus, both Bell and Castells argue that a class conflict of the kind analysed by Marx no longer carries weight. Bell conceptualised this as 'the end of ideology' caused by the Keynesian welfare state, the demise of the propertied class, its replacement by meritocracy and the rise of living standards among the general population. Castells, too, thinks that the main social divisions in 'network societies' are no longer based on class differences between owners and labour. Instead, he believes that they stem from differences in ability and education between those who comprise informational labour, the core workforce in the network society, and those manual or unskilled workers who are 'switched off' from its main economic areas (Castells 2000a, 258-260). Castells argues that the radical subject of socialism (the industrial working class) has effectively vanished from history. It has been replaced by new social movements representing a wide variety of different identity-based politics (environmentalism, feminism, gay liberation, etc.) and driven by more life-style conscious and individualistic attitudes.

Castells (2000a, 505) writes that the class structure as a whole has become more ephemeral in the network society because the question of "who are the owners, who are the producers, who are the managers, and who the servants becomes increasingly blurred in a production system of variable geometry, of teamwork, of networking, outsourcing, and subcontracting" (Castells 2000a, 506). Ultimately, Castells supports the familiar idea that mana-

gerial elites have taken power from capitalists, although he does not identify managers as state bureaucrats. The power is in the hands of those who 'program' and control the information and communication networks and connect these to other networks (Castells 2009, 45-46). Thus, according to Castells, the individuals who run and manage the networks and the flows of information form the most powerful social group of the network society, and these people are not necessarily those with the most economic capital.

Castells explains that he is "not identifying the concrete social actors who are powerholders" because "in all cases they are networks of actors exercising power in their respective areas of influence through the networks that they construct around their interests" (Castells 2009, 430). Power thus seems to be a highly diffuse issue. What is more, Castells (2009, 45) suggests that "in many instances, the power holders are networks themselves". Here, we encounter technological determinism that is even more pronounced than in Bell's analysis. For Bell, knowledge, technical skill and education give access to power, and the most powerful group in society are technocratic elites, especially in the government. By contrast, Castells considers that although political elites have power, ultimate control now lies with communication networks. The following proposition is fundamental for Castells:

Networks constitute the new social morphology of our societies [...] While the networking form of social organization has existed in other times and spaces, the new information technology paradigm provides the material basis for its pervasive expansion throughout the entire social structure [...] this networking logic induces a social determination of a higher level than that of the special social interests expressed through the networks; the power of flows takes precedence over the flows of power" (Castells 2000a, 469).

Castells attributes ultimate power to technological properties of networked communications, the internet in particular, thus decoding "social relations as effects of technological networks" (Heise 2002, 686). However, he does not view this through dystopian lenses. In Castells' optimistic view, big corporations and rigid bureaucratic institutions of previous times have given way to horizontal networks, which has resulted in the dispersal of all forms of centralised power. Castells (2000b, 19) argues that "historically, power was embedded in organizations and institutions, organized around a hierarchy of centres". Yet, "networks dissolve centres, they disorganize hierarchy, and make materially impossible the exercise of hierarchical power without processing instructions in the network, according to the network's morphological rules" (Castells 2000b, 19). A technological logic underlies these drastic changes:

Railways and the telegraph constituted the first infrastructure for a quasi-global network of communication with self-reconfiguring capacity. However, the industrial society (both in its capitalist and socialist versions) was predominantly structured around large-scale, vertical production organizations and extremely hierarchical state institutions, in some instances evolving into totalitarian systems. This is to say that early, electrically based communication technologies were not powerful enough to equip networks with autonomy in all their nodes. [...] It was only under the conditions of a mature industrial society that autonomous projects of organizational networking could emerge. When they did, they could use the potential of micro-electronics-based digital communication technologies (Castells 2009, 22-23).

In contrast to Bell's account, Castells' information society analysis is positioned against the state in a strikingly straightforward manner. Paradoxically, in a book dedicated to Nicos Poulantzas, Castells is not interested in viewing the state as a condensed and contested "relationship of forces [...] among classes and class fractions" (Poulantzas 1980, 128) because for Castells, the state is principally a hierarchical center of power (directly or latently totalitarian in its nature) that dominates through the threat of violence (e.g. Castells 2009, 15). However, it is also a form of power that is dissolving, according to Castells, both because of the crisis of the territorially bounded nation-state form due to globalisation and because of the



aforementioned properties of new networked communications that make possible all kinds of de-centralised political activities that challenge top-down state domination (Castells 2009, 17-19; Castells 2012a).

