

Rapporter från Forskningsgruppen för utbildnings- och kultursociologi

Sociology of Education and Culture Research Reports

Nr 26

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# An Introduction to Manuel Castells' The Information Age

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A report from the research project  
"Eliter och transnationella utbildningsstrategier"  
(Elites and transnational educational strategies),  
funded by the Humanistisk-Samhällsvetenskapliga forskningsrådet  
(the Swedish Council for Research in the Humanities and Social Sciences)

SEC, ILU, Uppsala Universitet  
Februari 1999

Forskningsgruppen för utbildnings- och kultursociologi  
(Sociology of Education and Culture)

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*An Introduction to Manuel Castells' The Information Age*

SEC Research Reports/Rapporter från Forskningsgruppen för utbildnings- och kultursociologi, No. 26  
Febr. 1999

ISSN 1103-1115

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## Foreword

This paper is mainly written during my visiting sojourn at the Department of Sociology, New York University, the spring 1998. I would like to thank Professor Craig Calhoun for giving me the possibility to spend some time at the intellectually stimulating Department of Sociology. Furthermore, the Swedish Institute gave me the economic means for realizing the visit and I am very thankful for their support. The paper is written in the framework of the research project “Elites and Transnational Educational Strategies,” financed by The Swedish Council for Research in the Humanities and Social Sciences (HSFR). Finally, I also wish to thank Donald Broady and the participants in the doctoral course “Globalization and Transnationalization” for insightful comments and stimulating discussions on the topic.

Mikael Börjesson

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Our societies are increasingly structured around a bipolar opposition between the Net and the Self<sup>1</sup>

Manuel Castells

## Introduction

In the last two decades, there has been a growing interest among sociologists and other social scientists in global phenomena and we have seen a number of attempts to theorize the new economy, the new society and the new world. The coming of the Postindustrial Society was foreseen by Daniel Bell in 1973 and already four years earlier Alain Touraine had invented the term. Bell and Touraine did not so much focus on globalization *per se*; they were more concerned with questioning the industrial society. Approaches that are more oriented towards a global perspective can be found in Ronald Robertson's work on religion in the 1960's and in Immanuel Wallerstein's theory developed in the beginning of the 1970s of the world economy. The interest in global perspectives then decreased for a period. In the early 1980s, postmodern theories conquered the academia, aiming at dissolving the established philosophical and social scientific foundations, most notably attacked by Jean-François Lyotard and Jean Baudrillard. In the late 1980s globalization theory again began to expand and according to Mike Featherstone and Scott Lash, globalization has "become an increasingly influential paradigm in the human science since the beginning of the 1990s."<sup>2</sup> The increased interest in globalization theories can partly be understood as a response to the challenges by the postmodern theories, and constitutes an attempt to still base science on positivistic ground. Despite the common interest in global phenomena, globalization theory is a disparate business, containing scientists from a variety of disciplines and a number of perspectives on globalization. I have in an earlier discussion of globalization theory argued that there are two dominant emphases (emphases—because the authors are not ignorant about other aspects of globalization) in the understanding of globalization process; one focusing on the economy, the other on culture. (Immanuel Wallerstein, Saskia Sassen and Robert B. Reich contra Ulf Hannerz and Ronald Robertson). However, some scholars try to combine these two perspectives in their projects.

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<sup>1</sup> Manuel Castells, *The Information Age: Economy, Society, Culture. Volume I: The Rise of the Network Society*, Blackwell Malden/Oxford 1997 [1996], p. 3. Hereafter referred to as V.I.

<sup>2</sup> Mike Featherstone & Scott Lash, "Globalization, Modernity and the Spatialization of Social Theory: An Introduction" in Mike Featherstone, Scott Lash & Ronald Robertson (eds.), *Global Modernities*, Sage, London, 1995, p. 1.

In this paper I will focus on the hitherto most comprehensive and elaborated attempt to understand our world with a multidimensional approach, namely Manuel Castells' *The Information Age: Economy, Society, Culture*, a three-volume opus contenting totally over 1,400 pages. It sums up twelve years of research and covers a wide range of topics and perspectives reaching from economy and technology to culture, social movements and global crime. In sharp contrast to most of the literature on globalization, the dimensions of today's world in *The Information Age* are represented in a truly global perspective. Large sections of the work are dedicated to non-western regions such as the Sub-Saharan Africa, the South East Asia, former Soviet Union, and South America. Furthermore, Castells states that his book(s) is "not a book about books."<sup>3</sup> All the three volumes are based upon thoroughly empirical research, which unfortunately is not always the case in works on globalization. Nevertheless, Castells is not ignorant about theory; his aim is rather to develop theories and to test hypotheses in relation to empirical data. I will here mainly focus upon his theories and the concepts that he develops and uses, and try to not refer to his empirical data more than necessary, although the work is overwhelmed by fascinating data.

Albeit Castells' magnum opus is the main focus of this paper, I will also integrate some other important work on globalization, mainly two books by Saskia Sassen, *Globalization and its Discontents* and *Cities in a World Economy*, David Harvey's *The Condition of Postmodernity* and Paul Hirst & Grahame Thompson's critical account, *Globalization in Question*. An underlying question is whether the globalization process is the end of our former understanding of concepts of class and social groups. Finally, since my main interest lies in education, I give some comments from the perspective of the tradition of educational research emerging from Pierre Bourdieu's sociological project.

The paper is organized in a rather straightforward way: I will discuss *The Information Age*, volume by volume and extend the discussion when necessary to the other contributions mentioned above. In the conclusion I will broaden the discussion and relate Castells' work to the sociological tradition and to an educational perspective. First, some comments upon Castells' fundamental theoretical framework will be given.

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<sup>3</sup> V.I, p. 25 and Manuel Castells, *The Information Age: Economy, Society, Culture. Volume II: The Power of Identity*, Blackwell Malden/Oxford 1997, p. 2, hereafter referred to as V.II.

## A Theoretical Framework

Many of the most prominent sociologists today (for example Pierre Bourdieu, Jürgen Habermas and Anthony Giddens) are aiming at overcoming the dualisms between structure and agency, society and individuals, the objective and the subjective, etc. This is also to some extent true for Castells. In Castells' version we have an opposition, or dualism, between the Net and the Self, where the first concept aims at capturing a structural level and the second a more individual level of analysis. The structure of the work resembles the dualism. The first volume, *The Rise of the Network Society*, focus on the more structural aspects of the world, while the second volume, *The Power of Identity*, deals more with action and especially different forms of political action and so-called new social movements. The third and last volume, *The End of Millennium*, covers more detailed analyses of important historical transformation in the end of the 20<sup>th</sup> century where the theoretical frameworks developed in the proceeding volumes are applied. It also constitutes an attempt to sum up and synthesize the Net and the Self.

Castells' theoretical framework takes its starting-point in the separation of two fundamental levels, modes of production (capitalism or statism) and modes of development (pre-industrialism, industrialism and informationalism), which give rise to different logical possibilities such as industrial capitalism and industrial statism. Castells assumes that societies are organized around "human processes structured by historically determined relationships of *production, experience, and power*."<sup>4</sup> Production is defined as "the action of humankind on matter (nature) to appropriate it and transform it for its benefit by obtaining a product, consuming (unevenly) part of it, and accumulating surplus for investment, according to a variety of socially determined goals."<sup>5</sup> Production is also understood in terms of class relations, determining the use and profits of the production. In other words, Castells follows a Marxian tradition in his understanding of the economy. Experience is "the action of human subjects on themselves, determined by the interaction between biological and cultural identities, and in relationship to their social and natural environment."<sup>6</sup> Fundamental for the identities is the gender/sexual relations mainly organized around the family and dominated by the men. Finally, power is defined as "that relationship between human subjects which, on the basis of production and experience, imposes the will of some subjects upon others by the potential or actual use of violence, physical or symbolic."<sup>7</sup> Power relations are usually organized in societal institutions, determined by power struggles, and the state serves (in a Weberian sense) as the warrant of power through its monopoly of violence. Castells also sees power in the perspective developed by Foucault, that is as microphysics of power, diffused throughout all societal institutions.<sup>8</sup>

Interesting to note is that the theoretical fundamentals in a way reflects the overall organization of the work. The concept of production aims at capturing a structural economic level, (Volume 1) while the stress on experience, indicates a focus on action, identities and culture (Volume 2). The analyses

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<sup>4</sup> V.I, pp. 14–15.

<sup>5</sup> V.I, p. 15.

<sup>6</sup> V.I, p. 15.

<sup>7</sup> V.I, p. 15.

<sup>8</sup> V.I, p. 15.

of power is interwoven with the other analyses in the three volumes and gives the reader the impression that power always is present, even if not in all cases in its traditional forms. Moreover, we can also note that Castells extends, or modifies, Marx's theories with the inclusion of a more Weberian perspective (we can see the concepts of production, experience and power in analogy with Weber's famous concepts of class, status and party, where class corresponds to the economy, status to culture and party to power)<sup>9</sup> and, as we will discuss in detail below, he also gives the state a more autonomous role than merely being the agent for the ruling class.

In his prologue, Castells moves from the theoretical fundamentals discussed above to point out how these fundamentals are related on a factual level. He argues that the world today can best be characterized as an informational mode of development and that we have passed the industrial age. With the concept of informational he wants to emphasize that information has always played an important role in all societies, but today information serves as the most fundamental aspect of the economy, information today is *the* commodity and information penetrates all spheres of societies.<sup>10</sup> To add the other aspect, the dimension of production, Castells argues that the techno-economic system is informational capitalism and that statism with the fall of the Soviet Union to a large extent has vanished as a mode of production.<sup>11</sup>

An important feature of Castells' work is the emphasis on technology, which is not so common in the globalization literature where the stressing of economy or culture dominates. For Castells, technology is the ground for the analyses of economy, society and culture. This does not imply that technology determines the rest. Instead, Castells argues that technology is society, that is, society cannot be understood as something different from technology, or in other words, there would be no societies without technology.<sup>12</sup> Let us now turn to see how Castells uses his theoretical framework and follow him through his *voyage du monde*.

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<sup>9</sup> Max Weber, "Class, Status and Power," pp. 180–195 in H. H. Gerth & C. Wright Mills, *From Max Weber: Essays in Sociology*, Oxford University Press, New York 1980 [1946].

<sup>10</sup> One can perhaps wonder why Castells' work is titled *The Information Age* and not *The Informational Age* and Castells has two reasons for the choice of title. First his overall project is to determine the extent and diffusion of a new techno-economic system, based on information, and he wants to avoid giving the answer to this question before hand. Second, in a world where information plays such a crucial role, he simply wants an easier access to his work—the term information is more common used than informational, as for example in information technology. V.I, note 33, pp. 21–22.

<sup>11</sup> V.I, pp. 18–22.

<sup>12</sup> V.I, p. 5.

## The Rise of the Network Society

### *The Net and the Information Technology Revolution*

Even if information technology and economy are closely interrelated and intertwined, they need to be separated on an analytical level, and thus Castells devotes two separate chapters to these phenomena. Here, I will first discuss Castells' view of the technological revolution and later turn towards the economy and try to relate the former to the latter.

Technology has been one of Castells' major interests for over a decade. For example, in *The Informational City* (1989) he describes the new informational cities (or, more precise, the informational regions) and their development in the US. In his account, technology is a central feature for the understanding of the new economical spaces. In *Technopoles of the World. The Making of 21<sup>st</sup> Centuries Industrial Complexes* (1994) the scope is widened in a geographical sense and Castells together with Peter Hall tries to map the field of technopoles<sup>13</sup> in a global perspective.

