

Opening

I was eighteen years old. My urge for freedom was bumping against the walls that the dictator had erected around life. My life and everybody else's life. I wrote an article in the Law School's journal, and the journal was shut down. I acted in Camus' *Caligula*, and our theater group was indicted for promoting homosexuality. When I turned on the BBC world news to find a different tune, I could not hear a thing through the stridency of radio interference. When I wanted to read Freud, I had to go to the only library in Barcelona with access to his work and fill out a form explaining why. As for Marx or Sartre or Bakunin, forget it – unless I would travel by bus to Toulouse and conceal the books at the border crossing, risking the unknown if caught transporting subversive propaganda. And so, I decided to take on this suffocating, idiotic, Franquist regime, and joined the underground resistance. At that time, the resistance at the University of Barcelona consisted of only a few dozen students, since police repression had decimated the old democratic opposition, and the new generation born after the Civil War was barely entering adulthood. Yet, the depth of our revolt, and the promise of our hope, gave us strength to engage in a most unequal combat.

And there I was, in the darkness of a movie theater in a working-class neighborhood, ready to awaken the consciousness of the masses by breaking through the communication firewalls within which they were confined – or so I believed. I had a bunch of leaflets in my hand. They were hardly legible as they were printed on a primitive, manual copying device,

soaked with purple ink that was the only communication medium available to us in a country blanketed by censorship. (My uncle, a military colonel, had a cozy job as censor, reading every possible book – he was a writer himself – and, moreover, previewing all the sexy films to decide what to cut for the audience and what to keep for himself and his colleagues in the church and the army.) So I decided to make up for my family's collaboration with the forces of darkness by distributing a few sheets of paper to workers, to reveal how bad their lives really were (as if they would not know it), and call them to action against the dictatorship, all the while keeping an eye on the future overthrow of capitalism, the root of all evil. The idea was to leave the leaflets in the empty seats on my way out of the theater, so that at the end of the session, when the lights came on, the moviegoers would pick up the message – a daring message from the resistance intended to give them enough hope to engage in the struggle for democracy.

I did seven theaters that evening, moving each time to a distant location in another workers' lair to avoid detection. As naïve as the communication strategy was, it was no child's game, as being caught meant being beaten up by the police and most likely going to jail, which is what happened to several of my friends. But, of course, we were getting a kick out of our prowess, while hoping to avoid other kinds of kicks. As I finished that revolutionary action for the day (one of many until I ended up in exile in Paris two years later), I called my girlfriend, proud of myself, feeling that the words I had conveyed could change a few minds which could ultimately change the world. I did not know many things at that time. Not that I know substantially more now. But I did not know then that the message is effective only if the receiver is ready for it (most people were not) and if the messenger is identifiable and reliable. And the Workers Front of Catalonia (of whom 95 percent were students) was not as serious a brand as the communists, the socialists, the Catalan nationalists, or any of the established parties, precisely because we wanted to be different – we were searching for identity as the post-Civil War generation.

Thus, I doubt that my actual contribution to Spanish democracy was equal to my expectations. And yet, social and political change has always been enacted, everywhere and at all times, from a myriad of gratuitous actions, sometimes uselessly heroic (mine was certainly not that) to the point of being out of proportion to their effectiveness: drops of a steady rain of struggle and sacrifice that ultimately floods the ramparts of oppression when, and if, the walls of incommunication between parallel solitudes start cracking down, and the audience becomes "we the people." After all, as

naïve as my revolutionary hopes were, I did have a point. Why would the regime close down every possible channel of communication outside its control if censorship were not of the essence for the perpetuation of its power? Why would Ministries of Education, then and now, want to make sure that they commissioned history books and, in some countries, ensure that the gods (only the authentic ones) descended on the classroom? Why did students have to fight for the right to free speech; unions to fight for the right to post information about their company (then on the billboard, now on the website); women to create women's bookstores; subdued nations to communicate in their own language; Soviet dissidents to distribute samizdat literature; African Americans in the US, and colonized people around the world, to be allowed to read? What I sensed then, and believe now, is that power is based on the control of communication and information, be it the macro-power of the state and media corporations or the micro-power of organizations of all sorts. And so, my struggle for free communication, my primitive, purple-ink blog of the time, was indeed an act of defiance, and the fascists, from their perspective, were right to try to catch us and shut us off, so closing the channels connecting individual minds to the public mind. Power is more than communication, and communication is more than power. But power relies on the control of communication, as counterpower depends on breaking through such control. And mass communication, the communication that potentially reaches society at large, is shaped and managed by power relationships, rooted in the business of media and the politics of the state. Communication power is at the heart of the structure and dynamics of society.

This is the subject matter of this book. Why, how, and by whom power relationships are constructed and exercised through the management of communication processes, and how these power relationships can be altered by social actors aiming for social change by influencing the public mind. My working hypothesis is that the most fundamental form of power lies in the ability to shape the human mind. The way we feel and think determines the way we act, both individually and collectively. Yes, coercion, and the capacity to exercise it, legitimate or not, is an essential source of power. But coercion alone cannot stabilize domination. The ability to build consent, or at least to instill fear and resignation vis-à-vis the existing order, is essential to enforce the rules that govern the institutions and organizations of society. And these rules, in all societies, manifest power relationships embedded in the institutions as a result of processes of struggle and compromise between conflicting social actors who mobilize for their

interests under the banner of their values. Furthermore, the process of institutionalizing norms and rules and the challenge to these norms and rules by actors who do not feel adequately represented in the workings of the system go on simultaneously, in a relentless movement of reproduction of society and production of social change. If the fundamental battle about the definition of the norms of society, and the application of these norms in everyday life, revolves around the shaping of the human mind, communication is central to this battle. Because it is through communication that the human mind interacts with its social and natural environment. This process of communication operates according to the structure, culture, organization, and technology of communication in a given society. The communication process decisively mediates the way in which power relationships are constructed and challenged in every domain of social practice, including political practice.

The analysis presented in this book refers to one specific social structure: the network society, the social structure that characterizes society in the early twenty-first century, a social structure constructed around (but not determined by) digital networks of communication. I contend that the process of formation and exercise of power relationships is decisively transformed in the new organizational and technological context derived from the rise of global digital networks of communication as the fundamental symbol-processing system of our time. Therefore, the analysis of power relationships requires an understanding of the specificity of the forms and processes of socialized communication, which in the network society means both the multimodal mass media and the interactive, horizontal networks of communication built around the Internet and wireless communication. Indeed, these horizontal networks make possible the rise of what I call mass self-communication, decisively increasing the autonomy of communicating subjects vis-à-vis communication corporations, as the users become both senders and receivers of messages.

However, to explain how power is constructed in our minds through communication processes, we need to go beyond how and by whom messages are originated in the process of power-making and transmitted/formatted in the electronic networks of communication. We must also understand how they are processed in the networks of the brain. It is in the specific forms of connection between networks of communication and meaning in our world and networks of communication and meaning in our brains that the mechanisms of power-making can ultimately be identified.

This research agenda is a tall order. Thus, in spite of the many years dedicated to the intellectual project communicated in this book, I certainly do not pretend to provide definitive answers to the questions I raise. My purpose, ambitious enough, is to propose a new approach to understanding power in the network society. And, as a necessary step toward this goal, to specify the structure and dynamics of communication in our historical context. To advance the construction of a grounded theory of power in the network society (which, for me, is tantamount to a theory of communication power), I will focus my effort on studying the current processes of asserting political power and counterpower, by using available scholarly research on the matter, and conducting a number of case studies in a diversity of social and cultural contexts. However, we know that political power is only one dimension of power, as power relationships are constructed in a complex interaction between multiple spheres of social practice. And so, my empirical analysis will be necessarily incomplete, although I hope to stimulate a similar analytical perspective for the study of power in other dimensions, such as culture, technology, finance, production, or consumption.