In the industrial era, Castells argues, it was not only the state but also the market that was similarly centralised. Yet, in times of 'informational capitalism' he sees much positivity in the way in which global capitalism has evolved. Capitalist markets now show a new kind of dynamism because of a change from hierarchical to "horizontal corporations" (Castells 2000a, 178). At "the heart of the connectivity of the global economy and of the flexibility of informational production, there is a new form of economic organization, the *network enterprise*" (Castells 2000b, 10). The 'network enterprise' and the 'horizontal corporation' refer to the demise of vertically integrated corporations, Tayloristic work settings, mass-production and mass-consumption of standardised goods, and a move toward business projects, flexible production processes and customised consumption.

Castells (2000b, 18) notes that the rise of the network enterprise does "not preclude exploitation, social differentiation and social resistance" and that the vertical disintegration of corporations does not spell the end of concentrated economic power as such. Yet, these realisations do not cancel Castells' ultimate affirmation of global capitalism due to two theoretical emphases. The first one is close to Bell's analysis: Castells (2000b, 18) supports the idea that "the capacity to contribute to the value-producing chain [...] determines the individual bargaining position" rather than economic capital and production-based class position. In other words, to become part of "informational labour" one needs to have proper abilities, skills, and education. This suggestion is unavoidably meritocratic as it presupposes that "the stratification system of informational capitalism is unchallengeable since it is deserved" (Webster 2014, 126).

The second aspect is that Castells associates "network enterprises" with an increase in human autonomy because it points to the end of hierarchical bureaucracies and signals a new, more innovative economy. Castells' celebration of "network enterprises" such as Cisco Systems, leads him to uncritically reproduce "mantras borrowed from business consultants instead of analysing the structures of economic power" (Heiskala 2003, 240). By the same token, Castells writes eloquently about "the spirit of informationalism" that drives global capitalism today, an ethos of flexibility and multiplicity of values, and "a culture of the ephemeral, a culture of each strategic decision, a patchwork of experiences and interests" (Castells 2000a, 214). With such rhetoric, Castells places a high premium on entrepreneurs and 'hackers', people who form the "creative class" of informational capitalism and who lead its shifting business projects. For Castells, the true heroes of the network society are "rebellious" visionaries such as Steve Wozniak and Steve Jobs whose establishment of Apple is "a truly extraordinary saga that has by now become the founding legend of the Information Age" (Castells 2000a, 43; for an account of the dark side of this "saga", see Sandoval 2014). On the same basis, he also makes sweeping policy suggestions, exhorting nation-states to invest in innovation-friendly networks and milieus (Castells 2004, 158-160). Innovation for him is 'the fuel' of the New Economy (Castells 2004, 158), "the product of intelligent labor" and "collective intellect" (Castells 2001, 101) that depends on open access to information and mutual co-operation. Here, Castells emphasises, in adherence to new management discourses, the importance of organisational decentralisation that allows creativity and entrepreneurship to flourish.

Castells backs up his views concerning visionary entrepreneurship with references to Max Weber, whose "theoretical principles" he believes "still provide a useful guideline [...] to highlight the new cultural/institutional configuration underlying the organizational form of economic life" (Castells 2000a, 211). In making such claims, Castells relies on Weber's idea that shifts in cultural values are the driving forces behind economic and social changes of epochal proportions. The Weberian-sounding concept of "the spirit of informationalism" also constitutes the liberal utopian dimension of Castells' thought. He offers them as dynamic features of network societies that contrast starkly with the 'statist' rigidities of industrial societies: class politics, labour parties and even the very ethos of welfare states in general, whose bureaucracies reproduce, in Castells view, a "legitimizing identity" (Castells 2000a, 9). Against this

negative view of industrial welfare states, the promises of informational capitalism, with its flexible networked corporations and innovation-friendly mentalities come across as liberating. Due to these features, Castells' network society analyses effectively sing the praises of "cool capitalism" (McGuigan 2009) or "the new spirit of capitalism" (Boltanski and Chiapello 2006), i.e. a more dynamic "high-tech capitalism" (Haug 2003) in its neoliberal phase.

Castells' recent work thus offers a version of information society theory that is compatible with the neoliberal restructuring of capitalist societies. It celebrates the latest innovations in communications technology and in tune with neoliberal ideology, it rejects the assumed conformity of state-directed Keynesianism. It thus represents what Fisher (2010, 236-243) has conceived as a new kind of legitimation strategy that supports "the new constellations of power entailed by the new stage of capitalism" – a new kind of 'technology discourse' that tries to lead us to believe that the alienations produced by interventionist welfare states and centrally planned economies have been transcended by "the withdrawal of the state from markets, the globalization of the economy, the dehierarchization and decentralization of businesses, and the flexibilization of production and the labor process". Although Castells and Bell share many common theoretical starting points, here Castells' analysis of network society diverges most clearly from Bell's earlier analysis of post-industrial society. Both Bell and Castells reserve an important role for the state and state-employed intellectuals in guiding the development of the information society. However, for Bell, the state is the leading element of the information society, the political "cockpit" (Bell 1974, 364) from which it is kept in order. Instead, for Castells, the state is subordinated to the market. It needs to be kept from interfering too much with the workings of the real engines of the information society, namely, innovative entrepreneurs, "hackers" and risk capital investors.