Castells uses a common definition of technology, "the use of scientific knowledge to specify ways of doing things in a *reproductional* manner."<sup>14</sup> He also shares the rather established view that we today experience a revolutionary leap in the technological field, as we did in the late eighteenth century with the industrial revolution. Regarding the definition of "informational technology" Castells includes typical technologies in "microelectronics, computing (machines and software), telecommunications/broadcasting and optoelectronics."<sup>15</sup> What perhaps is more controversial is that Castells' definition of information technology includes biological technology, especially genetic engineering, which he argues is an important feature of information based technology and is further more and more intertwined with other information technology.<sup>16</sup> To understand the informational technology revolution it is important to note that information always played an important role in the economy and the production, but as pointed out above, information technology today functions as a source of economic growth in itself. For the first time in human history, the human mind has become a direct productive force and the borders between designers, engineers and the users have to a large extent broken down in a constant flow of development. Further, the speed of development and diffusion is unique. While it took two centuries for the industrialism to conquer the world, information technology has become a global phenomenon in two decades.<sup>17</sup> To describe the technological features of the information technology revolution, Castells points out three areas as the

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<sup>13</sup> Defined as "various deliberate attempts to plan and promote, within one concentrated area, technologically innovative, industrial-related production: technology parks, scientific cities, technopolises and then like." Manuel Castells and Peter Hall, *Technopoles of the World. The Making of 21<sup>st</sup> Centuries Industrial Complexes*, Routledge London 1994, p. 8.

<sup>14</sup> V.I, pp. 29–30, quote from Daniel Bell, *The Coming of Post-industrial Society. A Venture in Sociological Forecasting*, New York: Basic Books 1976 [1973], p. 29, which is a quotation from a lecture by Harvey Brooks, *Technology and the Ecological Crises*, Amherst 1971.

<sup>15</sup> V.I, p. 30.

<sup>16</sup> V.I, p. 30.

<sup>17</sup> V.I, pp. 30–34.

most important: microelectronics, computers and telecommunications. Although these areas have developed through different paths, today they are closely interrelated and the information technology as we know it today would not be possible without close links between all three areas.<sup>18</sup> Remarkably, most of the technologies were known or could be traced back to World War II and beyond, but the 1970s have to be seen as the beginning of the information technology revolution. A wide range of technological innovations saw their daylight in the 1970s: the microprocessor, the microcomputer, the optic fiber, and the TCP/IP (the protocols that make communication between different networks on the Internet possible). The 1970s were also crucial for the development of biotechnology with breakthroughs in gene science.<sup>19</sup> We will see later that the timing of the information technology revolution will play a crucial role for Castells' analyses of other dimensions of today's societies.

How shall we then understand the timing of the information technology revolution and the fact that it almost exclusively was an American revolution? Castells argues that it cannot be seen as an outcome of either economic or political factors. The information technology revolution occurred before the economic crisis and can thus not be a response to it. The American investments in the defense industry were most vivid in the 1960s and were to some extent important for investments in technological research but this factor is not sufficient for explaining the technology development. Instead the information technology revolution is a product of the technology sphere itself, where one invention has led to the other. An important criteria was the innovative milieu that were to be found in the Silicon Valley with its, among other substantial features, high concentration of engineers and close links between universities (especially Stanford) and companies.<sup>20</sup>

To sum up the characteristics of the information technology, Castells uses the concept of paradigm, as developed by Kuhn.<sup>21</sup> Castells sees five characteristics as essential for the information technology paradigm, namely that information technologies (IT) are

- 1) technologies that act on information, and not the other way around which has been the case before;
- 2) shaping (however, not determining) all human action since all activities involves information;
- 3) working through a network logic, important for the implementation, innovation and development of IT and this network logic is crucial for all systems and sets of relationships using IT;
- 4) based on flexibility both in the sense of the IT-systems themselves and the IT-based organizations and companies;
- 5) converging of "specific technologies into a highly integrated system," where boundaries between different technological and scientific areas, disciplines and companies are transgressed and blurred.<sup>22</sup>

That information technology largely was an intralogical phenomenon does of course not mean that there are no links to the wider society. Once a fact, investments in the American military industry have played a crucial role for the further faith of information technology and information technology has had a great impact on the economy and its transformation to a truly global economy, which will be the topic of the following section.

## *A Global and Informational Economy*

The economy argues Castells, has changed fundamentally and become global over the last two decades, i.e., during the same period as the information technology revolution has occurred. This is no coincidence; information technology is the material basis for a global economy and Castells further argues that the new economy is an informational economy. With informational he means that information and information processes are the products of the new economy and not mainly devices

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<sup>18</sup> The Internet is perhaps the clearest example of this, conditioned by the development of telecommunications and the latest fiber optics, which works as the infrastructure of the networks, and the development of the computer—unthinkable without the developments in microelectronics (as for example the semiconductors and the microprocessor).

<sup>19</sup> V.I, pp. 40–50.

<sup>20</sup> V.I, pp. 50–60. See also Manuel Castells and Peter Hall, *Technopoles of the World. The Making of 21<sup>st</sup> Centuries Industrial Complexes*, pp. 14–28.

<sup>21</sup> It should be noted that Castells' use of the notion of paradigm in the context of technology is not entirely new. V.I, p. 61.

<sup>22</sup> V.I, pp. 60–65. Note that it is not a quotation, even if the style indicates so.

for the production of other products (even if this evidentially also is the case). Further, the ability to process and generate information is the most crucial weapon in the struggles between firms, regions and countries.<sup>23</sup> According to Castells, a global economy is something different from a world economy in the notion of Immanuel Wallerstein and Ferdinand Braudel. A world economy has existed since the 16<sup>th</sup> Century but a global economy is a new phenomenon.<sup>24</sup> What is then new and how shall we understand the emergence of the new economy?

Castells sets out to discuss the new economy in terms of productivity.<sup>25</sup> However, problems arise, especially considering how to determine productivity. Interestingly, these problems can to some extent be said to be a product of the ways to measure; the measures are developed in the context of an industrial economy and are inadequate for understanding an informational economy,<sup>26</sup> a theme that we have reason to come back to. Instead of focusing on productivity, Castells examines the logic of capitalism and he states that profitability determines the development and the productivity. Showing that the productivity of the industrial economy did not decline in the 1960s and 1970s, Castells argues that the industrial economy then reaches its peak. It was then a mature economy and the crisis in the 1970s should not be understood as mainly an effect of the oil crisis in 1973, rather as a crisis due to over-production. To deal with this problem, firms have four different ways to still keep their profits: reduction of production costs, increase productivity further, broaden the market and finally increase the rate of capital turnover. What happened in the 1970s was that the firms broadened their markets and thus created a global market—"the industrial economy had to become informational and global or collapse."<sup>27</sup> This gave rise to a restructuring of the economy, where certain branches (mainly manufacturing) declined and others (electronics and services) increased their competitiveness and profits. The second phase of the emergence of a global and informational economy has to be traced to the late 1970s and the early 1980s and implies the restructuring of national financial markets, i.e. opening them up for foreign investments, and thus creating a global financial market. A condition for this development was evidentially information technology; global markets would not function without telecommunications, advanced computer programs and computer networks communicating in real time. This is however not sufficient for an understanding of the rise of a global financial market and the new informational economy. We also have to add that there has been a wider change in societies, the new economy was also an effect of institutional and political actions and policies. As we will discuss later, the state played a crucial role for the transformation of the economy, which implies that the information economy has a broader scope than just sectors of the economy; it penetrates whole societies and must therefore be described as informational. Before entering a discussion of other features of the information age, a few words needs to be said concerning the limitations of a global economy.

Although the dominant feature of the new economy is the global dimension, it has to be pointed out that it is not a completely global or planetary economy. Nation states still exist and have a considerable impact on the economy. Not all sectors of the economy are connected to the global economy and the national economies are still based on production for the national market, which constitutes the largest share of GNP. Neither are all regions in a country part of a global economy nor are multinational companies operating all over the world. Still, the dominant feature of the economy today is that it works on a global scale and that all major economic regions are connected to the global system. That there are economical regions is considered by Castells as an important aspect of the global economy. Other regions, branches and economies that are not directly connected to the global economy are however strongly effected by the global economy and the trend is a growing dependence on the global and informational economy.<sup>28</sup>

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<sup>23</sup> V.I, pp. 66–67.

<sup>24</sup> V.I, p. 92.

<sup>25</sup> The following is based on V.I, pp. 66–92.

<sup>26</sup> Castells writes: "In sum, it may well be that a significant proportion of the mysterious productivity slowdown results from a growing inadequacy of economic statistics to capture movements of the new informational economy, *precisely because of the broad scope of its transformation under the impact of information technology and related organizational change.*" V.I, p. 78 (italics in original).

<sup>27</sup> V.I, p. 92.

<sup>28</sup> V.I, pp. 97–103.

This view is to some extent challenged by Paul Hirst and Grahame Thompson, two of most prominent opponents to globalization theory. They argue in the book, *Globalization in Question. The International Economy and the Possibilities of Governance*, that what they conceive as the strong globalization claim is false. The authors develop two ideal types of the economy, one international and one global. The crucial difference between the models is the role that the nation states play in the economy. For the strong globalization claim, constructed from some of the most radical understandings of globalization phenomena (who actually represent these ideas, are not made explicit, but the reader understand that authors like Robert B. Reich and Kenichi Ohmae are the scope of the criticism), argues Hirst and Thompson, is it essential that the nation states not are in control of the economy. Instead, transnational corporations and the global market for finance and goods set the conditions. The international model acknowledges that the nations states fulfils important functions in the international economy and that they still have the power to do so.<sup>29</sup>

The evidences Hirst and Thompson put forth for the inadequacy of the global economy model are falling in two categories, argument considering the history of the international economy and arguments about the recent development. By the former, they argue that the openness of the economy is nothing new, in fact, the economy was more internationally integrated, i.e. the national economies were less autonomous, in the period between 1879–1914 than today. They also point out that there has always been different ways of regulating the economy and that there have been oscillations between different grades of regulation, implying that the relatively unregulated economy today could be transformed into a system of higher regulation.<sup>30</sup> Considering the description of the economy today, the authors find that major transformation after World War Two is the shift from international trade to international investments, or foreign direct investments (FDI). The main bulk of the foreign direct investments is mediated by the multinational companies, and highly concentrated to the most developed countries. Furthermore, there is a distinct pattern concerning the rest of the foreign direct investments, where the big three economic powers, North America, Europe and Japan, invest in their neighboring countries. Hirst and Thompson conceive this as an argument for the non-existence of a truly global economy.<sup>31</sup> Another important feature of today's economy is that the transnational corporations—so crucial for the radical globalization theories—are rare exceptions. Most of the internationally important companies are multinational companies and most of these have a distinct national base, where the technological development is concentrated and the most important market is.<sup>32</sup>

Hirst and Thompson's account is valuable in some respects. It helps us to see the limitations of the more pronounced or enthusiastic globalization perspectives, mainly present in non-scientific arenas, such as politics and popular management literature. But, from a scientific point, one can be dubious about who actually should be targeted by Hirst and Thompson's criticism. Even if authors advocating a very radical view on globalization can be said to be corrected by Hirst and Thompson, these scholars represent a very limited number, and most of the serious social scientist have a more nuanced perspective on the matters. The problem with Hirst and Thompson's approach is that it is too undifferentiated and thus fails to grasp the importance of the new tendencies—they argue for example that the telegraph cables created an information system not fundamentally different from today's data communication systems.<sup>33</sup> Furthermore, they perceive the global economy as a moral economy, i.e. that the trade and investments should be balanced between different countries and regions around the world.<sup>34</sup> I hold Castells' perspective, that the increased importance of regions and larger trade blocks and the uneven economic development are indicators of a more globalized economy, as a more convincing perspective. Furthermore, as Richard Palmer points out in a critique of Hirst and

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<sup>29</sup> Paul Hirst & Grahame Thompson, *Globalization in Question. The International Economy and the Possibilities of Governance*, Polity Press, Cambridge, UK 1997 [1996], pp. 8–13. Hirst and Thompson's book has two dimensions, one is the description of the economy, the other the political implications of how the economy works. I will here only deal with their understanding of the economy and discuss their political aspects later.