I confess that the choice of political power as the main object of my investigation has been determined by the existence of a considerable scientific literature that has examined in recent years the connection between communication and political power at the frontier between cognitive science, communication research, political psychology, and political communication. In this book, I combine my own expertise on sociopolitical analysis and the study of communication technologies with the works of scholars investigating the interaction between the brain and political power in order to build a body of observation that may provide a measure of the relevance of this interdisciplinary approach. I have explored the sources of political power relationships in our world by trying to link the structural dynamics of the network society, the transformation of the communication system, the interaction between emotion, cognition, and political behavior, and the study of politics and social movements in a variety of contexts. This is the project behind this book, and it is up to the reader to evaluate its potential usefulness. I continue to believe that theories are just disposable tools in the production of knowledge, always destined to be superseded, either by being discarded as irrelevant or, hopefully in this case, folded into an improved analytical framework elaborated somewhere by someone in the scientific community to make sense of our experience of social power.

To help the communication process between you and me, I will outline the structure and sequence of this book which, in my view, follows the

logic of what I have just presented. I start by defining what I understand to be power. Thus, Chapter 1 tries to clarify the meaning of power by proposing some elements of power theory. To do so, I make use of some classical contributions in social science that I find relevant and useful for the kind of questions I am asking. It is, of course, a selective reading of power theories, and in no way should it be understood as an attempt to place myself in the theoretical debate. I do not write books about books. I use theories, any theory, in the same way that I hope my theory will be used by anyone: as a toolbox to understand social reality. So I use what I find useful and I do not consider what is not directly related to the purpose of my investigation, which is the majority of contributions to power theory. Therefore, I do not intend to contribute to the deforestation of the planet by printing paper to criticize works that, in spite of their intellectual elegance or political interest, are not on the horizon of my research. Furthermore, I situate my understanding of power relationships in our type of society, which I conceptualize as the network society, which is to the Information Age what the industrial society was to the Industrial Age. I will not go into the detail of my network society analysis since I dedicated a full trilogy to this task a few years ago (Castells, 2000a, c, 2004c). I have, however, recast, in Chapter 1, the key elements of my conceptualization of the network society as they relate to the understanding of power relationships in our new historical context.

After establishing the conceptual foundations of the analysis of power, I proceed, in Chapter 2, with a similar analytical operation concerning communication. Yet, when it comes to communication, I go further by empirically investigating the structure and dynamics of mass communication under the conditions of globalization and digitalization. I analyze both the mass media and the horizontal networks of interactive communication, focusing on both their differences and their intersections. I study the transformation of the media audience from receptors of messages to senders/receivers of messages, and I explore the relationship between this transformation and the process of cultural change in our world. Finally, I identify the power relationships embedded in the mass-communication system and in the network infrastructure on which communication depends, and I explore the connections between business, media, and politics.

Having set up the structural determinants of the relationship between power and communication in the network society, I change the perspective of my analysis from the structure to the agency. If power works by acting

on the human mind by the means of communicating messages, we need to understand how the human mind processes these messages, and how this processing translates into the political realm. This is the key analytical transition in this book, and perhaps the one element in the investigation that will require a greater effort on the part of the reader (as it did on my part) because political analysis is only beginning to integrate structural determination with cognitive processes. I did not embark on this complex enterprise to honor fashion. I did it because I found the large body of literature that, in the past decade, has conducted experimental research to unveil the processes of individual political decision-making revealing in terms of the relationship between mental processes, metaphorical thinking, and political image-making. Without accepting the reductionist premises of some of these experiments, I think that the research of the school of affective intelligence, and other works of political communication, provide a most-needed bridge between social structuration and the individual processing of power relationships. The scientific foundations of much of this research are to be found in the new discoveries of neuroscience and cognitive science, as represented, for instance, in the works of Antonio Damasio, Hanna Damasio, George Lakoff, and Jerry Feldman. Thus, I anchored my analysis of the relationship between communication and political practice in these theories, and in the empirical evidence in the field of political psychology that can be better understood from a neuroscientific perspective, such as the work of Drew Westen.

While I do not have any particular expertise in this field, with the help of my colleagues I have tried to present in Chapter 3 an analysis of the specific relationships between emotion, cognition, and politics. I then relate the results of this analysis to what communication research knows about the conditioning of political communication by social and political actors deliberately intervening in the media and other communication networks to foster their interests, through mechanisms such as agenda-setting, framing, and priming of the news and other messages. To illustrate the potential explanatory value of this perspective, and to simplify its complexity, I proceed in Chapter 3 with an empirical analysis of the process of misinformation of the American public by the Bush administration concerning the Iraq War. So doing, I hope to be able to draw the practical political implications of a complicated analytical approach. Processes are complex but the outcomes of such processes are both simple and consequential, as communication processes have implanted the "war on terror" frame into the minds of millions of people, inducing a culture of fear in our lives.

Thus, the first three chapters of this book are inextricably linked because an understanding of the construction of power relationships through communication in the network society requires the integration of the three key components of the process explored separately in each one of the chapters:

- The structural determinants of social and political power in the global network society.
- The structural determinants of the process of mass communication under the organizational, cultural, and technological conditions of our time.
- The cognitive processing of the signals presented by the communication system to the human mind as it relates to politically relevant social practice.

I will then be in a position to undertake specific empirical analyses that will make use, at least to some extent, of the concepts and findings of the first three chapters which, together, constitute the theoretical framework proposed in this book. Chapter 4 will explain and document why, in the network society, politics is fundamentally media politics, focusing on its epitome, the politics of scandal, and relating the results of the analysis to the worldwide crisis of political legitimacy that challenges the meaning of democracy in much of the world. Chapter 5 explores how social movements and agents of political change proceed in our society through the reprogramming of communication networks, so becoming able to convey messages that introduce new values to the minds of people and inspire hope for political change. Both chapters will deal with the specific role of mass media and horizontal communication networks, as media politics and social movements use both sets of networks, and as media networks and Internet networks are inter-related. Yet, my assumption, which will be tested, is that the greater the autonomy provided to the users by the technologies of communication, the greater the chances that new values and new interests will enter the realm of socialized communication, so reaching the public mind. Thus, the rise of mass self-communication, as I call the new forms of networked communication, enhances the opportunities for social change, without however defining the content and purpose of such social change. People, meaning ourselves, are angels and demons at the same time, and so our increased capacity to act on society will simply project into the open who we really are in each time/space context.

In proceeding with a series of empirical analyses, I will rely on available evidence, as well as some case studies of my own, from a variety of social, cultural, and political contexts. A majority of the material, however,

concerns the United States for the simple reason that there has been more scholarly research done there on the topics covered in this book. However, I am convinced that the analytical perspective put forward in this book is not context-dependent, and could be used to understand political processes in a diversity of countries, including the developing world. This is because the network society is global, and so are the global communication networks, while cognitive processes in the human mind universally share basic features, albeit with a range of variation in the cultural forms of their manifestation. After all, power relationships are the foundational relations of society throughout history, geography, and cultures. And if power relationships are constructed in the human mind through communication processes, as this book will try to demonstrate, these hidden connections may well be the source code of the human condition.

The lights are now on in the movie theater. The room empties slowly as viewers make the transition between images on the screen and images in their lives. You queue toward the exit, any exit to anywhere. Maybe some of the words from the film still resonate inside you. Words such as those ending Martin Ritt's *The Front* (1976), particularly Woody Allen's words to the McCarthyites: "Fellas ... I don't recognize the right of this committee to ask me these kinds of questions. And furthermore, you can all go f__ yourselves." Then, the images of Allen, handcuffed and on his way to prison. Power and challenge to power. And the girl's kiss. Handcuffed, but free and loved. A whirlwind of images, ideas, feelings.

Then, suddenly you see this book. I wrote it for you, and left it for you to find. You notice the nice cover. Communication. Power. You can relate to that. Whatever the connection with your mind, it worked because you are now reading these words. But I am not telling you what to do. This much I learned in my long journey. I fight my fights; I do not call upon others to do it for me, or even with me. Still, I say my words, words learned from and through my work and my job as a social science researcher. Words that, in this case, tell a story about power. In fact, the story of power in the world we live in. And this is my way, my only real way to challenge the powers that be by unveiling their presence in the workings of our minds.