#### **4. The Authoritarian Tendencies of Neoliberalism and the Erosion of Information Society Optimism**

The differences in Bell's and Castells' analyses are not accidental but they reflect a more general change in information society thinking and policies over the recent four decades. As noted, Bell's account of the rise of post-industrial society expressed the idea, heavily present in policy documents of the same time, that the state and its bureaucracies constituted the commanding centre of the society, an organ whose aim was to undermine, through rational planning and coordination, the negative insecurities created by venture capitalists, profit-hungry entrepreneurs and loose market mechanisms in general. Castells' ideas, in turn, reflect a neoliberal prioritisation of markets and a demand for a more "flexible" regulation of their operations. This change can be observed in major national and international information society initiatives and policy documents since the late 1980s. In policy recommendations produced by high-level institutions and conferences on the global information society, associated especially with G7 or G8 countries, the state is not considered as "a leader but rather [as] a facilitator of conditions favorable to transnational capital" (Chakravartty and Sarikakis 2006, 126). The markets, by contrast, are seen as forces that are "'liberating' consumers from the state through IT technology" (Chakravartty and Sarikakis 2006, 114). Thus, the "information society" has been articulated anew: today, it refers to the loosening of the fetters of the centralized national welfare state, considered as a relic of the "industrial" age that is now well on its way to the dustbin of history.

The distinctive differences in Bell's and Castells' analyses and in information society policies of different periods testify to the remarkable flexibility of information society thinking. It has clearly been malleable enough to survive major changes in the political-ideological climate of advanced capitalist countries. Besides noting this inherent flexibility, we need to identify the root causes of the success of the idea of information society (or "network society" and other related concepts). Why have the ideas surrounding the information society been so powerful in mainstream sociological and political thought for so long? We argue that the pervasiveness of the information society is based on the following two key factors.

First, the idea of information society, although it has been transformed according to changes in political ideology, is related to a real sense of 'what is going on'. In other words, it

has been used as a general description by which governments in advanced capitalist countries have tried to come to grips with potentials for developing forces of production and the realities of economic competition between states, in a shift from Fordism to a “hightech capitalism” and its new impacts on ways of life (see Haug 2003). At the same time, it has been presented as a solution to problems created by major economic crises and downturns.

In the early 1970s, information society thinking emerged as a reaction to the oil crisis and the related slow-down of economic growth in major economies, offering arguments and images about a paradigmatic shift from oil-intensive to information-intensive (e.g. electronics and communications technology) industries. In this way, information society became a truly compelling idea: from early on, spurred on, for example, by the 1958 Sputnik crises in the U.S., ideas related to the information society have been used as a yardstick by which to distinguish failed countries from successful ones, as measured by different information-society-specific indicators (the ratio between different sectors of production in terms of their contribution to the GDP, the amount of workforce in these sectors, the speed and level of technological innovation or the uses of computer technology in homes, etc.). The quest for these kinds of sources of success in global economic competition formed the main motivation for the earliest committees and official reports on information society in the 1970s and 1980s. This quest also generated a need for academic information society specialists (such as Bell and Castells) as ‘conceptive intellectuals’ whose works could be used by governments to formulate new economic policies that were considered appropriate for the new times. The rapidly rising political importance of the information society also meant that intellectuals belonging to this field could enhance their own academic status by being in the vanguard of information society development, offering suitable concepts and analyses for its purposes.

Second, the discourse on the information society has, throughout its existence, enjoyed wide hegemonic potential, appealing to people across the political spectrum. Given the notion that the global capitalist economy is a battlefield between dynamic and backward countries, the idea of the information society has been formulated as an unquestioning truth of what constitutes economic and social success for any nation. As such, the notion of the information society has been put to the public as an offer of how to make sense of current developments, that is, as an effective suggestion regarding what everyone should think as an expression of their own best interest.

Accordingly, the concept of the information society evokes mostly positive qualities. It suggests a dynamic economy in search of new growth areas, the rise of an immaterial (and thus less environmentally harmful) economy and the innovation of new, more intelligent technologies that are associated with fun, creativity and democracy. Despite all sorts of qualifications that academic information society thinkers make in their arguments, their way of speaking about the subject is decidedly optimistic. The sociology of the information society runs counter to a loss of trust in the modern project, introduced to western thought by the holocaust and the atom bomb, through the assumption that despite its problems, modernisation still holds much economic, political and cultural potential. Who would vehemently oppose such a powerful topos that promises at least something for everyone? Due to the positive appeals made on behalf of the information society, information society discourses can be seen as utopian. By constructing a dualistic shift between industrial societies and information societies and by pointing to progressive elements in this shift, they direct attention to what is historically dynamic and liberating. In this way, information society offers a motivating vision.