<sup>30</sup> *Ibid.*, pp. 26–50.

<sup>31</sup> *Ibid.*, pp. 51–72.

<sup>32</sup> *Ibid.*, pp. 76–98.

<sup>33</sup> *Ibid.*, p. 197.

<sup>34</sup> *Ibid.*, pp. 51–72.

Thompson's perspective on globalization, they fail to acknowledge the qualitative aspects and other then economic aspects of the new economy—arguments that we will come back to considering the transformation of space.<sup>35</sup>

### ***The Network Organization***

We saw above that the information technology paradigm includes a focus on networks and flexibility and that the new economy is conditioned by electronic networks. There is also a wider emphasis on networks in the new economy related to the idea that it is informational, not just an information economy. Evidence for this can be found in the fact that firms, companies and the overall economic structures are organized and structured according to a network logic. Castells puts it: "My thesis is that the rise of the informational economy is characterized by the development of a new organizational logic which is related to the current process of technological change, but not dependent upon it."<sup>36</sup> This new organizational logic is central for the globalization of the economy. The informational economy has developed in a wide range of cultural setting over the world, implying that it is not conditioned by a specific cultural setting for its development. The analytically interesting question, however, is whether there is a unified organizational culture around the world. Castells tries to answer the question by examining a set of distinct different trends in organization.<sup>37</sup>

Castells identifies seven trends in organization. The first, the change from Fordism to post-Fordism, refers to the breakdown of mass-production and the switch to flexible production. While large scale production, specialization of work and hierarchic organizations describe the former, the latter is characterized by either small scale flexibility, productions of specialized products for a small market, or more recently high-volume flexible production dependent on advanced production techniques.<sup>38</sup> Both types of flexible production are argued to be a result of an increased demand for specialized products (due to among other things more diversified markets) and the decline of mass consumption. The second feature is the argument among certain scholars that there is a crisis regarding larger corporations and a rise of small and medium sized firms. This is true in one aspect; small and medium sized firms have increased in numbers and are well suited for the more flexible production demands, but still—even if there is a crisis in the organizational pattern—large corporations play dominant roles in the global economy and have certainly not diminished. The third trend is the new management methods in a number of corporations, predominantly Japanese and the methods are usually referred to as "Toyotaism," including just-in-time, a slim production, cutting of storage costs, involvement of workers in the working process and teamwork among other things. The forth and fifth types of organizational development refers to linkages and networks originating from small and medium sized companies, either in the form of networks between small and medium sized firms or with larger corporations, or organized by license agreements under an umbrella corporation. The sixth trend is similar to the former two, but refers to a large company scale, usually titled

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<sup>35</sup> Richard Palmer, "Globaliseringsbegreppets objektiva grund och teoretiska funktion" pp. 70–75 in *Häftan för kritiska studier*, nr 3 1995.

<sup>36</sup> V.I, p. 152.

<sup>37</sup> V.I, pp. 151–154.

<sup>38</sup> The change from a Fordist mode of production to a mode of flexible production is central in David Harvey's analyses of the new economy. See David Harvey, *The Condition of Postmodernity. An Inquire into the Origins of Cultural Change*, Blackwell, Malden/Oxford 1997 [1990]. Harvey's account, although not as extensive as Castells, is not restricted to an analysis of the organization of the economy. His account of the transition from Fordism to a flexible accumulation emphasizes a wide range of the topics we have seen Castells draw upon, the importance of technology, the globalization of the economy, the innovations in finance, the rise of services sectors and decline in manufacturing. (Ibid., pp. 141–172) Harvey's interest also covers the relations between economy and society, and he understands today's economy as capitalistic driven by accumulation of capital and profit (cf. Castells discussion of the profitability as the core of capitalism above). Nevertheless, in order for the economy to function, a set of corresponding social and political conditions (mode of regulation) has to be fulfilled. (Ibid., pp. 121–124.) Harvey's theoretical understanding of the transformation of the economy is based on Marx: "Even though present conditions are very different in many respects, it is not hard to see how the invariant elements and relations that Marx defined as fundamental to any capitalist mode of production still shine through, and in many instances with an even greater luminosity than before, all the surface froth and evanescence so characteristic of flexible accumulation." (Ibid., p. 188.)

“strategic alliances,” which are limited in time and scope. Finally, there is a trend regarding the internal structure of larger corporations, including “flattening” of the organization and an orientation towards processes and teamwork.<sup>39</sup>

Castells summarizes the organizational trends stating that they are distinct from each other, but nevertheless similar in that they all have developed as a result of the crisis in the traditional industrial production organization model. Another common feature is the emphasis on network structures in the new organization models and Castells sets out to examine the link between this structure and the information technology with its similar structure.<sup>40</sup>

All of these organizational changes are not outcomes of technology since some of them preceded the information technology breakthrough and in some cases information technology has been introduced without organizational changes in order to increase the control of the workers. These examples taken aside, informational technology has played and plays a crucial role for the development of more flexible, flattened and network-based organizational forms both within corporations and between firms of all sizes. To be part of a network or not has become the dividing line between success and failure in the new economy and Castells argues that we now see the emergence of a new kind of enterprise—the network enterprise—dominating the age of informational economy. Castells defines the network enterprise as “that specific form of enterprise whose system of means is constituted by the intersection of segments of autonomous systems of goals.”<sup>41</sup> The reasons for the success of the network enterprise in the new economy are its capabilities to generate knowledge and to adapt to fast-changing goals.<sup>42</sup>

For a further understanding of the new organizational forms of the new informational economy, Castells examines different forms of network organizations in some successful Asian countries. He finds that culture and history are important for the understanding of how different forms of networks (ranging from family based, as in the case of South China, to the large-scale corporations’ network structure in Japan) have developed within different national contexts. The nation state has also had impact on the development of network organizations and taken together with the cultural and historical factors’ importance for the organizational structure Castells criticizes the Western neo-liberal view on economy and organization for not being grounded in empirical research and for being biased by an ethnocentrically perspective.<sup>43</sup>

Finally, Castells puts forth the question, following Weber, whether the new organizational model and the new informational economy also correspond to a new form of spirit and ethic. Castells points out that even if we are still living in a capitalist society (which also was the condition for Weber’s analyses) the unit is no longer the entrepreneur in the Schumpeter sense, the family or the class, but the network. This gives rise to the question whether there is a unifying culture within the networks. According to Castells, there is no such thing, rather a set of different cultures, or in Castells’ formulation, a “multifaceted, virtually culture” and the “‘spirit of informationalism’ is the culture of ‘creative destruction’ accelerated by the speed of the optoelectronic that processes its signals. Schumpeter meets Weber in the cyberspace of the network enterprise.”<sup>44</sup>

## ***The Breakdown of Traditional Labor***

Labor, the relation between capital and labor, and the relation between class structure and labor have always been central for sociological analyses of society and Castells is no exception from the tradition. In the following, I will concentrate on Castells’ view of labor as such in the new global and informational economy and come back to the other features later.

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<sup>39</sup> V.I, pp. 154–166.

<sup>40</sup> V.I, pp. 167–168.

<sup>41</sup> V.I, p. 171.

<sup>42</sup> V.I, pp. 168–172.

<sup>43</sup> V.I, pp. 172–190 *et* 193. For example, Williamson’s argument that firms change their inner organization in order to cut transactional cost do not consist with the actual development of the network structure where the risks and transactional cost are shared within the network, not within each firm.

<sup>44</sup> V.I, p. 199.

Central to many theories about economy and society from the 1970s and onward is a shift in the economic structure with a decline of employment in agriculture and manufacturing and a rise of employment in services. This has led theorists to name the new era post-industrial and the economy is described as a service or information economy. Castells questions these theories arguing that that even if traditional industry production has declined this kind of production is still very important and the notion of a post-industrial era is simply misleading. Also the concept of a service economy fails to emphasize the conditions of the new economy, where boundaries between “goods” and “services” to a large extent have diminished. It also lacks a substantial methodology and theoretical foundation for giving an appropriate description of today’s services.<sup>45</sup>

To answer questions concerning the structure of labor in the new economic era, Castells uses two data sets from the G-7-countries; one reaching from 1920–1970 and the other covering the period 1970–1990, thus roughly capturing what is conceived as the post-agricultural era and the post-industrial era.<sup>46</sup> One important finding is that there are notable differences between the countries. While one general trend is that the agriculture sector is declining even further, this does not hold true for manufacturing. In Japan and Germany, the two most expansive economies today, the proportions of workers in manufacturing have not declined drastically and are still on relative high levels. Japan has also the lowest rate of increase in the information sector, followed by Germany and Italy. On the other end is the US with a substantial decline in manufacturing and an increase in the service sector (an increase of the employment ratio of service to industry from 1,1 to 2,0 already in the first period and an even faster increase rate in the second period). If we consider the types of positions, where the common view of the post-industrial society is that managerial jobs have increased and also, according to left-wing analyses, that low-skilled jobs have increased, Castells finds that there is a great variety among the countries. The US and Canada have high proportions of managers, professionals and technicians, accounting for one third of the labor force, while these categories are only representing nearly 15% in Japan. Moreover, there is no direct evidence for a polarization of the labor force in the sense that the bottom and the top of the structure expands in the same high proportions; the top expands much faster than the bottom.<sup>47</sup> Taking all these trends together, Castells sees some general developments, most notably the decline of employment in agriculture and traditional manufacturing, the increase of producer services and social services, the increased differentiation of jobs with increasing numbers of technicians, managers and professionals (conceived as the core of the post-industrial society) and of “white-collar” low skill jobs. But there are significant differences between the countries and thus Castells distinguishes between two major models of societies—a “Service Economic Model” and an “Industrial Production Model”—where the US most clearly represents the first and Japan the latter. He concludes that most of the theories of post-industrial societies fails to reach beyond the US (the paradigmatic model, due to that most of the theories are developed from American data) and thus failing to give a wider and more appropriate account of the new occupational structures. Since the economy is global and different functions are developed in different countries, Castells states that:

The implications of such an observation for the theories of informationalism are far-reaching: the unit of analysis to comprehend the new society will necessarily have to change. The focus of the theory must shift to a comparative paradigm able to explain at the same time the sharing of technology, the interdependency of the economy, and the variations of history in the determination of an employment structure spread across national boundaries.<sup>48</sup>

A central question from a more global perspective on the labor structure concerns the existence of a global labor force. Compared to the globalization of capital, the globalization of labor is almost nonexistent, for example, only 1.5% of the total global labor force work in a foreign country. With a closer examination, Castells finds some evidence of a tendency towards a more global labor *market*. Today there is one category of workers that can be said to be operating on a truly global market,

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<sup>45</sup> V.I, pp. 201–208.

<sup>46</sup> The following is based on V.I, pp. 208–231.

<sup>47</sup> There is however a clear tendency towards an increased economic inequality, but this a different feature of the labor structure and should be analyzed separately.