Chapter 1

Power in the Network Society

What is Power?

Power is the most fundamental process in society, since society is defined around values and institutions, and what is valued and institutionalized is defined by power relationships.

Power is the relational capacity that enables a social actor to influence asymmetrically the decisions of other social actor(s) in ways that favor the empowered actor's will, interests, and values. Power is exercised by means of coercion (or the possibility of it) and/or by the construction of meaning on the basis of the discourses through which social actors guide their action. Power relationships are framed by domination, which is the power that is embedded in the institutions of society. The relational capacity of power is conditioned, but not determined, by the structural capacity of domination. Institutions may engage in power relationships that rely on the domination they exercise over their subjects.

This definition is broad enough to encompass most forms of social power, but requires some specifications. The concept of *actor* refers to a variety of subjects of action: individual actors, collective actors, organizations, institutions, and networks. Ultimately, however, all organizations, institutions, and networks express the action of human actors, even if this action

has been institutionalized or organized by processes in the past. *Relational capacity* means that power is not an attribute but a relationship. It cannot be abstracted from the specific relationship between the subjects of power, those who are empowered and those who are subjected to such empowerment in a given context. *Asymmetrically* means that while influence in a relationship is always reciprocal, in power relationships there is always a greater degree of influence of one actor over the other. However, there is never absolute power, a zero degree of influence of those subjected to power vis-à-vis those in power positions. There is always the possibility of resistance that calls into question the power relationship. Furthermore, in any power relationship there is a certain degree of compliance and acceptance by those subjected to power. When resistance and rejection become significantly stronger than compliance and acceptance, power relationships are transformed: the terms of the relationship change, the powerful lose power, and ultimately there is a process of institutional change or structural change, depending on the extent of the transformation of power relationships. Or else power relationships become non-social relationships. This is because, if a power relationship can only be enacted by relying on structural domination backed by violence, those in power, in order to maintain their domination, must destroy the relational capacity of the resisting actor(s), thus canceling the relationship itself. I advance the notion that sheer imposition by force is not a social relationship because it leads to the obliteration of the dominated social actor, so that the relationship disappears with the extinction of one of its terms. It is, however, a social action with social meaning because the use of force constitutes an intimidating influence over the surviving subjects under similar domination, helping to reassert power relationships vis-à-vis these subjects. Furthermore, as soon as the power relationship is re-established in its plural components, the complexity of the multilayered mechanism of domination works again, making violence one factor among others in a broader set of determination. The more the construction of meaning on behalf of specific interests and values plays a role in asserting power in a relationship, the less the recourse to violence (legitimate or not) becomes necessary. However, the institutionalization of the recourse to violence in the state and its derivatives sets up the context of domination in which the cultural production of meaning can deploy its effectiveness.

There is complementarity and reciprocal support between the two main mechanisms of power formation identified by theories of power: violence and discourse. After all, Michel Foucault starts his *Surveiller et Punir* (1975)

with the description of the torture of Damiens before going on to deploy his analysis of the construction of disciplinary discourses that constitute a society in which “factories, schools, military barracks, hospitals, all look like prisons” (1975: 264, my translation). This complementarity of the sources of power can also be perceived in Max Weber: He defines social power as “the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests” ([1922] 1978: 53), and he ultimately relates power to politics and politics to the state, “a relation of men dominating men, a relation supported by means of legitimate (i.e. considered to be legitimate) violence. If the state is to exist the dominated must obey the authority claimed by the powers that be... the decisive means for politics is violence” ([1919] 1946: 78, 121). But he also warns that an existing state “whose heroic age is not felt as such by the masses can nevertheless be decisive for a powerful sentiment of solidarity, in spite of the greatest internal antagonisms” ([1919] 1946: 177).

This is why the process of legitimation, the core of Habermas’s political theory, is the key to enable the state to stabilize the exercise of its domination (Habermas, 1976). And legitimation can be effectuated by diverse procedures of which constitutional democracy, Habermas’s preference, is only one. Because democracy is about a set of processes and procedures, it is not about policy. Indeed, if the state intervenes in the public sphere on behalf of the specific interests that prevail in the state, it induces a legitimation crisis because it reveals itself as an instrument of domination instead of being an institution of representation. Legitimation largely relies on consent elicited by the construction of shared meaning; for example, belief in representative democracy. Meaning is constructed in society through the process of communicative action. Cognitive rationalization provides the basis for the actions of the actors. So, the ability of civil society to provide the content of state action through the public sphere (“a network for communicating information and points of view” [Habermas, 1996: 360]) is what ensures democracy and ultimately creates the conditions for the legitimate exercise of power: power as representation of the values and interests of citizens expressed by means of their debate in the public sphere. Thus, institutional stability is predicated on the capacity to articulate different interests and values in the democratic process via communication networks (Habermas, 1989).

When there is separation between an interventionist state and a critical civil society, the public space collapses, thus suppressing the intermediate

sphere between the administrative apparatus and the citizens. The democratic exercise of power is ultimately dependent on the institutional capacity to transfer meaning generated by communicative action into the functional coordination of action organized in the state under the principles of constitutional consensus. So, *constitutional access to coercive capacity and communicative resources that enable the co-production of meaning complement each other in establishing power relationships.*

Thus, in my view, some of the most influential theories of power, in spite of their theoretical and ideological differences, share a similar, multifaceted analysis of the construction of power in society:¹ *violence, the threat to resort to it, disciplinary discourses, the threat to enact discipline, the institutionalization of power relationships as reproducible domination, and the legitimation process by which values and rules are accepted by the subjects of reference, are all interacting elements in the process of producing and reproducing power relationships in social practices and in organizational forms.*

This eclectic perspective on power – useful, hopefully, as a research tool beyond its level of abstraction – articulates the two terms of the classical distinction between *power over* and *power to* proposed by Talcott Parsons (1963) and developed by several theorists (for example, Goehler’s [2000] distinction between transitive power [power over] and intransitive power [power to]). Because, if we assume that all social structures are based on power relationships that are embedded in institutions and organizations (Lukes, 1974), for a social actor to engage in a strategy toward some goal, being empowered to act on social processes necessarily means intervening in the set of power relationships that frame any given social process and condition the attainment of a specific goal. The empowerment of social actors cannot be separated from their empowerment against other social actors, unless we accept the naïve image of a reconciled human community, a normative utopia that is belied by historical observation (Tilly, 1990, 1993; Fernández-Armesto, 2000). The power to do something, Hanna Arendt (1958) notwithstanding, is *always* the power to do something against someone, or against the values and interests of this “someone” that are enshrined in the apparatuses that rule and organize social life. As Michael Mann has written in the introduction to his historical study of the sources of social power, “in its most general sense, power is the ability to pursue and attain goals through the mastery of one’s environment”

¹ Gramsci’s analysis of the relationships between the state and civil society in terms of hegemony is close to this formulation, although conceptualized in a different theoretical perspective, rooted in class analysis (see Gramsci, 1975).

(1986: 6). And, after referring to Parsons's distinctions between distributive and collective power, he states that:

In most social relations both aspects of power, distributive and collective, exploitative and functional, operate simultaneously and are intertwined. Indeed, the relationship between the two is dialectical. In pursuit of their goals humans enter into cooperative, collective power relations with one another. But in implementing collective goals, social organization and a division of labor are set up... The few at the top can keep the masses at the bottom compliant, provided their control is *institutionalized* in the laws and norms of the social group in which both operate.

(1986: 6-7)

Thus societies are not communities, sharing values and interests. They are contradictory social structures enacted in conflicts and negotiations among diverse and often opposing social actors. Conflicts never end; they simply pause through temporary agreements and unstable contracts that are transformed into institutions of domination by those social actors who achieve an advantageous position in the power struggle, albeit at the cost of allowing some degree of institutional representation for the plurality of interests and values that remain subordinated. So, the institutions of the state and, beyond the state, the institutions, organizations, and discourses that frame and regulate social life are never the expression of "society," a black box of polysemic meaning whose interpretation depends on the perspectives of social actors. They are crystallized power relationships; that is, the "generalized means" (Parsons) that enable actors to exercise power *over* other social actors in order to have the power *to* accomplish their goals.