This vision is future oriented, but it is not other-worldly: the utopian aspects of information society analyses arise from features that are in harmony with the mundane economic logics of capitalism (the growth and expansion of markets, the importance accorded to technological innovation, profit orientation, shifts between monopoly and competition, etc.). Both Bell and Castells accept these capitalist features as immutable. Although Bell and Castells see the role of the state and the market through different lenses, they both conceive politics as the domain of liberal-democratic state institutions and they do not question the lack of democratic control over the market. For the same reason, for Castells (2011), the recent global economic crisis is not a systemic crisis of capitalism but a political crisis of regulation by the state. Whatever problems of political legitimacy this crisis may cause, these can only be tack-

led by reforming political and cultural structures while keeping the capitalist mode production in place.

These liberalist reductions lead both Bell and Castells to consider social conflicts of interest in the information society only in so far as they are not “rooted in class analysis” (Castells 2009, 13). As pointed out, they both consider class conflicts as historical remnants of the ‘industrial society’, although they have different reasons for thinking that way. For Bell, the reason why class conflict has lost its previous importance is due to decreasing material inequality and the coming of an abundant post-industrial society that spells ‘the end of ideology’. This does not mean that the new society will be totally free of conflicts, but the basis of conflict has shifted to other issues, such as lifestyle choices and consumption habits (Bell 1974, 475–483; Bell 1976).

With regard to the credibility of Bell’s information society analyses, in general, the triumph of neoliberalism as the dominant political and ideological dogma throughout the world has made a mockery of his belief that the state has achieved some kind of supremacy over the market. On the contrary, the state has become invaded by a logic according to which all political considerations regarding the economy, the labour market, health care, education, culture and so on, need to be market-based. This has occurred to the extent that official party politics is widely seen (and actually felt, as declining voting percentages in many Western countries show) as being hollowed out. The same can be said about Bell’s claim that society would become more egalitarian: the dismantlement of the Keynesian welfare state is an intentional feature of the neoliberal “competition state” model (Cerny 2000), which has abandoned the notion of work for all and resulted in permanently high figures of unemployment and part-time working contracts and in increasing economic inequality.

Bell aimed to show that industrial capitalism had effectively been superseded by a move toward post-industrialism and that the latter represents a new social form where class conflicts have been muted and converted into conflicts of identity. However, Mandel (1975, 500–501) pointed out that Bell’s conception of “the end of ideology” and his account of post-industrial society constitutes a specific form of ideology in “late capitalism”. Bell’s theories lead to a mistaken belief in the omnipotence of managers and bureaucrats and in “the ability of experts to overcome all explosive conflicts and integrate antagonistic social classes into the existing social order” (Mandel 1975, 525). As testified by the economic crises and recessions worldwide in the past decades and the massive social polarisations and protests that they have instigated, capitalism is indeed a system that creates class conflicts that resist stabilisation.

Likewise, in contrast to what Bell wrote in the 1970s, entrepreneurs have not become less but more central, especially in ideological terms. Capitalist businesspeople, spearheaded by the gurus of the information age, such as Steve Jobs, Larry Page or Mark Zuckerberg, offer “models of behavior to be disseminated throughout society” (da Costa and Silva Saraiva 2012, 591). They are the “creative drivers” who are expected to give their nations a comparative advantage in the creation of technological innovations and lead the way to “a new long-wave of capitalist growth” (Garnham 2005, 22). In recent years, such anticipations have found new forms in much business commentary and myth-making concerning high-tech ‘start-up’ companies and their ‘angel investors’ that comprise the cutting edge of economic growth. This new emphasis on individualist entrepreneurialism has emerged in tandem with the neoliberal argument that excessive state regulation and the ways in which this curtails creativity are responsible for all economic and societal ills.

Castells’ adherence to the importance of innovation and entrepreneurship and his critique of bureaucratic management brings his analyses in line with the shift toward the “dominant market-led vision of the information society” (Mansell 2012, 3). According to Castells, the new informational ‘mode of development’ has emerged because of an inescapable, transhistorical logic of ‘creative destruction’ that undermines previous social forms and political attachments. Schumpeter’s theories of growth informed Bell’s thinking but Castells offers them an even more direct role, writing in pseudo-poetic terms that “the ‘spirit of informationalism’ is the culture of ‘creative destruction’ accelerated to the speed of the optoelectronic circuits that

process its signals. Schumpeter meets Weber in the cyberspace of the network enterprise” (Castells 2000a, 199).