<sup>48</sup> V.I, p. 231.

namely the elite of the informational economy, “the highest-skilled professionals in innovative R&D, cutting-edge engineering, financial management, advanced business services, and entertainment.”<sup>49</sup> However, the informational economy effects labor in a global perspective on other levels, in Castells’ words there is “a tendency toward increased interdependency of the labor force on a global scale.”<sup>50</sup> Three major trends mediated through information technology accounts for this tendency: 1) employment in multinational corporations and transnational networks, 2) international trade and 3) the global competition and new modes of flexible management. We can note that even if the number of employees in multinational corporation is very modest compared to other workers, the value produced by these employees is everything but insignificant; one third of the private production in the world is accounted by these workers. International trade and especially direct foreign investments have led to massive industrialization of developing countries, restructuring the whole labor structure of these countries. Consequently, this has also had an impact on the developed countries; the extensive decline of the manufacturing sector in the Western countries is related to the growth of industrial production in new areas over the globe. This has blurred the former division between the North and the South, and further, the industries in some of the developing countries are as advanced as their counterparts in the developed world, thus breaking down the distinction between high-technology and old-fashioned production.<sup>51</sup>

The relation between the North and the South is one topic that Saskia Sassen develops in her latest book, *Globalization and its Discontents*.<sup>52</sup> Sassen’s approach considering immigration transgresses Castells’ and gives us a more complete understanding of the phenomenon. Sassen puts forth that the flow of immigrants from developing countries towards the developed countries has to be understood as an outcome of the globalization of the economy. The ideas underlying the immigration policies in the developed countries conceive immigration as a result of conditions and factors only in the developing countries such as war, famine and natural catastrophes. This is however not enough for an understanding of immigration flows. More important is the globalization of the economy. When a developed country invests extensively in a developing country, it effects the whole economy of the developing country; not only producing employment in certain sectors of the economy, but more important here, it also produce substantial unemployment in other sectors. Furthermore, the investments tend to create personal and cultural linkage between the countries. Another important factor for the immigration is also that the demand for cheap labor has increased in the developed countries, especially in the *global cities*. This demand is to a large extent fulfilled by immigrants, legal as well as illegal, mainly due to that they, because of their desperate situation, are the only ones accepting underpayment, lack of labor rights, horrible working conditions, and so forth. (The existence of cheap labor and low-cost production in the leading economic region around the world also contributes to blurring the distinction between a developed North and an underdeveloped South.) These factors taken together produce a flow of immigration from the developing country towards the developed.<sup>53</sup>

Turing back to Castells’ analyses, he argues that the new global and informational economy has reshaped the division of labor and that it has changed the actual work performed and the conditions for work. We have seen some examples above demonstrating that the traditional statistical and economic categories are designed for an understanding of industrial societies, and this is also true for work (different types of jobs, employment and relations) in the new informational era. In order to understand the new economy Castells develops a typology, divided along three dimensions: 1) tasks

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<sup>49</sup> V.I, p. 234.

<sup>50</sup> V.I, p. 234.

<sup>51</sup> V.I, pp. 234–240.

<sup>52</sup> Saskia Sassen, *Globalization and its Discontents*, The New Press, New York 1998. The book is a collection of essays focusing on globalization, global cities, feminism, electronic space and immigration.

<sup>53</sup> *Ibid.*, pp. 31–53. See also pp. 55–76 for an interesting comparison of immigration and immigration policy in the US and Japan, two very different countries in these respects, but where Japan, the former so ethnic homogenous country, now have become more like the diversified US due to its extensively economic investments in Asia. Furthermore, see Saskia Sassen, *Cities in a World Economy*, Pine Forge Press, Thousand Oaks, CA 1994, pp. 99–117 et 120–121 for a discussion on the blurred lines dividing the rich and the poor cities, where the rich cities today content a significant number of poor people.

performed in the work process (value-making), 2) relationship between an organization and its environment (relation-making) and 3) relationship between managers and employees in an organization (decision-making).<sup>54</sup> (See Appendix for a description of the categories for the three levels.)

An important topic in the current debate considering work is whether the new technology will result in a decrease of jobs. Castells finds that there is no direct relationship between informational technology and loss of jobs. In fact, there is a great division between regions, while jobs have increased in Japan and South-East Asia, Europe has lost a lot of jobs and information technology is not a sufficient factor for an understanding of the creation of jobs.<sup>55</sup> According to my view, a more important feature of the new economy is the transformation of relations between employees and the companies and the rise of fleximers and part-timers, and thus also the decline of full-time workers. In almost all the G-7-countries the proportion of the working force that is part-timers have increased and reached in 1993 between 15-25% in all countries except Italy and France. In addition, the traditional carrier pattern and lifelong employment is breaking down, even in Japan to some extent, but there is also a general trend that the companies keep a core of full-time workers. These transformations of employment relations have a wide range of consequences, reaching from a division between those who have stable working conditions to those living under rather unstable conditions, sometimes employed on a day-to-day-basis, to a more equal society regarding the relations between the sexes.

Finally, an important aspect of the new labor structure is the income distribution. It is a fact that the rich have become richer and the poor poorer. This tendency is especially articulated in the US, where the median family income has slowed down its growth since the 1950s and actually became negative for the period 1989-1993. Furthermore, the top fifth of the households in 1993 earned almost 50% of the total income, while the bottom fifth accounted for less than four per cent. If we look more closely at the top fifth, the skewness of the income growth increases rapidly: the first and "poorest" 10% in the top fifth increased their income with 9.1% while the richest 1% of the population increased their income with 62.9%! At the other end of the distribution spectra, the percentage living under the poverty line increased from 13.1% to 15.1% in the four years between 1989 and 1993. How shall we then understand this polarization of economic resources? Popular theories today try to explain the trend as an outcome of the new technologies and of a mismatch between the supply (labor) and the demand (occupations and jobs). Castells, however, finds little evidence for these theories, the reasons for the polarization has to be explained by factors that are more complex. Main factors are economic/political imperatives, the reconstruction of the economy with the increased power of capital versus labor (the power of the trade unions declined rapidly in the globalization process) and informational technology in the sense that the economic restructuring would have been impossible without it.<sup>56</sup>

### *Time, Space and Power*

Today's social sciences are very oriented towards concepts—we associate certain scholars with certain concepts almost as if the concepts have become the trademarks of scholars in the academic sphere. "Manuel Castells" has this far been synonymous with the notion of "space of flows." Even if it ought to have become clear by now that Castells' project is way too comprehensive to be summarized as just a theory of the space of flows, Castells devotes one chapter to develop his thoughts on the subject. Since the notion of space of flows is central for his analyses, I think it could be well worth the effort to try to understand what Castells means with his concept. Further, we have

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<sup>54</sup> V.I, pp. 240–245. These dimensions should be conceived as distinct from each other. (According to Castells, the dimensions and the categories are developed from empirical data but still I find it very interesting to empirically determine the autonomy of the different dimensions). We can also observe the hierarchy of power within each dimension and one can imagine that there are important struggles between, for example, the commanders, the networkers and the deciders.

<sup>55</sup> V.I, pp. 251–264.

<sup>56</sup> V.I, pp. 272–279.

to inquire into the relations between the concept and different spheres, such as technology, economy and culture. To start with, some reflections upon Castells' notion of time will be given.

Time is effected under the new technological and economic paradigm. While time always has been connected to a place, the new technology, to use a notion of Giddens, disembeds time and makes it abstract, creating as Castells prefers to name it, a timeless time. For Castells this new notion of time can be traced to a wide range of social activities. Regarding the economy, with the rise of a global financial market, working as a real time unit, the time has become essential for determine the outcome; the key function in profit making lies in the speed of the transactions, creating as Saskia Sassen puts it, superprofits.<sup>57</sup> We have also seen that the traditional work has broken down and been replaced with multiple forms of working condition, flextime, part-time and day-to-day-employment. Recalling that Castells in his understanding of technology also includes biology, he draws on the new possibilities by medicine and biological science to prolong life, which have lead to the denial of death.<sup>58</sup> But also, science has reshaped the whole relation to nature and what formerly was conceived as "natural" has been transgressed trough for example plastic surgery and new reproduction technologies. Overall, Castells puts forth the hypothesis that "the network society is characterized by the breaking down of rhythmicity, either biological and social, associated with the notion of a lifecycle."<sup>59</sup> Why then the notion of timeless time, which seems like a contradiction in terms? Castells' point of reference is Leibniz' understanding of time as an order of succession of things. What is characteristic in the new era, argues Castells, is the interruption of succession. An additional example of this can be found in the new media and culture, where the "things" lose their intrinsic meaning and becomes just signs in a forever changing web of symbols and further whose meaning depends upon the current context. Thus, we have a timeless time, a time where the succession of things has been disrupted.<sup>60</sup>

To turn towards "space," it has to be pointed out that this has become a very crucial topic for the globalization-related literature.<sup>61</sup> Saskia Sassen has in her studies on global cities shown how the spatial logic of global cities is reshaped by the logic of the global economy<sup>62</sup> and she has more recently studied the new emerging electronic space, see below. In *Cities in a World Economy*, Sassen extends here analyses of the global cities. Instead of just focusing on the most important ones, i.e. New York, London and Tokyo, she discusses the emergence of a transnational urban system and the transformations of cities in general in the new global economy. Considering the conditions for an understanding of a transnational urban system, she writes: "So much of social science is profoundly routed in the nation-state as the ultimate unit for analysis that conceptualizing processes and systems as transnational is bound to create much controversy."<sup>63</sup> Sassen's argument for the existence of a transnational urban system, as distinct from cities competing in a world market, is that the cities are divided according to function, e.g. Tokyo is center for the capital export, New York is main finance center in terms of financial production, and London the center for smaller financial markets around the world.<sup>64</sup> Furthermore, other cities have become important for more restricted geographical areas or for more economic specialized functions. As for example, Miami has become the financial center for Latin America and the Caribbean, Frankfurt has become a major economic center for Europe, and Chicago is accounted for 60 per cent of the global trade in futures.<sup>65</sup> There is an overall tendency for concentration of financial center, in most countries one city becomes more dominating then others.<sup>66</sup>

<sup>57</sup> Saskia Sassen, *Globalization and its Discontents*, pp. 88–89.

<sup>58</sup> As for example, the numbers of people whom die at hospitals have increased rapidly and thus separating death from the private sphere. V.I, pp. 451–454.

<sup>59</sup> V.I, p. 446. Another example of the impact of technology for the concept of time can be seen in the change in warfare, where the traditional war have come to an end and we have seen the rise of the instant war dominated by technology, most highlighted in the Gulf war. V.I, pp. 454–461.

<sup>60</sup> V.I, pp. 462–464.

<sup>61</sup> Besides those mentioned below, see for example Scott Lash & John Urry, *Economics of Sign and Space*, Sage, London 1994.

<sup>62</sup> Saskia Sassen, *The Global City. New York, London, Tokyo*, Princeton University Press, Princeton 1991.

<sup>63</sup> Saskia Sassen, *Cities in a World Economy*, p. 50.

<sup>64</sup> *Ibid.*, p. 50.

<sup>65</sup> *Ibid.*, pp. 47, et 78–82.

<sup>66</sup> *Ibid.*, pp. 89–93.

To make the picture further complicated, Sassen distinguishes between three different sorts of cities, or better, systems of cities. Beside the transnational urban system, there is a system of primate cities. These cities are mainly located in developing countries and are characterized by that they have a very high concentration of economic functions in their country. The opposite of this is the balanced urban system, most prominent expressed in Europe with a high density of cities with important economic functions. Within the European system of cities, a highly complex pattern and hierarchy takes shape, where certain cities have multiple functions serving local, regional, national, European and global markets, while others are more restricted in their scope. Depending on their relation to the economy, their history and their location, cities rise and decline.<sup>67</sup> Recalling Palmer's critique of Hirst and Thompson's account of globalization referred to above, it becomes obvious that the restricted perspective on globalization developed by the authors fails to account for the complexity and the spatial reorganization of cities and their function that Sassen points out.