This is hardly a novel theoretical approach. It builds on Touraine's (1973) theory of the production of society and on Giddens's (1984) structuration theory. Actors produce the institutions of society under the conditions of the structural positions that they hold but with the capacity (ultimately mental) to engage in self-generated, purposive, meaningful, social action. This is how structure and agency are integrated in the understanding of social dynamics, without having to accept or reject the twin reductionisms of structuralism or subjectivism. This approach is not only a plausible point of convergence of relevant social theories, but also what the record of social research seems to indicate (Giddens, 1979; Mann, 1986, 1992; Melucci, 1989; Dalton and Kuechler, 1990; Bobbio, 1994; Calderon, 2003; Tilly, 2005; Sassen, 2006).

However, processes of structuration are multilayered and multiscalar. They operate on different forms and levels of social practice: economic

(production, consumption, exchange), technological, environmental, cultural, political, and military. And they include gender relations that constitute transversal power relationships throughout the entire structure. These multilayered processes of structuration generate specific forms of time and space. Each one of these levels of practice, and each spatiotemporal form, (re)produce and/or challenge power relationships at the source of institutions and discourses. And these relationships involve complex arrangements between different levels of practice and institutions: global, national, local, and individual (Sassen, 2006). Therefore, if structuration is multiple, the analytical challenge is to understand the specificity of power relationships in each one of these levels, forms, and scales of social practice, and in their structured outcomes (Haugaard, 1997). Thus, *power is not located in one particular social sphere or institution, but it is distributed throughout the entire realm of human action. Yet, there are concentrated expressions of power relationships in certain social forms that condition and frame the practice of power in society at large by enforcing domination. Power is relational, domination is institutional.* A particularly relevant form of domination has been, throughout history, the state in its different manifestations (Poulantzas, 1978; Mulgan, 2007). But states are historical entities (Tilly, 1974). Therefore, the amount of power they hold depends on the overall social structure in which they operate. And this is the most decisive question in understanding the relationship between power and the state.

In the classical Weberian formulation, "ultimately one can define the modern state only in terms of the specific means peculiar to it, as to every political association, namely the use of political force. *Every state is founded on force*" ([1919] 1946: 77; emphasis added). As the state can be called upon to enforce power relationships in every domain of social practice, it is the ultimate guarantor of micro-powers; that is, of powers exercised away from the political sphere. When micro-power relationships enter into contradiction with the structures of domination embedded in the state, either the state changes or domination is reinstated by institutional means. Although the emphasis here is on force, the logic of domination can also be embedded in discourses as alternative or complementary forms of exercising power. Discourses are understood, in the Foucauldian tradition, as combinations of knowledge and language. But there is no contradiction between domination by the possibility of resorting to force and by disciplinary discourses. Indeed, Foucault's analysis of domination by the disciplinary discourses underlying the institutions of society refers

mainly to state or para-state institutions: prisons, the military, asylums. The state-based logic is also extended to the disciplinary worlds of production (the factory) or of sexuality (the heterosexual, patriarchal family; Foucault, 1976, 1984a, b). In other words, disciplinary discourses are backed up by the potential use of violence, and state violence is rationalized, internalized, and ultimately legitimized by the discourses that frame/shape human action (Clegg, 2000). Indeed, the institutions and para-institutions of the state (for example, religious institutions, universities, the learned elites, the media to some extent) are the main sources of these discourses. To challenge existing power relationships, it is necessary to produce alternative discourses that have the potential to overwhelm the disciplinary discursive capacity of the state as a necessary step to neutralizing its use of violence. Therefore, while power relationships are distributed in the social structure, the state, from an historical perspective, remains a strategic instance of the exercise of power through different means. But the state itself is dependent on a diversity of power sources. Geoff Mulgan has theorized the capacity of the state to assume and exercise power through the articulation of three sources of power: violence, money, and trust.

The three sources of power together underpin political power, the sovereign power to impose laws, issue commands and hold together a people and a territory... It concentrates force through its armies, concentrates resources through exchequers, and concentrates the power to shape minds, most recently through big systems of education and communication that are the twin glues of modern nation states... Of the three sources of power the most important for sovereignty is the power over the thoughts that give rise to trust. Violence can only be used negatively; money can only be used in two dimensions, giving and taking away. But knowledge and thoughts can transform things, move mountains and make ephemeral power appear permanent. (Mulgan, 2007: 27)

However, the modes of existence of the state and its capacity to act on power relationships depend on the specifics of the social structure in which the state operates. Indeed, the very notions of state and society depend on the boundaries that define their existence in a given historical context. And our historical context is marked by the contemporary processes of globalization and the rise of the network society, both relying on communication networks that process knowledge and thoughts to make and unmake trust, the decisive source of power.

State and Power in the Global Age

For Weber, the sphere of action of any given state is territorially bounded: "Today we have to say [in contrast to various force-based institutions in the past] that the state is a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory. Note that territory is one of the characteristics of the state" ([1919] 1946: 78). This is not necessarily a nation-state, but it is usually so in its modern manifestation: "A nation is a community of sentiment which would adequately manifest itself in a state of its own; hence, a nation is a community which normally tends to produce a state of its own" ([1922] 1978: 176). So, nations (cultural communities) produce states, and they do so by claiming the monopoly of violence within a given territory. The articulation of state power, and of politics, takes place in a society that is defined as such by the state. This is the implicit assumption of most analyses of power, which observe the power relationships within a territorially constructed state or between states. Nation, state, and territory define the boundaries of society.

This "methodological nationalism" is rightly challenged by Ulrich Beck because globalization has redefined the territorial boundaries of the exercise of power:

Globalization, when taken to its logical conclusion, means that the social sciences must be grounded anew as a reality-based science of the transnational – conceptually, theoretically, methodologically, and organizationally as well. This includes the fact that there is a need for the basic concepts of "modern society" – household, family, class, democracy, domination, state, economy, the public sphere, politics and so on – to be released from the fixations of methodological nationalism and redefined and reconceptualized in the context of methodological cosmopolitanism. (Beck, 2005: 50)

David Held, starting with his seminal article in 1991, and continuing with a series of political and economic analyses of globalization, has shown how the classical theory of power, focused on the nation-state or on subnational government structures, lacks a frame of reference from the moment that key components of the social structure are local and global at the same time rather than local or national (Held, 1991, 2004; Held et al., 1999; Held and McGrew, 2007). Habermas (1998) acknowledges the problems raised by the coming of what he calls "the postnational constellation" for the process of democratic legitimacy, as the Constitution (the defining institution) is national and the sources of power are increasingly constructed in the

supranational sphere. Bauman (1999) theorizes a new understanding of politics in a globalized world. And Saskia Sassen (2006) has shown the transformation of authority and rights, and thus power relationships, by the evolution of social structure toward "global assemblages."

In sum: if power relationships exist in specific social structures that are constituted on the basis of spatiotemporal formations, and these spatiotemporal formations are no longer primarily located at the national level, but are global and local at the same time, the boundary of society changes, and so does the frame of reference of power relationships that transcend the national (Fraser, 2007). This is not to say that the nation-state disappears. But it is to say that the national boundaries of power relationships are just one of the dimensions in which power and counterpower operate. Ultimately, this affects the nation-state itself. Even if it does not fade away as a specific form of social organization, it changes its role, its structure, and its functions, gradually evolving toward a new form of state: the network state that I analyze below.