Through the fusion of such theoretical ideas with managerial motives, Castells’ network society analysis is certainly up-to-date with recent political and ideological realities. Yet it is no less problematic for this. Like Bell, Castells disregards the continuity of class conflicts in the ‘information age’. Castells thinks that a major shift has occurred in the nature of social conflicts. For him, the historical shift from an industrial society to an informational one has largely destroyed the political importance of class politics as represented by labour unions and parties. They are vestiges of an old “mode of development”, too locally based and dependent on national states to survive in the information age characterised by transnationally based, flexible enterprises and production systems. The suggestion that the social conflicts of the ‘network society’ are, in fact, overdetermined by a fundamental class conflict that is inherent to capitalism (and which is now exacerbated because of neoliberal policies) is not acceptable to Castells. Thus, in a recent address to a gathering of Finnish political elites, Castells (2012b) spoke of the necessity to make “the welfare state more productive” and to connect “policies of innovation and entrepreneurship” with venture capital investors for European Union (EU) countries to overcome their on-going economic crises. In other words, for Castells, economic crises are not based on the contradictions of capitalist economy, but on bad state management (Fuchs 2012, 792-793). He proposes that resources and policies are needed that support “the reconstruction of a form of innovative, global capitalism” (Castells 2011, 209). Castells does not go as far as to suggest that the state has no active role to play in the organisation of capitalist development and that capitalism works best when it is left free to organise itself on the basis of how people signal their needs in the market through buying or not buying and just “protected” by an authoritarian state (which would constitute a Hayekian view of information society, see Webster 2014, 251ff). Nonetheless, from Castells’ perspective, one cannot imagine freedom from the compulsions created by the markets but only think of how to manage them more efficiently and how to reinforce innovation-supporting cultural identities and values that increase the chances that economic and social conflicts will not affect this or that country or region as seriously as others.

This vision overlooks the fact that liberal democracy has from its outset separated politics and economy, so that the power stemming from capitalist property and social relations could be ‘protected’ from democratic accountability (Wood 1994, 54). The neoliberal restructuring of societies worldwide has meant a huge expansion of global capitalism over the state and its liberal-political institutions. This has undermined, more dramatically than ever, the capacity of nation-state governments to manage contradictions that arise from the clashes of interest between what capital owners and ordinary citizens want. Both politicians and citizens increasingly have “to listen to what ‘the markets’ tell them” and “as a result citizens increasingly perceive their governments, not as *their* agents, but as those of other states or of international organizations, such as the IMF or the EU, immeasurably more insulated from electoral pressure than was the traditional nation-state” (Streeck 2011, 26). The whole liberal democratic process based on mainstream party representation is becoming unresponsive to citizens who feel increasingly powerless to have an influence on politics (Streeck 2011, 26). This, combined with strict austerity policies demanded by the market forces, is a breeding ground for, among other things, increasing populist-nationalist hatred of immigrants and other “outsiders”, as has recently been witnessed, for instance, in many EU countries. Castells is aware of the existence of such conflicts, but he seriously underplays the specifically capitalist dynamics that lie behind their emergence and the equally serious limitations that democratically unaccountable markets place on attempts to reconcile them. It is fair to say that Castells simply ignores such inherent contradictions of capitalism and concentrates instead on the discontinuities produced by “informationalism”.

The real challenges to Castells’ network society theory are not only analytical but also historical. Today, the on-going global economic crisis and the neoliberal transformation of democracy pose difficulties for the neoliberally restructured information society analysis offered by him. In the current historical conjuncture, his theory is toothless in the face of the severity of social conflicts created by the global economic crisis: a remedy to the weakening of ne-

oliberalism's hegemonic potential and its increasing turn to austerity and authoritarian solutions, caused by the increasing shift of power to globally operating capital, requires more than visionary entrepreneurs and the creation of more efficient innovation systems and networks.

As Garnham (2004a, 7, 14) observes, much of the success of information society thinking, both in academia and in public politics, stems from the fact that it has been "sufficiently vague" to hide its contradictions and to present itself as more coherent than what it actually is, enabling "many to jump on the bandwagon and find a seemingly comfortable home in its promiscuous warmth" (Garnham 2004b, 95). "Information society" has indeed been a powerful idea across the advanced capitalist world, organically connected to the hegemony of neoliberalism ever since the ascendancy of Reaganism and Thatcherism (Dyer-Witheford 1999, 21-22; Neubauer 2011, 211). Yet it remains to be seen whether information society theory can survive the current challenges created by the global economic crisis and re-modify itself as a response to them. Will we see, perhaps, a return, à la the Nobelist Paul Krugman's (2012) theses against neoliberal austerity policies, to a more Keynesian information society theory, in a kind of return to Bell's earlier propositions? Or will we witness instead a decline of the political influence of information society theory in general? As discussed in the above, the idea of the information society has closely followed the ideological requirements of different political conjunctures, and its success has hinged on its capacity to present itself as a hopeful vision of progressive modernisation. However, this can only be sustained if the actual economic and social developments offer at least some grounds for such hope.