Perhaps, the most important contribution on the subject is developed by David Harvey. Harvey sees space in relation to time and he develops a theory of the time-space compression. Obviously, through the industrial revolution and into the present, the time for travel has dramatically shrunken, but more important is that space through capitalism and the enlightenment project has become rationalized and economized, something to control and to conquer.<sup>68</sup> In the postmodern era, the time-space compression has accelerated in a speed never seen before. Crucial for the economic system in the postmodern age is the turnover-rate of production (changing from a mode of Fordist production to a mode of flexible accumulation) and especially consumption has shifted from a lifetime perspective to a season based perspective (the spread of fashion to a mass audience) and from a consumption of goods to a consumption of services and culture. In the cultural sphere we have in the last decades seen the rise of a mass market for cultural goods, an enormous increase in production of these goods and a commercialization of culture (the best investment to be made in the beginning of the 1970s was buying art, far more better than stocks).<sup>69</sup> Harvey's main argument is that the changes that have occurred in the cultural, the economic and the political spheres are related to the time-space compression, but should not be understood as an outcome of a change towards a postcapitalist or postindustrial society, rather—the postmodern condition is a result of the “basic rules of capitalist accumulation.”<sup>70</sup>

According to Castells, space is a fundamental aspect of all societies. Castells puts forth the hypothesis that when societies transform, “space” changes. But not in the sense that space will reflect the new society, more correctly: it will express it. In analogy with his statements concerning the relation between technology and society, space is society and cannot be analyzed as a separate unit. Space is defined in relation to social practice, or more precisely, space is “the material support of time-sharing social practice.”<sup>71</sup> To clarify, Castells adds that the material support has a symbolic dimension too and that the notion of time-sharing social practices aims at articulate that space consists of different but simultaneous practices. The question is then how we shall understand the social practices, and Castells' argument is that today's societies are constructed around flows of different sorts and that flows are “the expression of processes *dominating* our economic, political and symbolic life.”<sup>72</sup> He modifies his definition of space according to today's societies: “The space of flows is the material organization of time-sharing social practices that works through flows.”<sup>73</sup> This definition is circular and to understand it we need a better definition (or description as Castells would have it) of the concept of space of flows. Castells offers this by specifying its content as organized around three layers. The first layer of the material support of spaces of flows is described as “actually constituted by a circuit of electronic impulses.”<sup>74</sup> Compared to former economies, where the city or

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<sup>67</sup> Ibid., pp. 29–47.

<sup>68</sup> David Harvey, *The Condition of Postmodernity. An Inquire into the Origins of Cultural Change*, pp. 240–241 et 254–259.

<sup>69</sup> Ibid., pp. 284–298.

<sup>70</sup> Ibid., pp. vii, et 327–359.

<sup>71</sup> V.I, p. 411.

<sup>72</sup> V.I, p. 412.

<sup>73</sup> V.I, p. 412.

<sup>74</sup> V.I, p. 412.

the nation was the dominant spatial organization, the network constitutes the same function today and even if “place” does not disappear it is shaped by the logic of the network. The second layer, that the network is constructed around nodes and hubs and thus giving the space of flows, a certain placeboundness describes this logic. The nodes and hubs are hierarchically organized, but mainly due to their function and position in the network, and the hierarchies can easily change according to development of the network. Suddenly a certain function becomes needless and thus the hub producing this function will be switched off, while another hub performing the required function will be switched on. However, there are important restrictions regarding the flexibility of the networks, which Castells sometimes tends to ignore. An important contribution in this regard is given by Saskia Sassen. In her discussion on electronic space, she criticizes the popular ideas of electronic space, i.e. that it is placeless and free from power relations. She highlights the importance of economic investments in electronic space and the growing spatial polarization of these (we have to remember that hyperreality of cyberspace has its material conditions and is dependent upon human support and development).<sup>75</sup> Sassen writes: “New York City has the largest concentration of fiber optic cable-served buildings in the world, but they are mostly in the center of the town, while Harlem, a low-income Afro-American community a mere two miles north of Manhattan’s center, has only one such building.”<sup>76</sup> The electronic space and its future promises in economic terms have in the recent years triggered enormous economic investments and Sassen argues that these factors, somewhat paradoxical, will lead to a further “hyper-concentration of resources, infrastructure, and central functions, with global cities as one strategic site in the new global economic network” and to “global alliances and massive concentration of capital and corporate power.”<sup>77</sup>

Finally, the third layer that Castells distinguishes regarding the spaces of flows articulates the human beings’ function within space, or more precisely the “spatial organization of the dominant, managerial elites (rather than classes).”<sup>78</sup> According to Castells, the dominant structure of today’s societies, the space of flows, has to have actors to conceive, decide and implement it and these functions are carried out by the “technocratic-financial-managerial elites,”<sup>79</sup> who also have specific spatial requirements which gives rise to specific spatial manifestations. The dividing line between the people and the elites, argues Castells further, is the ability to organize, where the elites manage to organize societies towards their goals and in the same time disorganize the masses: “elites are cosmopolitans and the people local.”<sup>80</sup> While people’s experiences are connected to specific places, the logic of the spaces of flows creates powers and wealth disconnected to these places and thus giving rise to a further empowerment of the global elites. These elites shall not be understood in the sense of Mills’ “power elite,” because:

On the contrary, the real social domination steams from the fact that cultural codes are embedded in the social structure in such a way that the possessions of these codes opens the access to the power structure without the elite needing to conspire to bar access to its networks.<sup>81</sup>

This embeddedness of cultural codes in the social structure works through both economic and cultural factors. Given the boom in real estate, the elites can form distinct communities for housing and leisure activities, where major decisions take place. We also see the rise of a new international architectural style, materialized in specific spatial areas such as international airports and hotels, business centers and advanced communications centers. Interestingly, these new international spaces try to impose a non-historical and anti-stylish style, but as Castells argues, this, often postmodern architecture, becomes a significant feature of the new era and a spatial expression of it. The new

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<sup>75</sup> Saskia Sassen, *Globalization and its Discontents*, pp. 177–194.

<sup>76</sup> *Ibid.*, p. 182. Castells is not ignorant about the importance of economic investments in electronic infrastructure, see for example his discussion on the faith of Sub-Saharan Africa, referred to below.

<sup>77</sup> *Ibid.*, p. 191.

<sup>78</sup> V.I, p. 415.

<sup>79</sup> V.I, p. 415.

<sup>80</sup> V.I, p. 415.

<sup>81</sup> V.I, p. 416.

architecture is thus not escaping becoming history and a style among others.<sup>82</sup> Further, there has emerged a set of new specific practices, an international lifestyle aiming at creating a uniform, non-nation-based style that unifies the new global elites. Castells colorfully describes it as:

The regular use of SPA installations (even when traveling), and the practice of jogging; the mandatory diet of grilled salmon and green salad... the “pale chamois” wall color intended to create a cozy atmosphere of the inner space; the ubiquitous laptop computer; the combination of business suits and sportswear; the unisex dressing style, and so on.<sup>83</sup>

Is there then a new international class and how shall we understand the relation between capital and labor? Following Marx’s distinction between capitalists and workers, Castells argues that there are no such classes today. Capitalists in the classic sense still exists; for example in the Chinese transnational business networks and in the most successful Japanese corporations, but today the economy have become more diversified, also including public corporations and former politicians as in the case of the communist *nomenklatura* among the capitalists. What, however, is crucial is that the economy has become global and that no one can manage to overlook and understand it. Therefore, today’s capitalists are working in very restricted segments of the global market and cannot control the system like before. The flows are more powerful than the people who are operating in them are. Castells argues that there is no global capitalist class, but indeed a global capital. Nor is there a global working class, although there are different working classes around the world. However, the most important question considering classes and their relation to the economy ought to be the transformation of the relation between capital and labor. Today capital has become truly global, while labor largely still is local. Distinctively is furthermore that work has become more individualized, and that the strength of trade unions in effect has decreased. We have probably never before seen such an asymmetry in power between capital and labor.<sup>84</sup> However, for Castells the traditionally conceived struggle between workers and capitalists has today been subsumed into “the more fundamental opposition between the bare logic of capital flows and the cultural values of human experience.”<sup>85</sup> It is towards the second part, the cultural values of human experience, that we now will turn our attention.

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<sup>82</sup> V.I, pp. 418–423.

<sup>83</sup> V.I, p. 417.

<sup>84</sup> V.I, pp. 473–476.

<sup>85</sup> V.I, p. 476.

In this end of millenium, the king and the queen, the state and the civil society, are both naked, and their children-citizens are wandering around a variety of foster homes.<sup>86</sup>  
Manuel Castells

## The Power of Identity

In the second volume, *The Power of Identity*, Castells examines the process of forming identities within the new global and informational societies. The volume covers a wide range of topics, including the new social movements, the environmental movements, the rise of feminism and the decline of the patriarchy, the crisis of the nation-state, of politics and of democracy. Castells also examines a variety of ethnical, religious and geographical situated movements and identity related questions, thus giving the reader a truly global perspective on the matter. A central question is how Castells relates these identity-forming processes to his understanding of the economic and technological new era. Castells' thesis is that identity, defined as the "process of construction of meaning on the basis of a cultural attribute, or related set of cultural attributes, that is/are given priority over other sources of meaning,"<sup>87</sup> is transformed in the new societies. In contrast to Giddens, Castells argues that identities are constructed neither in a reflexively organized life-planning process (which have broken down in the new more flexible societies), nor on the basis of civil societies. Identities are instead constructed as "prolongation of communal resistance."<sup>88</sup> It is the tension between the global networks and the local cultural communes that becomes crucial, where the latter functions as a source for identity building, whether its basis is ethnic, religious or nationalistic.<sup>89</sup>

### *Social Movements*

Considering the so-called new social movements, Castells gives three very different examples of such kinds of movements, the Mexican revolution movement *Zapatistas*, the American Militia and Patriot

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<sup>86</sup> V.II, p. 355.

<sup>87</sup> V.II, p. 6. Castells also argues that identity is something different than roles and that identities tend to be singular and dominant over roles, which often are plural, and structured and imposed by institutions and organizations. Identities can have their origin in institutions, but are to a larger extent a result of an individual's own self-identification with other sources of meaning. Although, the identity forming process is an individual act, Castells is focusing on collective identities. These identities are social constructions but more important are "how, from what, by whom, and for what." (V.II, p. 7) To understand this, the collective identities have to be analyzed in a specific historical context. Furthermore, identities are also constructed in the context of power relations and Castells distinguishes between three different forms of identities: 1) legitimizing identities, imposed by the dominating institutions in society; 2) resistant identities, originating within groups that occupy dominated position in societies and 3) project identity, aiming at redefine a groups identity and position and also transform the whole structure of the society. (V.II, pp. 6–10.)

<sup>88</sup> V.II, p. 11.

<sup>89</sup> V.II, p. 65.

movement and the Japanese *Aum Shinrikyo*, the sect responsible for the gas attacks in Tokyo's subway. Even though their goals and motives are very different, Castells finds common themes for the movements. One is the use of technology, where the *Zapatistas* was the first revolutionary group to communicate their message through Internet—a media also extensively used by the American Militia to spread their ideas and link up different groups with similar agendas. The *Aum Shinrikyo* has attracted many young technicians and has used advanced technology in their terrorist attacks. A second common feature is that they in various forms are against the globalization process and have developed as a response to it, thus characterized by Castells as reactive movement.<sup>90</sup> This kind of movements are not the only important and powerful movements of our time, more powerful are the proactive movements, such as environmentalism and especially feminism.