How, in this new context, can we understand power relationships that are not primarily defined within the territorial boundaries established by the state? The theoretical construction proposed by Michael Mann for understanding the social sources of power provides some insights into the matter because, on the basis of his historical investigation, he conceptualizes societies as "constituted of multiple, overlapping and interacting sociospatial networks of power" (1986: 1). Therefore, rather than looking for territorial boundaries, we need to identify the sociospatial networks of power (local, national, global) that, in their intersection, configure societies. While a state-centered view of world political authority provided a clear indication of the boundaries of society and, therefore, of the sites of power in the context of the global age, to use Beck's characterization, we have to start from networks to understand institutions (see Beck, 2005). Or, in Sassen's (2006) terminology, the forms of assemblages, neither global nor local but both simultaneously, define the specific set of power relationships that provide the foundation for each society. Ultimately, the traditional notion of society may have to be called into question because each network (economic, cultural, political, technological, military, and the like) has its own spatiotemporal and organizational configurations, so that their points of intersection are subjected to relentless change. Societies as national societies become segmented and are constantly reshaped by the action of dynamic networks on their historically inherited social structures. In Michael Mann's terms, "a society is a network of social interaction at the

boundaries of which is a certain level of interaction cleavage between it and its environment. A society is a unit with boundaries" (1986: 13).

Indeed, it is difficult to conceive of a society without boundaries. But networks do not have fixed boundaries; they are open-ended and multi-edged, and their expansion or contraction depends on the compatibility or competition between the interests and values programmed into each network and the interests and values programmed into the networks they come into contact with in their expansionary movement. In historical terms, the state (national or otherwise) may have been able to function as a gatekeeper of network interaction, providing some stability for a particular configuration of overlapping networks of power. Yet, under the conditions of multilayered globalization, the state becomes just a node (however important) of a particular network, the political, institutional, and military network that overlaps with other significant networks in the construction of social practice. Thus, the social dynamics constructed around networks appears to dissolve society as a stable social form of organization. However, a more constructive approach to the understanding of the process of historical change is to conceptualize a new form of society, the network society, made up of specific configurations of global, national, and local networks in a multidimensional space of social interaction. I hypothesize that relatively stable configurations built on the intersections of these networks may provide the boundaries that could redefine a new "society," with the understanding that these boundaries are highly volatile because of the relentless change in the geometry of the global networks that structure social practices and organizations. To probe this hypothesis, I need to make a detour through network theory, and then I must introduce the specificity of the network society as a particular type of social structure. Only then can we redefine power relationships under the conditions of a global network society.

Networks

A network is a set of interconnected nodes. Nodes may be of varying relevance to the network, and so particularly important nodes are called "centers" in some versions of network theory. Still, any component of a network (including "centers") is a node and its function and meaning depend on the programs of the network and on its interaction with other nodes in the network. Nodes increase their importance for the network

by absorbing more relevant information, and processing it more efficiently. The relative importance of a node does not stem from its specific features but from its ability to contribute to the network's effectiveness in achieving its goals, as defined by the values and interests programmed into the networks. However, all nodes of a network are necessary for the network's performance, although networks allow for some redundancy as a safeguard for their proper functioning. When nodes become unnecessary for the fulfillment of the networks' goals, networks *tend* to reconfigure themselves, deleting some nodes, and adding new ones. Nodes only exist and function as components of networks. The network is the unit, not the node.

In social life, networks are communicative structures. "Communication networks are the patterns of contact that are created by the flow of messages among communicators through time and space" (Monge and Contractor, 2003: 3). So, networks process flows. Flows are streams of information between nodes, circulating through the channels of connection between nodes. A network is defined by the program that assigns the network its goals and its rules of performance. This program is made of codes that include valuation of performance and criteria for success or failure. In social and organizational networks, social actors, fostering their values and interests, and in interaction with other social actors, are at the origin of the creation and programming of networks. Yet, once set and programmed, networks follow the instructions inscribed in their operating system, and become capable of self-configuration within the parameters of their assigned goals and procedures. To alter the outcomes of the network, a new program (a set of goal-oriented, compatible codes) needs to be installed in the network – from outside the network.

Networks (and the sets of interests and values they embody) cooperate or compete with each other. Cooperation is based on the ability to communicate between networks. This ability depends on the existence of codes of translation and inter-operability between the networks (protocols of communication) and on access to connecting points (switches). Competition depends on the ability to outperform other networks by superior efficiency in performance or in cooperation capacity. Competition may also take a destructive form by disrupting the switchers of competing networks and/or interfering with their communication protocols. Networks work on a binary logic: inclusion/exclusion. Within the network, distance between nodes tends toward zero when every node is directly connected to every other node. Between nodes in the network and outside the network, distance is infinite, since there is no access unless the program of the network

is changed. When nodes in the network are clustered, networks follow the logic of small worlds' properties: nodes are able to connect with a limited number of steps to the entire network and related networks from any node in the network (Watts and Strogatz, 1998). In the case of communication networks, I would add the condition of sharing protocols of communication.

Thus, networks are complex structures of communication constructed around a set of goals that simultaneously ensure unity of purpose and flexibility of execution by their adaptability to the operating environment. They are programmed and self-configurable at the same time. Their goals and operating procedures are programmed, in social and organizational networks, by social actors. Their structure evolves according to the capacity of the network to self-configure in an endless search for more efficient networking arrangements.

Networks are not specific to twenty-first-century societies or, for that matter, to human organization (Buchanan, 2002). Networks constitute the fundamental pattern of life, of all kinds of life. As Fritjof Capra writes, "the network is a pattern that is common to all life. Wherever we see life, we see networks" (2002: 9). In social life, social network analysts have long investigated the dynamic of social networks at the heart of social interaction and the production of meaning (Burt, 1980), leading to the formulation of a systematic theory of communication networks (Monge and Contractor, 2003). Furthermore, in terms of social structure, archeologists and historians of antiquity have forcefully reminded us that the historical record shows the pervasiveness and relevance of networks as the backbone of societies, thousands of years ago, in the most advanced ancient civilizations in several regions of the planet. Indeed, if we transfer the notion of globalization into the geography of the ancient world, as determined by available transportation technologies, there was networked globalization of a sort in antiquity, as societies depended on the connectivity of their main activities to networks transcending the limits of their locality for their livelihood, resources, and power (LaBianca, 2006). Muslim culture has been historically based on global networks (Cooke and Lawrence, 2005). And McNeill and McNeill (2003) have demonstrated the critical role of networks in social organization throughout history.

This observation of the actual historical record runs counter to the predominant vision of the evolution of society that has focused on a different type of organization: hierarchical bureaucracies based on the vertical integration of resources and subjects as the expression of the organized

power of a social elite, legitimized by mythology and religion. This is to some extent a distorted vision, as historical and social analysis, more often than not, was built on ethnocentrism and ideology rather than on the scholarly investigation of the complexity of a multicultural world. But this relative indifference of our historical representation to the importance of networks in the structure and dynamics of society may also be linked to the actual subordination of these networks to the logic of vertical organizations, whose power was inscribed in the institutions of society and distributed in one-directional flows of command and control (Braudel, 1949; Mann, 1986, 1992; Colas, 1992; Fernández-Armesto, 1995). My hypothesis to explain the historical superiority of vertical/hierarchical organizations over horizontal networks is that the non-centered networked form of social organization had material limits to overcome, limits that were fundamentally linked to available technologies. Indeed, networks have their strength in their flexibility, adaptability, and capacity to self-reconfigure. Yet, beyond a certain threshold of size, complexity, and volume of flows, they become less efficient than vertically organized command-and-control structures, *under the conditions of pre-electronic communication technology* (Mokyr, 1990). Yes, wind-powered vessels could build sea-crossing and even trans-oceanic networks of trade and conquest. And horse-riding emissaries or fast-running messengers could maintain communication from the center to the periphery of vast territorial empires. But the time-lag of the feedback loop in the communication process was such that the logic of the system amounted to a one-way flow of the transmission of information and instruction. Under such conditions, networks were an extension of power concentrated at the top of the vertical organizations that shaped the history of humankind: states, religious apparatuses, war lords, armies, bureaucracies, and their subordinates in charge of production, trade, and culture.