The current conjuncture is characterised by economic stagnation in the West and "deepening inequalities of income, health and life chances within and between countries, on a scale not seen since before the Second World War" (Hall, Massey and Rustin 2013, 9). In this situation, the lack of economic growth is combined with seemingly unending austerity measures. This volatile combination is a breeding ground for "authoritarian statism" whereby advanced capitalist states turn more coercive and undemocratic legally, institutionally and politically in their efforts to keep social unrest under control (Bruff 2014). Damagingly for the optimistic information society discourses, such developments are crucially associated with highly un-democratic, hierarchical and advanced information-technological surveillance systems such as the ones exposed by the recent NSA (U.S. National Security Agency) spying scandal. If the promises of the information society concerning increasing economic productivity and democratisation continue to fail to materialise, the information society vision runs the risk of turning sour and becoming a mere apologia for a new "settlement of social conflict in advanced capitalism, this time entirely in favour of the propertied classes" (Streeck 2011, 29).

## References

- Allen, Kieran. 2004. *Max Weber. A Critical Introduction*. London: Pluto Press.
- Beilharz, Peter. 2006. Ends and Rebirths: An Interview with Daniel Bell. *Thesis Eleven* 85 (1): 93–103.
- Bell, Daniel. 2000/1960. *The End of Ideology: On the Exhaustion of Political Ideas in the Fifties*. Cambridge, MA: Harvard University Press.
- Bell, Daniel. 1974. *The Coming of Post-Industrial Society. A Venture in Social Forecasting*. London: Heinemann.
- Bell, Daniel. 1976. *The Cultural Contradictions of Capitalism*. New York: Basic Books.
- Bell, Daniel. 1980. Introduction. In *The Computerization of Society: A Report to the President of France*, ed. Nora Simon and Alain Minc, vii–xvi. Cambridge MA: MIT Press.
- Beniger, James R. 1986. *The Control Revolution: Technological and Economic Origins of the Information Society*. Cambridge, MA: Harvard University Press.
- Bisky, Lothar and Ohm, Christoph. 2004. Informationsgesellschaft. In *Historisch-kritisches Wörterbuch des Marxismus*, Vol. 6/II, edited by Wolfgang Fritz Haug, 1072–1086. Hamburg: Argument-Verlag.
- Boltanski, Luc and Ève Chiapello. 2006. *The New Spirit of Capitalism*. London: Verso.
- Brick, Howard. 1986. Daniel Bell and the Decline of Intellectual Radicalism. *Social Theory and Political Reconciliation in the 1940s*. Madison, Wisconsin: The University of Wisconsin Press.
- Brick, Howard. 2013. The End of Ideology Thesis. In *The Oxford Handbook of Political Ideologies*,