### ***Environmental Movements***

The environmental movements became in the US and in the Western Europe major forces in the late 1960s and have since then increased in numbers and spread over the world. Today, these movements are disparate and include all from worldwide professional organizations such as Greenpeace to local organizations with a single agenda.<sup>91</sup> Focusing on the discourse of the environmental movements, Castells finds four major themes. The first highlights the importance of technology: “an ambiguous, deep connection with science and technology,”<sup>92</sup> where on the one hand the movements are dependent upon technology for their analyses of the environment and for the communications of their messages (the diffusion of the environmental movements occurred at the same time as the information technology revolution did), and on the other hand technology and the belief in science as the way to a better society is highly criticized. Second and third, the environmental movements are vividly engaged in struggle considering the definition of space and time: While politics still to a large extent are national, environmental issues are transnational. Instead of focusing on the clock time and the timeless time, environmental movements argue for a more long-term time perspective, or an awareness of the “glacial time” in the words of Scott Lash and John Urry. Finally, this taken together leads to a redefinition of the human identity, as “a culture of the human species as a component of nature.”<sup>93</sup>

### ***Feminism and the Decline of Patriarchy***

However, even more important and far reaching than the environmental movement is the feminist movement. Castells analyzes the feminist movements within the context of the end of patriarchalism and connected to issues of work, sexuality and family. The crisis of the patriarchic family is clearly seen in the data. It contains two trends. First, the decline of the traditional family due to increased numbers of divorces and separations, and due to less marriages, and second, the rise of multiple forms of family constellations and single households. There are mainly two underlying factors for this crisis, namely the incorporation of women in the paid labor force and the rise of social movements challenging the patriarchy. In 1990 women constituted 32% of the total global labor force and in the OCED countries the average labor force participation rate for women has increased in twenty year from 48.3% to 61.6%, while for the same period (1973-1993) men's participation rate declined from 88.2% to 81.3%. This transformation is explained by the new informational and global economy, reshaping the conditions for work (more part-time jobs and the search for cheaper labor) and emphasizing sectors where women are strong (e.g. social service and electronic manufacturing).<sup>94</sup> The new economy has produced a large number of jobs throughout the world and the reason for hiring

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<sup>90</sup> V.II, pp. 68–109.

<sup>91</sup> See V.II, pp. 112–121 for a typology of the environmental movements and for a distinction between ecology and environmentalism.

<sup>92</sup> V.II, p. 123.

<sup>93</sup> V.II, p. 126.

<sup>94</sup> V.II, p. 159.

women for these jobs is mainly economic—the companies get the same work performed for less money. Another objective is the flexibility of women as workers, part-time and additional work have been characteristic for women's work for a long time and precisely these qualities are now required.<sup>95</sup> The entrance of women into paid labor has naturally had and does still have important consequences for the family. Women have become less dependent upon men for the support of the family, but it shall also be stressed that women still usually hold the main responsibility for the household and thus have double burdens.

Given the more equal position of women through their income and position in the professional life, women have become to question the traditional roles within the family. This points to the second major factor behind the breakdown of the patriarchy—the rise of social movements—especially the feminist movement—challenging the patriarchy. Even if feminism has a rather long history in some countries and that women have struggled for their rights over the years, Castells argues that the real breakthrough for feminism occurred in the late 1960s. A reason for this is of course that the entrance of women in the paid labor force laid the ground for feminism—more women were in a position where feminism became highly relevant. As feminism has diffused from the US in the 1960s to Europe in the early 1970s and today become global in its reach, it have become very diversified and rich in expressions. There is no such thing as a common global feminism due to the variety of oppressions and conditions for women's struggles. What however is central for almost all feminist movements throughout the world is the task of “de/re/construct woman's identity by degendering the institutions of society”<sup>96</sup> and once again we see the importance of identity in today's society.

The feminist movements are not alone in their challenge to the patriarchy, gay and lesbian liberation movements are highly relevant in this perspective. Why so is obvious—the patriarchy is based on heterosexuality. But why did the gay and lesbians movements developed when and where they did? Castells finds three factors important for the movements' development and rise in the 1960s and in the US and Western Europe. First, the new economy created in the metropolitan areas more flexible jobs, which were not controlled by large-scale organizations, oppressing the individual expression. Second, sexual liberation was one of the most important features of the whole atmosphere of the 1960s, and once one obstacle was overcome the ground was laid for the next to be overcome. Third, the feminist movement and the challenge of patriarchy led to a division between the sexes and created an atmosphere where same-sex relation could be expressed.<sup>97</sup> Castells further states that to understand the lesbian and gay movements we have to get beyond the reference to sexual preferences, the gay and lesbian movements are more an expression of and a struggle for the right to sexual identities.<sup>98</sup>

### *The Crisis of the State and Democracy*

The new social movements, environmentalism and feminism, do all to some extent challenge the legitimate of the nation state. But the state is also challenged from other directions. The state, as we know it since Keynes, the warrant for the national economy with control of the economic flows, and the self-scribed unit for the democracy and politics in general, has further seen its power wither away, both in economic and political terms. The global financial flows have rapidly decreased the possibility for the nation states to control their economies and those who have tried have paid an extremely high price for protecting their currency's status.<sup>99</sup> However, it is not only a crisis due to economic factors, the globalization of the economy has lead to different political projects in order to adapt to the new era. On the one hand, we have the grown importance of larger political unions, where EU is the most prominent example. (Here we can also add that the increased importance of advanced military technology has created a larger interdependency between the nation states, where

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<sup>95</sup> V.II, pp. 168–174.

<sup>96</sup> V.II, p. 202.

<sup>97</sup> V.II, pp. 202–206.

<sup>98</sup> V.II, pp. 220–221.

<sup>99</sup> V.II, pp. 245–254.

only a few have the ability to develop a high-tech defense, and today's military power is largely concentrated in the US and its extension NATO.) On the other hand, regions have become more important in the global economy and there is a tendency that regions try to obtain more autonomy in relation to the nation states. Yet another aspect is the increased number and significance of transnational Non-Governmental Organization, further decreasing the power of the nation states.<sup>100</sup>

The outcome of these challenges is not that the nation states have lost their power completely, rather that they have become one source of authority among others. The nation states have become part of broader networks of power and their position and function within these networks are determining the power of the nation states. To take the analysis a step further, the older correspondence between nation and state has to be questioned. As we have seen many examples of above, Castells argues that the new era demands new theoretical perspectives and concepts. Here we need to realize that through the power of identity, where national identities transgress borders and create tensions within the state, and through the power of flows, where other power relations than those based on the nation state are more powerful, today's power relations have changed and the nation states no longer functions as the self evident basis of the system.<sup>101</sup>

Related to the crisis of the nation state is the crisis of the democracy, which also has to be understood as an outcome of different trends. The decreased power of the nation state, where the decline of the welfare state is the most important factor, and the rise of different challenging movements, defining identities in contrast to the legitimate identity imposed by the traditional institutions, contribute to undermine the legacy of democracy.<sup>102</sup> Moreover, there is also an internal crisis in politics. This is due to globalization of media and the increased power of media as the dominant sphere for politics: "not that the media are the Forth Power: they are, instead, the ground for political struggles."<sup>103</sup> Castells speaks about "politics of scandals" as the dominant feature of the politics in the informational age. Worldwide, traditional political parties have been shocked by political scandals and lost their power. Corruption has become front-page-news all over the world, not as a result of increased corruption argues Castells, rather as a result of improved techniques to detect corruption through information technologies, and a less stable political system where it is more important to discredit politicians than to credit. Politics have also been personalized and personal characteristics play a more important role today (where Clinton's recently affairs just is an example among many).<sup>104</sup> Despite this crisis of democracy, Castells finds examples of reconstruction of democracy, ranging from local democracy, democracy supplied over the Net, to symbolic politics focusing on specific issues as peace, human rights and the environment.<sup>105</sup>

We can here also note that the view developed by Castells can be seen as a correction or criticism to Hirst and Thompson's view on the nation state. The new role of the nation state is the second major theme in Hirst and Thompson's book *Globalization in Question*. Their economic analyses are intertwined with the question of what possibilities there are for political action. Since they are critical of the strong globalization claim, and advocate an economic perspective on the world economy as based upon an inter-national economy, they argue that there are ways of controlling the economy. Hirst and Thompson are aware that the conditions for national governance have changed and they also put forth new sets of ideas to overcome the short-comings of the nation states, as for example a more extensive collaboration on a international level concerning the regulation of the economy.<sup>106</sup> Nevertheless, the problem with Hirst and Thompson's analyses are that they almost exclusively are based upon an economic perspective. (To Hirst and Thompson's advantage has to be pointed out that they highlight the importance of the states in regulating its population, but as Sassen shows, even here the state sees its power diminish.) Following Castells, we can find arguments for other factors decreasing the power of the nation states, such as the challenged legitimacy of nation state by

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<sup>100</sup> V.II, pp. 262–273.

<sup>101</sup> V.II, pp. 303–308, see also pp. 27–52.

<sup>102</sup> V.II, pp. 342–343.

<sup>103</sup> V.II, p. 337.

<sup>104</sup> V.II, pp. 333–342.

<sup>105</sup> V.II, pp. 349–353.

<sup>106</sup> Paul Hirst & Grahame Thompson, *Globalization in Question. The International Economy and the Possibilities of Governance*, 1997 [1996], pp. 178–194.

feminism, environmentalism, regionalism, religious movements, etc. Furthermore, the increased importance of media has implications for the governance, reshaping the logic of politics. To not include these factors in the analyses leads astray.

### ***The Notion of Power***

Before leaving the second volume of Castells' magnum opus, we have to ask us why the concept of power appears in the title of the volume. Power is essential in two aspects for Castells' analyses. We have seen in both the first and the second volume that the traditional power relations have changed under the new informational era. The global flows of finance, information, media, culture, etc. have created a precedence of power of flows over flows of power. Traditional institutions of power such as the state, the family, the patriarchy, the political parties, and the labor unions have lost much of their former power and ability to dictate people's lives. While power certainly not has disappeared in the new era, it has been transformed: "The site of the power are people's minds."<sup>107</sup> This is the second aspect of power and the focus for the second volume. Here we have seen that identities are fundamental for an understanding of the cultural values of human experience, the Self, and that identities are crucial both for the challenge of the traditional institutions and as a response to the globalization process. Hence Castells' emphasis on the power of identity.

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<sup>107</sup> V.II, p. 359.

In the last quarter of this fading century, a technological revolution, centered around information, has transformed the way we think, we produce, we consume, we trade, we manage, we communicate, we live, we die, we make war, and we make love.<sup>108</sup>

Manuel Castells

## The End of Millenium

While the two first volumes are rather consistent, the first focusing on structural aspects of the new era through analyses of technology, economy and labor, and the second devoted to the subjective aspect, agency and resistance based upon studies of social movements and the decline of traditional institutions, the third volume, *The End of Millenium*, is more heterogeneous. In my view it appears as if Castells has put together all the themes he finds interesting but could not fit into the other parts. This does not imply that the volume is less important, rather the opposite. Here we find thoughtful analyses of the fall of the Soviet Union, the rise of the Forth World, the expansion of global crime, and the future eventual development of two economic and political super-regions, the Asian Pacific and the European Union. The volume also includes the overall conclusion of the whole work. I will here very briefly discuss the specific analyses in the context of the two previous volumes and in the next section concentrate on the conclusions that Castells draws from his comprehensive empirical analyses and theoretical reasoning.