The ability of networks to introduce new actors and new contents in the process of social organization, with relative autonomy vis-à-vis the power centers, increased over time with technological change and, more precisely, with the evolution of communication technologies. This was particularly the case with the possibility of relying on a distributed energy network that characterized the advent of the industrial revolution (Hughes, 1983). Railways and the telegraph constituted the first infrastructure for a quasi-global network of communication with self-reconfiguring capacity (Beniger, 1986). However, the industrial society (both in its capitalist and its statist versions) was predominantly structured around large-scale, vertical production organizations and extremely hierarchical state institutions, in

some instances evolving into totalitarian systems. This is to say that early, electrically based communication technologies were not powerful enough to equip networks with autonomy in all their nodes, as this autonomy would have required multidirectionality and a continuous flow of interactive information processing. But it also means that the availability of proper technology is a necessary, but not sufficient, condition for the transformation of the social structure. It was only under the conditions of a mature industrial society that autonomous projects of organizational networking could emerge. When they did, they could use the potential of microelectronics-based digital communication technologies (Benkler, 2006).

Thus, networks became the most efficient organizational forms as a result of three major features of networks which benefited from the new technological environment: flexibility, scalability, and survivability. *Flexibility* is the ability to reconfigure according to changing environments and retain their goals while changing their components, sometimes bypassing blocking points of communication channels to find new connections. *Scalability* is the ability to expand or shrink in size with little disruption. *Survivability* is the ability of networks, because they have no single center and can operate in a wide range of configurations, to withstand attacks to their nodes and codes because the codes of the network are contained in multiple nodes that can reproduce the instructions and find new ways to perform. So, only the material ability to destroy the connecting points can eliminate the network.

At the core of this technological change that unleashed the power of networks was the transformation of information and communication technologies, based on the microelectronics revolution that took shape in the 1950s and 1960s (Freeman, 1982; Perez, 1983). It constituted the foundation of a new technological paradigm, consolidated in the 1970s, first in the United States, and rapidly diffused around the world, ushering in what I have characterized as the Information Age (Castells, 2000a, c, 2004c). William Mitchell (2003) has conceptualized the evolving logic of information and communication technology throughout history as a process of expansion and augmentation of the human body and the human mind: a process that, in the early twenty-first century, is characterized by the explosion of portable devices that provide ubiquitous wireless communication and computing capacity. This enables social units (individuals or organizations) to interact anywhere, anytime, while relying on a support infrastructure that manages material resources in a distributed information power grid (Castells et al., 2006b). With the advent of nanotechnology and the convergence of microelectronics and biological processes and materials,

the boundaries between human life and machine life are blurred, so that networks extend their interaction from our inner self to the whole realm of human activity, transcending barriers of time and space. Neither Mitchell nor I indulge in science fiction scenarios as a substitute for analyses of the technosocial transformation process. But it is essential, precisely for the sake of analysis, to emphasize the role of technology in the process of social transformation, particularly when we consider the central technology of our time – communication technology – that relates to the heart of the specificity of the human species: conscious, meaningful communication (Capra, 1996, 2002; Damasio, 2003). It was because of available electronic information and communication technologies that the network society could deploy itself fully, transcending the historical limits of networks as forms of social organization and interaction.

The Global Network Society²

A network society is a society whose social structure is made around networks activated by microelectronics-based, digitally processed information and communication technologies. I understand social structures to be the organizational arrangements of humans in relationships of production, consumption, reproduction, experience, and power expressed in meaningful communication coded by culture.

Digital networks are global, as they have the capacity to reconfigure themselves, as directed by their programmers, transcending territorial and institutional boundaries through telecommunicated computer networks. So, a social structure whose infrastructure is based on digital networks has the potential capacity to be global. However, network technology and networking organization are only means to enact the trends inscribed in the social structure. The contemporary process of globalization has its origin in economic, political, and cultural factors, as documented by scholarly analyses of globalization (Beck, 2000; Held and McGrew, 2000, 2007; Stiglitz, 2002). But, as a number of studies have indicated, the forces driving globalization could only be effectuated because they have at their

² This section elaborates and updates the analysis presented in my book *The Rise of the Network Society* (2000c). I take the liberty of referring the reader to that book for further elaboration and empirical support of the theorization presented here. Additional supporting material can be found in some of my writings in recent years (Castells, 2000b, 2001, 2004b, 2005a, b, 2008a, b; Castells and Himanen, 2002; Castells et al., 2006b, 2007).

disposal the global networking capacity provided by digital communication technologies and information systems, including computerized, long-haul, fast, transportation networks (Kiyoshi et al., 2006; Grewal, 2008). This is, in fact, what separates, in size, speed, and complexity, the current process of globalization from previous forms of globalization in earlier historical periods.

Thus, the network society is a global society. However, this does not mean that people everywhere are included in these networks. For the time being, most are not (Hammond et al., 2007). But everybody is affected by the processes that take place in the global networks that constitute the social structure. The core activities that shape and control human life in every corner of the planet are organized in global networks: financial markets; transnational production, management, and the distribution of goods and services; highly skilled labor; science and technology, including higher education; the mass media; the Internet networks of interactive, multi-purpose communication; culture; art; entertainment; sports; international institutions managing the global economy and intergovernmental relations; religion; the criminal economy; and the transnational NGOs and social movements that assert the rights and values of a new, global civil society (Held et al., 1999; Volkmer, 1999; Castells, 2000a; Jacquet et al., 2002; Stiglitz, 2002; Kaldor, 2003; Grewal, 2008; Jüris, 2008). Globalization is better understood as the networking of these socially decisive global networks. Therefore, exclusion from these networks, often in a cumulative process of exclusion, is tantamount to structural marginalization in the global network society (Held and Kaya, 2006).

The network society diffuses selectively throughout the planet, working on the pre-existing sites, cultures, organizations, and institutions that still make up most of the material environment of people's lives. The social structure is global, but most of human experience is local, both in territorial and cultural terms (Borja and Castells, 1997; Norris, 2000). Specific societies, as defined by the current boundaries of nation-states, or by the cultural boundaries of their historical identities, are deeply fragmented by the double logic of inclusion and exclusion in the global networks that structure production, consumption, communication, and power. I propose the hypothesis that this fragmentation of societies between the included and the excluded is more than the expression of the time-lag required by the gradual incorporation of previous social forms into the new dominant logic. It is, in fact, a structural feature of the global network society. This is because the reconfiguring capacity inscribed in the process of networking

allows the programs governing every network to search for valuable additions everywhere and to incorporate them, while bypassing and excluding those territories, activities, and people that have little or no value for the performance of the tasks assigned to the network. Indeed, as Geoff Mulgan observed, "networks are created not just to communicate, but also to gain position, to outcommunicate" (1991: 21). The network society works on the basis of a binary logic of inclusion/exclusion, whose boundaries change over time, both with the changes in the networks' programs and with the conditions of performance of these programs. It also depends on the ability of social actors, in various contexts, to act on these programs, modifying them in the direction of their interests. The global network society is a dynamic structure that is highly malleable to social forces, to culture, to politics, and to economic strategies. But what remains in all instances is its dominance over activities and people who are external to the networks. In this sense, the global overwhelms the local – unless the local becomes connected to the global as a node in alternative global networks constructed by social movements.

Thus, the uneven globalization of the network society is, in fact, a highly significant feature of its social structure. The coexistence of the network society, as a global structure, with industrial, rural, communal, or survival societies, characterizes the reality of all countries, albeit with different shares of population and territory on both sides of the divide, depending on the relevance of each segment for the dominant logic of each network. This is to say that various networks will have different geometries and geographies of inclusion and exclusion: the map of the global criminal economy is not the same as the map resulting from the international location patterns of high-technology industry.

In theoretical terms, the network society must be analyzed, first, as a global architecture of self-reconfiguring networks constantly programmed and reprogrammed by the powers that be in each dimension; second, as the result of the interaction between the various geometries and geographies of the networks that include the core activities – that is, the activities shaping life and work in society; and, third, as the result of a second-order interaction between these dominant networks and the geometry and geography of the disconnection of social formations left outside the global networking logic.