- Ed. Michael Freeden, Lyman Tower Sargent and Marc Stears, 90–112. Oxford: Oxford University Press.
- Burff, Ian. 2014. The Rise of Authoritarian Neoliberalism. *Rethinking Marxism* 26 (1): 113–129.
- Burnham, James. 1941. *A Managerial Revolution: What is Happening in the World*. New York: John Day.
- Castells, Manuel. 1980. *The Economic Crisis and American Society*. Princeton, NJ: Princeton University Press.
- Castells, Manuel. 1983. *The City and the Grassroots. A Cross-Cultural Theory of Urban Social Movements*. Berkeley, CA: University of California Press.
- Castells, Manuel. 1989. *The Informational City. Information Technology, Economic Restructuring and the Urban-Regional Process*. Oxford: Blackwell Publishers.
- Castells, Manuel. 2000a. *The Information Age: Economy Society and Culture. Volume I: The Rise of the Network Society*. Second Edition. Oxford: Blackwell.
- Castells, Manuel. 2000b. Materials for an Exploratory Theory of the Network Society. *British Journal of Sociology* 51 (1): 5–24.
- Castells, Manuel. 2001. *The Internet Galaxy. Reflections on the Internet, Business, and Society*. Oxford: Oxford University Press.
- Castells, Manuel. 2004. The Information City, the New Economy, and the Network Society. In *The Information Society Reader*, ed. by Frank Webster with the assistance of Raimo Blom, Erkki Karvonen, Harri Melin, Kaarle Nordenstreng and Ensio Puoskari, 150–164. London: Routledge.
- Castells, Manuel. 2009. *Communication Power*. Oxford: Oxford University Press.
- Castells, Manuel. 2011. The Crisis of Global Capitalism. Toward a New Economic Culture? In *Business as Usual. The Roots of the Global Financial Meltdown*, ed. Craig Calhoun and Georgi Derluigan, 185–209. New York: New York University Press.
- Castells, Manuel. 2012a. *Networks of Outrage and Hope. Social Movements in the Internet age*. Cambridge: Polity Press.
- Castells, Manuel. 2012b. Speech at Kestävän kasvun ja hyvinvoinnin foorumi [The Forum for Sustainable Growth and Welfare (Part I)]. <http://valtioneuvosto.fi/ajankohtaista/tallenteet/fi.jsp>
- Castells, Manuel and Marin Ince. 2003. *Conversations with Manuel Castells*. Cambridge: Polity Press.
- da Costa, Alessandra de Sá Mello and Silva Saraiva, Luiz Alex. 2012. Hegemonic Discourses on Entrepreneurship as an Ideological Mechanism for the Reproduction of Capital. *Organization* 19 (5): 587–614.
- Cerny, Philip G. 2000. Structuring the Political Arena: Public Goods, States and Governance in a Globalizing World. In *Global Political Economy: Contemporary Theories*, ed. Ronen Palan, 21–35. London: Routledge.
- Chakravarty, Paula and Sarikakis, Katherine. 2006. *Media Policy and Globalization*. Edinburgh: Edinburgh University Press.
- Clark Colin. 1940. *The Conditions of Economic Progress*. London: MacMillan.
- Crawford, Susan. 1983. The Origin and Development of a Concept: The Information Society. *Bulletin of the Medical Library Association* 71 (4): 380–385.
- Drucker, Peter F. 1968. *The Age of Discontinuity. Guidelines to Our Changing Society*. New York: Harper.
- Dyer-Witheford, Nick. 1999. *Cyber-Marx. Cycles and Circuits of Struggle in High-Technology Capitalism*. Chicago: University of Illinois Press.
- Fisher, Alan G.B. 1935. *The Clash of Progress and Security*. London: MacMillan & Co.
- Fisher, Eran. 2010. Contemporary Technology Discourse and the Legitimation of Capitalism. *European Journal of Social Theory* 13 (2): 229–252.
- Fourastié, Jean. 1949. *Le Grand Espoir du XXe Siècle. Progrès technique, progrès économique, progrès social*. Paris: Presses Universitaires de France.
- Fuchs, Christian. 2012. Some Reflections on Manuel Castells' Book *Networks of Outrage and Hope. Social Movements in the Internet Age*. *tripleC: Communication, Capitalism & Critique* 10 (2): 775–797. <http://www.triple-c.at/index.php/tripleC/article/view/459>
- Garnham, Nicholas. 2004a. Contradiction, Confusion and Hubris: A Critical Review of European Information Society Policy. In *Contradiction, Confusion and Hubris: A Critical Review of European Information Society Policy*, ed. Pascal Verhoest, 6–18. Brussels: ENCIP. Accessed April 25, 2014. <http://www.cprsouth.org/wp-content/uploads/2011/11/garnham-debate.pdf>
- Garnham, Nicholas. 2004b. Is the Information Society a New Mode of Production? *Javnost/The Public* 11 (3): 93–103.
- Garnham, Nicholas. 2005. From Cultural to Creative Industries. An Analysis of the Implications of the