The different topics analyzed in the third volume can be seen as both illustrations to and a deepening of the theories put forth in the preceding volumes. In the case of the fall of the Soviet Union, Castells' main argument for the failure is that the political system could not adapt its politics to the new informational age. In the desperate super power struggle, the Soviet Union decided to copy the Western products, instead of producing their own technologies, which actually would have been possible due to the advanced stage of science in the 1950s and 1960s. Once the decision was made, the track was determined and due to the rapid increase of the technology revolution in the West, the country became increasingly lacking behind. (One fundamental mistake was that one decided, in order to simplify, to produce micro chips with leads spaced 0.25 mm apart instead of 0.254 as the American, which led to that the Soviet Union not could use American micro chips or export their own.) Further, the organization of the Soviet economy did not allow for cross-fertilization and diffusion of technology, so crucial for the Silicon Valley-miracle.<sup>109</sup>

The importance of being part of the networks is underlined in the chapter on the rise of the Forth World. While there has been an improvement in living standards in many countries around the world, certain countries fall even further behind, especially the Sub-Saharan countries. The crisis of Sub-

<sup>108</sup> Manuel Castells, *The Information Age: Economy, Society, Culture. Volume III: The End of Millenium*, Blackwell Malden/Oxford 1998, p. 1. Hereafter referred to as V.III.

<sup>109</sup> V.III, pp. 26–37. See also Manuel Castells and Peter Hall, *Technopoles of the World. The Making of 21<sup>st</sup> Centuries Industrial Complexes*, pp. 12–28 et 41–57.

Saharan Africa is due to a complex set of factors, economic, technological and political, and has led to bankrupt countries, civil wars, famines, massacres, etc. Economically, export from Africa has declined, foreign investments in Africa have declined, and most of the countries have developed enormous national debt, the total African national debt rose from 30% of GNP in 1980 to almost 80% in 1994.<sup>110</sup> Considering technology, the most crucial sphere in the new economy, Sub-Saharan Africa lacks a fundamental infrastructure, computers, trained personnel and so forth, making it highly unlikely for the economies to be part of the expanding global and informational economy in the coming decades.<sup>111</sup>

But inequality, poverty and miserly living conditions are not restricted to just certain underdeveloped countries. An important feature of the new global and informational economy is the creation of “black holes” in virtually all developed countries. (Black holes, since, once in it, it is very unlikely to escape the downward spiral.) Side by side with financial districts, the hearts of the new economy, there exist deprived housing areas dominated by crime, drugs and violence.<sup>112</sup> These areas are disconnected from the rest of the global flows, except in one aspect, the global networks of crime.

Global crime is to a large extent a new phenomenon and according to Castells almost ignored by social scientists. Thus he sets out to acknowledge the importance of global crime and its connections to economies and societies.<sup>113</sup> Traditional illegal activities, such as drug traffic and prostitution, are important components of the new global crime. Nevertheless, more important today is the penetration of crime into legal activities. The global financial markets are sites for money laundering of considerable amounts, political systems are corrupted by criminal money in order to secure criminal activities (in some cases, most notably Colombia, criminal activities dominates whole countries), and also in stable economies and countries, crime have increased its power (e.g. when the *Yakusa* triggered an economic crisis in Japan). The new global crime makes extensive use of information technologies and works according to a network logic. This makes global crime very flexible and difficult to defeat—if one country becomes difficult to operate in, the activities are rapidly relocated to another, more favorable country.<sup>114</sup>

As for the question of the development of future super regions, Castells’ examination of the possibility of a fully integrated Asian Pacific region leads to a negative answer. He grounds his prediction on an interesting analysis of the importance of the nation-state and of the role of culture. Using the concept of a “developing state,” he concludes that in case of Japan and the four tigers (South Korea, Taiwan, Singapore and Hong Kong) the state has played a crucial role for the development, designing and implementing strategies, protecting markets and supporting key industries. (Castells strongly criticizes the neo-liberal economic perspective on the state, that it should be as minimal as possible and mainly function as a warrant of social order. Ironically, many of the developing states come closer to the ideal of a planned economy than some of the communist states

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<sup>110</sup> V.III, pp. 82–92.

<sup>111</sup> V.III, pp. 92–95. There is however some hope for the future. The end of apartheid in South Africa, the by far richest country below Sahara, can lead to a more integrated economy in Sub-Saharan Africa, but since South Africa runs the risk of being disconnected itself from the global networks, the development will need help from the rest of the world. V.III, pp. 122–127.

<sup>112</sup> V.III, pp. 162–164. See also John H. Mellenkopf & Manuel Castells (eds.), *Dual City. Restructuring New York*, Russell Sage Foundation, New York 1992 [1991], for an interesting account of the polarization of New York from a wide range of perspectives, such as income, housing and political power. The overall conclusion is that New York has changed fundamentally in many aspects during the last two decades: income inequalities have risen, a growing differentiation of the spatial organization of the city with a tendency towards more gentrified areas and more deprived areas, a rise of a professional strata and a decline of manufacture workers. But to say that New York has become a dual city is a simplification, which disguises a more complicated structure. It is true that a new more wealthy and powerful elite, dominated by white Protestant men in professional occupations, has emerged as a consequence of the restructuring, but on the other hand, the rest of the population, which mainly have seen their living conditions impoverished, does not constitute a unified group. Instead, we find a number of different groups according to race, ethnicity and social class, and the heterogeneity and lack of organization of the lower classes is the main reason for the dominance of the elite. (See in particular pp. 399–418.) In the context of polarization of larger cities, of course, Saskia Sassen’s *The Global City*, has to be mentioned, probably the most important contribution on the topic, linking the process of polarization to the logic of the global economy.

<sup>113</sup> V.III, pp. 166–168.

<sup>114</sup> V.III, pp. 201–205.

do—a fact that usually not is recognized.) Due to the cultural differences between the countries and their national history, Castells argues that it is more likely that the region—with potential to become the most important economic region in the beginning of the next century—develops according to its current features, that is, constituted by different nations intervening with each other, but working within different global networks.<sup>115</sup>

Considering Europe and the project of unifying Europe as a super region, Castells sees the development as very important for the future from a range of perspective: as a vehicle for a more peaceful Europe, as a balancing economic power between North America and Asia, and finally as a way to perhaps solve the problem with the governance in the era of declining legitimate for the nation states.<sup>116</sup> However, the unification process is not and will not be without problems and one can wonder why there still is a project, when a large share of the European population is critical of the project. Castells explains this fact by the constitution of the European project with a multi layer design, or to use Castells' words, a network state, defined as “a state characterized by the sharing of authority (that is, in the last resort, the capacity to impose legitimized violence) along a network.”<sup>117</sup>

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<sup>115</sup> V.III, pp. 264–280 *et* 308–309.

<sup>116</sup> V.III, pp. 310–311.

<sup>117</sup> V.III, p. 332.

## Conclusion

In the last chapter, *Conclusion: Making sense of our World*, of the third volume, Castells draws the threads together. I will here try to outline the most important features of his arguments. I will also intertwine some comments related to Castells' position within the sociological tradition. Another objective is to give a critical account of his project and try to relate it to educational sociology.

Castells begins with giving an account of what he titles the genesis of a new world. Whether the world today is a new world or not is however not essential for Castells. He finds that many phenomena certainly are new, such as micro chips, computers, mobile telecommunications, global financial markets working in real time, and the end of the cold war, but it is more important for him to describe what is happening today and making sense of everything.<sup>118</sup> What are then the most important features of the today's world? Castells argues that three independent processes taking shape in the late 1960s and early 1970s are fundamental, the technology informational revolution, the crisis of both capitalism and statism, and the rise of social movements. These processes interacted and created a new world, dominated by a new social structure, the network society, a new economy, the global and informational economy, and a new culture, the culture of real virtuality. Important is that the world due to these processes have become more interdependent.<sup>119</sup> Further, "the revolution of technology, the restructuring of economy and the critique of culture converged towards a historical redefinition of the relationship of production, power, and experience, on which societies are based."<sup>120</sup>

Castells then turns to discussing the emergence of a new society and the transformation of the relationship of production, power, and experience. The new division of labor and the new economy have created, as we have seen above, a new set of relations between capital and labor. Castells points out that the economy probably never has been more capitalistic than now, but since Marx's days, the contents of capitalism have changed in some aspects. He summarizes the transformation by outlining three levels. On the first level, the holders of property rights, we find three groups: shareholders of companies, family owners, and individual entrepreneurs. Non of these categories are new, but there are some important changes. The individual entrepreneurs, who almost disappeared during the industrial era of large corporations (cf. Mills: *The Power Elite*) have again become important. The shareholders are today usually anonymous and not directly involved in the companies as they were in the earlier stages of capitalism. The second level refers to those who actually have the direct power of

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<sup>118</sup> See note 1, V.III, p. 336.

<sup>119</sup> V.III, p. 336.

<sup>120</sup> V.III, p. 340.

the corporations (private and state owned), the managerial class, also a group that have a history stretching back in time. The third level is however a new feature, namely the global financial markets in themselves. Their importance lies in the fact that they are the “mother of all accumulations.”<sup>121</sup>

The transformation of capitalism has implications for the relations between social classes. Depending on definition of social class, the outcomes differ. From the perspective of social stratification theories of inequality and status, the new economy tends to increase polarization and inequality mainly through the differentiation between generic and self-programmed labor, where the latter is highly more valued in the new economy, the individualization of labor and the decreased power of labor unions, and finally the decline of the welfare state. Focusing on social exclusion, the new economy has also lead to an increased devaluation of certain types of jobs. Even if there in an overall perspective is no shortage of jobs, the working conditions for various services and manufacturing jobs have drastically worsened. Furthermore, the groups without jobs have ended up in a situation where there are few ways out, caught in “the black holes of informational capitalism.” The traditional Marxist’s perspective focusing on production and appropriation of profits becomes especially problematic under the new paradigm. On the one hand, we have the producers, divided in the two categories self-programmed labor and generic labor, where the latter are dependent upon the former, but where the former are self-sufficient and in no need of a unified working force. On the other hand, we have the appropriation of profits, which have become very complex due to the individualization of work, the increased power of certain producers through the network logic, and finally, the importance of the global financial markets where the profits are invested and thus functioning as the main productive force to some extent autonomous from “traditional” production.

Taking these perspectives together, Castells argues that the important dividing lines and locus of struggles in the Information Age are the division between self-prommable and generic labor, the social exclusion of certain groups and jobs, and the tension between the market logic of global capital and the human experience of workers’ lives. But this is not all. Considering power, we have seen how the traditional sites for power lost their sovereignty and new sources of power have emerged, where the power of identity have become especially important. Instead of class struggles, the struggles of the Information Age are fought in the realm of culture. The new site for power struggles through culture is the media, and power has transformed and exists now in the form of networks of information. A consequence of this is that there no longer exist stable power elites in the sense of Mills, rather elites from power, rising and falling due to the logic of space of flows. I am however not fully convinced by this argument. I think it is necessary to more thoroughly inquire into this question and analyze different spheres, such as economy (divided at least into finance, real estate, insurance and production of different sorts), politics, international affairs, cultural production, and media separately as well as the links between them. Moreover, it is important to discriminate between power and wealth (where the latter of course is one source for former and the former one mean for the latter) considering analyses of individuals and groups. In addition, we need to analyze the power of organizations, corporations and nation states and the relation between individuals and organizations, so crucial for Mills’ analyses of the Power Elite.<sup>122</sup>

We can also see an interesting process of despatialization of the elites. Digby Baltzell in his account of the American upper class from the end of the 18<sup>th</sup> century to 1940 argues that there is an important transformation of the higher class and the elite from being local to becoming national.<sup>123</sup>

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<sup>121</sup> V.III, p. 343. This does not imply, according to Castells, that the financial capital dominates over the industrial capital. This old distinction is not applicable on the new economy. Profits derived from industrial capital is circulated in the global financial markets to increase the profits, while financial capital is invested in production in an endless stream of investments leading to a unpredictable turnover of capital. The important thing is that it is in the global markets that the economic conditions are set and the superprofits are created.