The understanding of power relationships in our world must be specific to this particular society. An informed discussion of this specificity requires a characterization of the network society in its main components: production

and appropriation of value, work, communication, culture, and its mode of existence as a spatiotemporal formation. Only then can I meaningfully introduce a tentative hypothesis on the specificity of power relationships in the global network society – a hypothesis that will guide the analysis presented throughout this book.

What is Value in the Network Society?

Social structures, such as the network society, originate from the processes of the production and appropriation of value. But what constitutes value in the network society? What moves the production system? What motivates the appropriators of value and controllers of society? There is no change here in relation to earlier social structures in history: value is what the dominant institutions of society decide it is. So, if global capitalism shapes the world, and capital accumulation by the valuation of financial assets in the global financial markets is the supreme value, this will be value in every instance, as, under capitalism, profit-making and its materialization in monetary terms can ultimately acquire everything else. The critical matter is that, in a social structure organized in global networks, whatever the hierarchy is between the networks will become the rule in the entire grid of networks organizing/dominating the planet. If, for instance, we say that capital accumulation is what moves the system, and the return to capital is fundamentally realized in the global financial markets, the global financial markets will assign value to every transaction in every country, as no economy is independent of financial valuation decided in the global financial markets. But if, instead, we consider that the supreme value is military power, the technological and organizational capacity of military machines will structure power in their spheres of influence, and create the conditions for other forms of value – for example, capital accumulation or political domination – to proceed under their protection. However, if the transmission of technology, information, and knowledge to a particular armed organization is blocked, this organization becomes irrelevant in the world context. Thus, we may say that global networks of information and technology are the dominant ones because they condition military capacity which, in turn, provides security for the market to function. Another illustration of this diversity of value-making processes: we can assert that the most important source of influence in today's world is the transformation of people's minds. If it is so, then the media are the key networks, as the

media, organized in global conglomerates and their distributive networks, are the primary sources of messages and images that reach people's minds. But if we now consider the media as primarily media business, then the logic of profit-making, both in the commercialization of media by the advertising industry and in the valuation of their stock, becomes paramount.

Thus, given the variety of the potential origins of network domination, the network society is a multidimensional social structure in which networks of different kinds have different logics of value-making. The definition of what constitutes value depends on the specificity of the network, and of its program. Any attempt to reduce all value to a common standard faces insurmountable methodological and practical difficulties. For instance, if profit-making is the supreme value under capitalism, military power ultimately grounds state power, and the state has a considerable capacity to decide and enforce new rules for business operations (ask the Russian oligarchs about Putin). At the same time, state power, even in non-democratic contexts, largely depends on the beliefs of people, on their capacity to accept the rules, or, alternatively, on their willingness to resist. Then, the media system, and other means of communication, such as the Internet, could precede state power, which, in turn, would condition the rules of profit-making, and thus would supersede the value of money as the supreme value.

Thus, *value is, in fact, an expression of power*: Whoever holds power (often different from whoever is in government) decides what is valuable. In this sense, the network society does not innovate. What is new, however, is its global reach, and its networked architecture. It means, on one hand, that relations of domination between networks are critical. They are characterized by constant, flexible interaction: for instance, between global financial markets, geopolitical processes, and media strategies. On the other hand, because the logic of value-making, as an expression of domination, is global, those instances that have a structural impediment to exist globally are at a disadvantage vis-à-vis others whose logic is inherently global. This has considerable practical importance because it is at the root of the crisis of the nation-state of the industrial era (not of the state as such, because every social structure generates its own form of state). Since the nation-state can only enforce its rules in its territory, except in the case of alliances or invasion, it has to become either imperial or networked to relate to other networks in the definition of value. This is why, for instance, the US state, in the early twenty-first century, made a point of defining security against terrorism as the overarching value for the entire world. It was a way

of building a military-based network that would assure its hegemony by placing security over profit-making, or lesser goals (such as human rights or the environment), as the supreme value. However, the capitalist logic often becomes quickly overlaid on security projects, as the profitable business of American crony companies in Iraq strikingly illustrates (Klein, 2007).

Capital has always enjoyed the notion of a world without boundaries, as David Harvey has repeatedly reminded us, so that global financial networks have a head start as the defining instances of value in the global network society (Harvey, 1990). Yet, human thought is probably the most rapidly propagating and influential element of any social system, on the condition of relying on a global/local, interactive communication system in real time – which is exactly what has emerged now, for the first time in history (Dutton, 1999; Benkler, 2006). Thus, ideas, and specific sets of ideas, could assert themselves as the truly supreme value (such as preserving our planet, our species, or else serving God's design), as a prerequisite for everything else.

In sum: the old question of industrial society – indeed, the cornerstone of classical political economy – namely, “what is value?,” has no definite answer in the global network society. Value is what is processed in every dominant network at every time in every space according to the hierarchy programmed in the network by the actors acting upon the network. Capitalism has not disappeared. Indeed, it is more pervasive than ever. But it is not, against a common ideological perception, the only game in the global town.

Work, Labor, Class, and Gender: The Network Enterprise and the New Social Division of Labor

The preceding analysis of the new political economy of value-making in the global networks paves the way to understanding the new division of labor, and thus work, productivity, and exploitation. People work; they always have. In fact, today people work more (in terms of total working hours in a given society) than they ever did, since most of women's work was previously not counted as socially recognized (paid) work. The crucial matter has always been how this work is organized and compensated. The division of labor was, and still is, a measure of what is valued and what is not in labor contribution. This value judgment organizes the process of production. It also defines the criteria according to which the product is shared, determining differential consumption and social stratification.

The most fundamental divide in the network society, albeit not the only one, is between self-programmable labor and generic labor (Carnoy, 2000; Castells, 2000c; Benner, 2002). *Self-programmable labor* has the autonomous capacity to focus on the goal assigned to it in the process of production, find the relevant information, recombine it into knowledge, using the available knowledge stock, and apply it in the form of tasks oriented toward the goals of the process. The more our information systems are complex, and interactively connected to databases and information sources via computer networks, the more what is required from labor is the capacity to search and recombine information. This demands appropriate education and training, not in terms of skills, but in terms of creative capacity, as well as in terms of the ability to co-evolve with changes in organization, in technology, and in knowledge. By contrast, tasks that are little valued, yet necessary, are assigned to *generic labor*, eventually replaced by machines, or shifted to lower-cost production sites, depending on a dynamic, cost-benefit analysis. The overwhelming mass of working people on the planet, and the majority in advanced countries, are still generic labor. They are disposable, unless they assert their right to exist as humans and citizens through their collective action. But in terms of value-making (in finance, in manufacturing, in research, in sports, in entertainment, in military action, or in political capital), it is the self-programmable worker who counts for any organization in control of resources. Thus, the organization of the work process in the network society acts on a binary logic, dividing self-programmable labor from generic labor. Furthermore, the flexibility and adaptability of both kinds of labor to a constantly changing environment is a precondition for their use as labor.

This specific division of labor is gendered. The rise of flexible labor is directly related to the feminization of the paid labor force, a fundamental trend of the social structure in the past three decades (Carnoy, 2000). The patriarchal organization of the family induces women to value the flexible organization of their professional work as the only way to make family and job duties compatible. This is why the large majority of temporary workers and part-time workers in most countries are women. Furthermore, while most women are employed as generic labor, their educational level has improved considerably vis-à-vis men, while their wages and working conditions have not risen at the same pace. Thus, women have become the ideal workers of the networked, global, capitalist economy: on one hand, they are able to work efficiently, and adapt to the changing requirements of business; on the other hand, they receive less compensation for the

same work, and have fewer chances for promotion because of the ideology and practice of the gendered division of labor under patriarchalism. However, reality is, to use an old word, dialectical. Although the mass incorporation of women into paid labor, partly because of their condition of patriarchal subordination, has been a decisive factor in the expansion of global, informational capitalism, the very transformation of women's condition as salaried women has ultimately undermined patriarchalism. The feminist ideas that emerged from the cultural social movements of the 1970s found fertile ground in the experience of working women exposed to discrimination. Even more importantly, the economic bargaining power earned by women in the family strengthened their power position vis-à-vis the male head of the family, while undermining the ideological justification of their subordination on the grounds of the respect due to the authority of the male breadwinner. Thus, the division of labor in the new work organization is gendered, but this is a dynamic process, in which women are reversing dominant structural trends and inducing business to bring men into the same patterns of flexibility, job insecurity, downsizing, and offshoring of their jobs that used to be the lot of women. Thus, rather than women rising to the level of male workers, most male workers are being downgraded to the level of most women workers, while professional women have reached a higher level of connectivity into what used to be the old boys networks. These trends have profound implications for both the class structure of society and the relationship between men and women at work and in the family (Castells and Subirats, 2007).