- Creative Industries Approach to Arts and Media Policy Making in the United Kingdom. *International Journal of Cultural Policy* 11 (1): 15–29.
- Garnham, Nicholas and Christian Fuchs. 2014. Revisiting the Political Economy of Communication. *TripleC: Communication, Capitalism & Critique* 12 (1): 102–141. <http://www.triple-c.at/index.php/tripleC/article/view/553>
- Gilman, Nils. 2003. *Mandarins of the Future. Modernization Theory in Cold War America*. Baltimore: The Johns Hopkins University Press.
- Hall, Stuart, Doreen Massey and Michael Rustin. 2013. After Neoliberalism: Analyzing the Present. *Soundings* 53: 8–22.
- Haug, Wolfgang Fritz. 2003. *High-Tech-Kapitalismus. Analysen zu Produktionsweise, Arbeit, Sexualität, Krieg und Hegemonie*. Hamburg: Argument-Verlag.
- Heise, Mikiya. 2002. Phantasmagorien der Netzwerkgesellschaft. Zu Manuel Castells. *Das Argument* 248 (Vol. 44): 684–695.
- Heiskala, Risto. 2003. Information Revolution, the Net and Cultural Identity. A Conceptual Critique of Manuel Castells The Information Age. *European Journal of Communication* 6 (2): 233–245.
- Hobsbawn, Eric. 1994. *Age of Extremes. The Short Twentieth Century, 1914-1991*. London: Michael Joseph.
- King, William F. 2004. Neoconservatives and “Trotskyism”. *American Communist History*, 3 (2): 247–266.
- Koivisto, Juha and Mikko Lahtinen. 2012. Conjuncture, Historico-Political. *Historical Materialism* 20 (1): 267–277.
- Krugman, Paul. 2012. *End This Depression Now!* New York: W.W. Norton & Company.
- Latham, Michael E. 2000. *Modernization as Ideology. American Social Science and “Nation Building” in the Kennedy Era*. Chapel Hill: The University of North Carolina Press.
- Machlup, Fritz. 1962. *The Production and Distribution of Knowledge in the United States*. Princeton: Princeton University Press.
- Mandel, Ernest. 1975. *Late Capitalism*. London: New Left Books.
- Mansell, Robin. 2012. *Imagining the Internet. Communication, Innovation, Governance*. Oxford: Oxford University Press.
- Mattelart, Armand. 2003. *Information Society: An Introduction*. London: Sage.
- McGuigan, Jim. 2009. *Cool Capitalism*. London: Pluto Press.
- McKenzie, Jordan. 2013. Daniel Bell’s ‘Disjunction of the Realms’: On the Importance of Unfashionable Sociology. *Thesis Eleven* 118 (1): 96–104.
- Neubauer, Robert. 2011. Neoliberalism in the Information Age, or Vice Versa? Global Citizenship, Technology, and Hegemonic Ideology. *TripleC: Communication, Capitalism & Critique* 9 (2): 195–230. <http://www.triple-c.at/index.php/tripleC/article/view/238>
- Nora, Simon and Alain Minc. 1980. *The Computerization of Society: A Report to the President of France*. Cambridge MA: MIT Press.
- OECD. 1981. *Information Activities, Eletronics and Telecommunications Technologies. Vol. 1: Impact on Employment, Growth and Trade. Information Computer Communications Policy Report 6*. Paris: OECD.
- OECD. 1986. Trends in the Information Economy. *Information Computer Communications Policy Report 11*. Paris: OECD.
- Parker, Edwin B. 1975. Background Report. In *OECD Informatics Studies 11. Conference on Computer/Telecommunications Policy. Proceedings of the OECD Conference 4.-6-2. 1975*, 8–129. OECD: Paris.
- Porat, Mark U. 1977. *The Information Economy: Definition and Measurement*. U.S. Department of Commerce, Office of Telecommunications. Washington D.C., U.S.: Government Printing Office.
- Poulantzas, Nicos. 1980. *State, Power, Socialism*. London: Verso.
- Preston, Paschal. 2001. *Reshaping Communications. Technology, Information and Social Change*. London: Sage.
- Rantanen, Terhi. 2005. The message is the medium. An interview with Manuel Castells. *Global Media and Communication* 1 (2): 135–147.
- Richta, Radovan et al. 1969. *Civilization at the Crossroads. Social and Human Implications of the Scientific and Technological Revolution*. White Plains, New York: International Arts and Sciences Press.
- Sandoval, Marisol. 2013. Foxconned Labour as the Dark Side of the Information Age: Working Conditions at Apple’s Contract Manufacturers in China. *TripleC: Communication, Capitalism & Critique* 11 (2): 318–347. <http://www.triple-c.at/index.php/tripleC/article/view/481>
- Schettkat, Ronald and Lara Yocarini. 2003. The Shift to Services: A Review of Literature.



- Forschungsinstitut zur Zukunft der Arbeit, IZA Discussion Paper no. 964. Accessed April 25, 2014. <http://ftp.iza.org/dp964.pdf>
- Schiller, Dan. 1996. *Theorizing Communication. A History*. New York: Oxford University Press.
- Streeck, Wolfgang. 2011. The Crises of Democratic Capitalism. *New Left Review* 71: 5–29.
- Steinbicker, Jochen. 2011a. *Pfade in die Informationsgesellschaft*. Weilerswist: Webrück Wissenschaft.
- Steinbicker, Jochen. 2011b. *Zur Theorie der Informationsgesellschaft. Ein Vergleich der Ansätze von Peter Drucker, Daniel Bell und Manuel Castells*. 2<sup>nd</sup> edition. Wiesbaden: VS Verlag.
- van Laak, Dirk. 1999. Der Begriff 'Infrastruktur' und was er vor seiner Erfindung besagte. In *Archiv für Begriffsgeschichte* 41: 280–299.
- Webster, Frank. 2014. *Theories of the Information Society. Fourth Edition*. London: Routledge.
- Wood, Ellen Meiksins. 1994. A Tale of Two Democracies. *History Today* 44 (5): 50–55.

### About the Authors

*Marko Ampuja* is a lecturer at the Department of Social Research, University of Helsinki, Finland. He has published on media and social theory, political economy of communication and critical theory. His recent publications include the book *Theorizing Globalization: A Critique of the Mediatization of Social Theory* (Brill, 2012; paperback edition by Haymarket Books, 2013).

*Juha Koivisto* is a lecturer at the Department of Social Research, University of Helsinki, Finland. He is a fellow of the *Berliner Institut für kritische Theorie* (InkriT) and a member of the *Historical-Critical Dictionary of Marxism workshop* as well as member of the advisory boards of the journals *Das Argument* and *Historical Materialism*. He has published widely on topics such as conjuncture, ideology, discourse analysis and theories of the public sphere. His recent publications include the book *Mapping Communication and Media Research: Conjunctures, Institutions, Challenges* (2010, co-authored with Peter D. Thomas).