<sup>122</sup> C. Wright Mills, *The Power Elite*, Oxford University Press, New York 1981 [1956], see especially pp. 6–11 *et* 18–25.

<sup>123</sup> E. Digby Baltzell, *Philadelphia Gentlemen. The Making of a National Upper Class*, Transaction Publishers, New Brunswick and London 1995 [1958]. Baltzell makes a distinction between elite, as referring to the individual and certain positions of power, and the higher social class, where the unit is the family and its tradition the determinant of class position. Mainly focusing on the Philadelphia gentlemen of wealth and power, Baltzell argues that the higher social class in Philadelphia developed over the years as a local social class incorporating the rising elites. During the beginning of the

(Baltzell's distinction between elites and social class, see the preceding note, is also important to incorporate in a more extensively analysis of the elites of today as outlined above.) This argument can also be found in C. Wright Mills' *The Power Elite*, where he describes the decline of the local elites and the rise of national elites and especially the Power Elite, constituted by the elites in economy, politics and military.<sup>124</sup> With Robert B. Reich's *The Work of Nations*,<sup>125</sup> the argument is taken a step further. The elites (or the symbol analysts in Reich's words) are no longer national—they have by the end of the 20<sup>th</sup> century become independent of the nations and global in their scope. A number of other scholars have also developed similar arguments, e.g. Ulf Hannerz distinguishes between cosmopolitans and locals and Saskia Sassen highlights the bargain power of the professionals in production services. Strikingly, as the economy and other sectors of societies develop from local to national to global, the elites follow the transformation, while the people, the masses still are local.<sup>126</sup>

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What about education in the new era? This question is highly adequate, since Castells almost completely ignores to examine the role of education. However, he gives some glimpses. Considering production and the new definition of labor, Castells emphasizes the role of education (or more precisely, higher education) as a dividing feature:

A major difference refers to what I call generic labor versus self-programmable labor. The critical quality in differentiating these kinds of labor is education, and the capacity to accessing higher levels of education; that is embodied knowledge and information. The concept of education must be distinguished from skills. Skill can be quickly obsolete by technological and organizational change. Education (as distinct from the warehousing of children and students) is the process by which people, that is labor, acquire the capability constantly to redefine the necessary skills for a given task, and to access the sources for learning these skills.<sup>127</sup>

If education plays such a crucial role for the differentiation of labor, we need a more thoroughly understanding of education in the new era. Further, while so much of today's societies are transformed under the label of globalization, is the same true for education, are we witnessing the rise of a global educational system, or global networks of educational institutions?<sup>128</sup> We have also seen that universities are crucial for economic development in the informational technology paradigm, and this points to a more adequate analysis of universities as producers of the essential element in the economy: information. Above we saw that the sites for power struggles are media and culture. We can then ask what implications this have for education, one of the traditional institutions of society and one of the most important producers of culture—a question that unfortunately Castells also ignores.

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20<sup>th</sup> century, the families of wealth changed their strategies. It became more important to send the children to boarding schools in New England and for the men to obtain a degree from Harvard, Yale and Princeton, instead of from Pennsylvania University as before. Many of the important institutions, corporations and banks in Philadelphia, which traditionally had been dominated by the local elite, increased their share of out of town people in the trustees and management. Another feature of Baltzell's work is his preoccupation with the decline of responsibility among the higher classes, a theme that otherwise perhaps is most associated with Thorstein Veblen and his *The Theory of the Leisure Class*.

<sup>124</sup> C. Wright Mills, *The Power Elite*, see especially pp. 6–9, 30–46 et 274–297.

<sup>125</sup> Robert B. Reich, *The Works of Nations. Preparing Ourselves for the 21<sup>st</sup> Century Capitalism*, Simon and Schuster, New York 1993 [1991].

<sup>126</sup> With the exception of the increased number of people forced to migrate due to political, economic and other reasons.

<sup>127</sup> V.III, p. 341.

<sup>128</sup> For example, it is interesting to note that the strongest economic, military and political power today, the US, also is the country that totally dominates the flows of students between countries (of the 1.4 million foreign students in the world, 450.000 are to be found in the US and 300.000 of these originate from Asian countries).

Despite the shortcomings considering education, Castells' work is very impressive and I will end this paper by pointing out the most important features of The Information Age. First, we have the scope of the work. Analyzing global phenomena, Castells more than any other contemporary scholar uses the whole world as his laboratory. There are important advantages of this approach. Castells minimizes the risk of being ethnocentric in his analyses and avoids the perspective bias as in Smith's and Marx's analyses of capitalism, which almost exclusively were based on the emergence of capitalism in Great Britain.<sup>129</sup> The wide range of perspectives applied in the work further broadens the analyses. One of Castells' main findings is that different spheres tend to integrate more and more and the boundaries between for example biology and information technology, economy and media, and politics and global crime are blurred. This points to the importance of applying multiple perspectives for an understanding of societies today. The risk is otherwise overwhelming that the results will be dependent upon the perspective chosen. There are nevertheless problems with such a broad scope as Castells', such as, that at least for the specialists, the analyses become simplifications of very complex structures. To Castells' advantage must be held that he in his analyses operate at a rather complex level, pointing out the different features of a phenomenon, and keeping different levels of analyses separate. He is illuminating critical of oversimplifications of the new economy (usually due to an ethnocentric perspective or biased by ideological overtones) and as a reader one is repeatedly reminded of the complexities of specific problems. The problem, according to my view, is that he has a tendency to slide from a differentiated view in the discussion to more simplistic views in the conclusions. The logic of network and is given such a priority in the overall explanations so one can wonder if this actually holds true. The concept of a network state seems to me more like an attempt to extend the network logic to the political sphere without an actual ground for it.<sup>130</sup>

One can notice that there are alternatives to the network-approach. Bourdieu's notion of field gives us another tool for a structural understanding. Even if networks could be part of a field (as for example in form of social capital), the network logic, as used by Castells, however contradicts the logic of fields. Fields, as lined out in a number of studies by Bourdieu and his colleagues, follow a more hierarchical structure with dominating and dominated positions and are more limited in their reach compared to networks. There are relatively clear boundaries (which however must be determined by empirical research) between fields. The network logic does to some extent undermine the logic of fields, blurring the boundaries between the fields and creating more unstable power positions. On the other hand, the notion of field can be very useful for an understanding of global phenomena. The network approach tends to, although acknowledging the role of power, emphasize a more free-floating power structure, and I am not certain that this approach gives the most accurate description of global phenomena. Put in another way, it is more important to study the nodes of power within the networks and to understand how they are related than to just state that networks now are the predominant feature of societies. Perhaps, what appears as diffusion of power only is a result of a higher concentration of power?

The most important contribution by Castells is that he forces us to think in new ways and that he also provides tools for this. We have seen a number of times how traditional concepts, theories and statistical categories are misleading for an understanding of today's societies. Therefore, the importance of creating new concepts, new theoretical frameworks and statistical categories cannot be underestimated.<sup>131</sup> Nevertheless, we also have to notice that the sociological tradition is important for

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<sup>129</sup> Weber on the other hand, had a more truly global approach, studying different economic and religious systems on their own account.

<sup>130</sup> Castells' argument is based upon the recognition that in the EU no single state will have the power to control the political arena and thus networks of power can develop. However, is it not usually the case that there are negotiations (predominating conditioned by different power resources) between states or other agents of power? Moreover, it does not evidentially follow that this will lead to a network structure.

<sup>131</sup> A similar approach can be found in Saskia Sassen's work. She argues for example that cities today not can be understood exclusively in relation to the nation state. In the case of real estate prices, the prices in central New York are more related to central Tokyo and London, than to the surrounding areas. (Saskia Sassen, *Cities in a World Economy*, p. 6.) Economic functions and development of cities has to, as we have seen, be understood in relation to local, regional, national and global markets. This also implies that cities have to be analyzed in a relational perspective, and thus not in isolation.

Castells. In his theoretical framework and throughout the text, Marx and Weber among others are drawn upon. Castells' analyses of economy and social classes are based upon a Marxian perspective. Notable is that the economy never have been more capitalistic than today and that Marx's theories probably are more relevant now than in many years (Marx is very influential for among others Harvey and Jameson). Castells nevertheless points at some limitations of Marx's theories. Even if capital is global, social classes are not and even if the polarization between the rich and the poor never been more pronounced, the traditional struggles between a working class and the bourgeoisie have today been superseded by cultural battles fought over identity. Castells also uses Weber (or more correct, a Weberian approach) to overcome some of the limitations of Marxism. This is apparent in Castells' analyses of the state, his emphasis on power and his more pluralistic approach, where the economy is not determining in the last resort (technology could be argued to have this function in Castells' reasoning). As Castells transcends Marx, he also modifies Weber's theories, especially in his analyses of power. In Weber's account, the state is the legitimate base for the power structure, but in the information age, the state has lost its sovereignty and become one site of power among others. Furthermore, perhaps one can argue that Weber's typology of authority has been outdated, or at least more complex. As we saw in volume two, the traditional authority has lost its importance. On the one hand, one can argue that the rational authority has increased its dominance (mainly through the diffusion of capitalism and rational theories of economy), but, on the other hand, new forms of identities are developed, not mainly based on rational objectives, rather on a mixture of sources.

Finally, if we accept Castells' analyses of the transformation of power and that culture today is the primarily site for power struggles, where concepts, ideas and thoughts along with symbols and signs are the weapons, this has specific implications. Here I think it is crucial to adopt a strategy in line with Pierre Bourdieu's sociological project. From an epistemological perspective, it is important to understand that these concepts and ideas circulating in the mediascape are not objective, rather stakes in a struggle to define the reality. Sociology and social science have to break with these taken-for-granted views and try to create more objective concepts and tools. We have to analyse the content of the flows of ideas, study how the ideas are created, by whom and where, and who benefits from it. For this task, Manuel Castells' *The Information Age*, is a self-scribed point of departure, although not everything has to be agreed upon.

## Appendix

### Castells' typology and categories on work and its functions in the informational/global economy:

Regarding the value-making work tasks, Castells distinguishes six different functions:

- 1) commanders (strategic decision-making and planning);
- 2) researchers (innovation of products and processes);
- 3) designers (adaptation, packing and targeting of innovations);
- 4) integrators (management of the connections between different functions);
- 5) operators (execution of tasks under own responsibility);
- 6) "operated" (execution of preprogrammed tasks).

Since the predominant feature of the new economy is the network structure we have to add the relations to other organizations to the picture and here Castells names three different functions and corresponding occupations:

- 1) networkers (deciding with who to connect and designing the network company's structure);
- 2) networked (on-line workers, but not in charge of when, how, why and with whom);
- 3) switched-off workers (performing specific tasks non-interactive and with one-way instructions).

Regarding the last dimension, the decision-making, three categories are distinguished by Castells:

- 1) deciders (responsible for decisions in the last instance);
- 2) participants (involved in the decision-making);
- 3) executants (implementing the decisions).<sup>132</sup>

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<sup>132</sup> V.I pp. 240–245.

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Publications	Rapporter från Forskningsgruppen för utbildnings- och kultursociologi (Sociology of Education and Culture Research Reports), ISSN 1103-1115  Skeptronhäften (Skeptron Occasional Papers), ISSN 0284-0731
Distribution	ILU, Uppsala universitet, Box 2136, SE-750 02 Uppsala, Sweden Phone 018 4712401, fax 018 4712400, e-mail <a href="mailto:Dep.Teach@ilu.uu.se">Dep.Teach@ilu.uu.se</a>



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