The creativity, autonomy, and self-programmable capacity of knowledge labor would not yield their productivity pay-off if they were not able to be combined with the networking of labor. Indeed, the fundamental reason for the structural need for flexibility and autonomy is the transformation of the organization of the production process. This transformation is represented by *the rise of the network enterprise*. This new organizational business form is the historical equivalent under informationalism of the so-called Fordist organization of industrialism (both capitalist and statist), which is the organization characterized by high-volume, standardized, mass production and vertical control of the labor process according to a top-down, rationalized scheme ("scientific management" and Taylorism, the methods that prompted Lenin's admiration, leading to their imitation in the Soviet Union). Although there are still millions of workers in similarly run factories, the value-producing activities in the commanding heights of the production process (R&D, innovation, design, marketing, management,

and high-volume, customized, flexible production) depend on an entirely different type of firm and, therefore, a different type of work process and of labor: the network enterprise. This is not the equivalent of a network of enterprises. It is a network made from either firms or segments of firms, and/or from the internal segmentation of firms. Thus, large corporations are internally decentralized as networks. Small and medium businesses are connected in networks, thus ensuring the critical mass of their contribution as subcontractors, while keeping their main asset: flexibility. Small and medium business networks are often ancillary to large corporations; in most cases to several of them. Large corporations, and their subsidiary networks, usually form networks of cooperation, called, in business practice, strategic alliances or partnerships.

But these alliances are rarely permanent cooperative structures. This is not a process of oligopolistic cartelization. These complex networks link up on specific business projects, and reconfigure their cooperation in different networks with each new project. The usual business practice in this networked economy is one of alliances, partnerships, and collaborations that are specific to a given product, process, time, and space. These collaborations are based on sharing capital and labor, but most fundamentally information and knowledge, in order to win market share. So these are primarily information networks, which link suppliers and customers through the networked firm. The unit of the production process is not the firm but the business project, enacted by a network, the network enterprise. The firm continues to be the legal unit of capital accumulation. But, since the value of the firm ultimately depends on its financial valuation in the stock market, the unit of capital accumulation, the firm, becomes itself a node in a global network of financial flows. Thus, in the network economy, the dominant layer is the global financial market, the mother of all valuations. The global financial market works only partly according to market rules. It is also shaped and moved by information turbulences of various origins, processed and communicated by the computer networks that constitute the nerve system of the global, informational, capitalist economy (Hutton and Giddens, 2000; Obstfeld and Taylor, 2004; Zaloom, 2006).

Financial valuation determines the dynamics of the economy in the short term, but, in the long run, everything depends on productivity growth. This is why the source of productivity constitutes the cornerstone of economic growth, and therefore of profits, wages, accumulation, and investment (Castells, 2006). And the key factor for productivity growth in this knowledge-intensive, networked economy is innovation (Lucas, 1999;

Tuomi, 2002), or the capacity to recombine factors of production in a more efficient way, and/or produce higher value added in process or in product. Innovators depend on cultural creativity, on institutional openness to entrepreneurialism, on labor autonomy in the labor process, and on the appropriate kind of financing for this innovation-driven economy.

The new economy of our time is certainly capitalist, but of a new brand of capitalism: it depends on innovation as the source of productivity growth; on computer-networked global financial markets, whose criteria for valuation are influenced by information turbulences; on the networking of production and management, both internally and externally, locally and globally; and on labor that is flexible and adaptable. The creators of value have to be self-programmable and able to autonomously process information into specific knowledge. Generic workers, reduced to their role as executants, must be ready to adapt to the needs of the network enterprise, or else face displacement by machines or alternative labor forces.

In this system, besides the persistence of exploitation in the traditional sense, the key issue for labor is the segmentation between three categories: those who are the source of innovation and valuation; those who are mere executants of instructions; and those who are structurally irrelevant from the perspective of the profit-making programs of global capitalism, either as workers (inadequately educated and living in areas without the proper infrastructure and institutional environment for global production) or as consumers (too poor to be part of the market), or both. The primary concern for much of the world's population is to avoid irrelevance, and instead engage in a meaningful relationship, such as that which we call exploitation – because exploitation does have a meaning for the exploited. The greatest danger is for those who become invisible to the programs commanding the global networks of production, distribution, and valuation.

The Space of Flows and Timeless Time

As with all historical transformations, the emergence of a new social structure is linked to the redefinition of the material foundations of our existence, space and time, as Giddens (1984), Adam (1990), Harvey (1990), Lash and Urry (1994), Mitchell (1999, 2003), Dear (2000, 2002), Graham and Simon (2001), Hall and Pain (2006), and Tabboni (2006), among others, have argued. Power relationships are embedded in the social

construction of space and time, while being conditioned by the time-space formations that characterize society.

Two emergent social forms of time and space characterize the network society, while coexisting with prior forms. These are the *space of flows* and *timeless time*. Space and time are related, in nature as in society. In social theory, space can be defined as the material support of time-sharing social practices; that is, the construction of simultaneity. The development of communication technologies can be understood as the gradual decoupling of contiguity and time-sharing. The *space of flows* refers to the technological and organizational possibility of practicing simultaneity without contiguity. It also refers to the possibility of asynchronous interaction in chosen time, at a distance. Most dominant functions in the network society (financial markets, transnational production networks, media networks, networked forms of global governance, global social movements) are organized around the space of flows. However, the space of flows is not placeless. It is made of nodes and networks; that is, of places connected by electronically powered communication networks through which flows of information that ensure the time-sharing of practices processed in such a space circulate and interact. While in the space of places, based on contiguity of practice, meaning, function, and locality are closely inter-related, in the space of flows places receive their meaning and function from their nodal role in the specific networks to which they belong. Thus, the space of flows is not the same for financial activities as for science, for media networks as for political power networks. In social theory, space cannot be conceived as separate from social practices. Therefore, every dimension of the network society that we have analyzed in this chapter has a spatial manifestation. Because practices are networked, so is their space. Since networked practices are based on information flows processed between various sites by communication technologies, the space of the network society is made of the articulation between three elements: the places where activities (and people enacting them) are located; the material communication networks linking these activities; and the content and geometry of the flows of information that perform the activities in terms of function and meaning. This is the space of flows.

Time, in social terms, used to be defined as the sequencing of practices. Biological time, characteristic of most of human existence (and still the lot of most people in the world) is defined by the sequence programmed in the life-cycles of nature. Social time was shaped throughout history by what I call bureaucratic time, which is the organization of time, in institutions and

in everyday life, by the codes of military-ideological apparatuses, imposed over the rhythms of biological time. In the industrial age, clock time gradually emerged, inducing what I would call, in the Foucauldian tradition, disciplinary time. This is the measure and organization of sequencing with enough precision to assign tasks and order to every moment of life, starting with standardized industrial work, and the calculation of the time-horizon of commercial transactions, two fundamental components of industrial capitalism that could not work without clock time: time is money, and money is made over time. In the network society, the emphasis on sequencing is reversed. The relationship to time is defined by the use of information and communication technologies in a relentless effort to annihilate time by negating sequencing: on one hand, by compressing time (as in split-second global financial transactions or the generalized practice of multitasking, squeezing more activity into a given time); on the other hand, by blurring the sequence of social practices, including past, present, and future in a random order, like in the electronic hypertext of Web 2.0, or the blurring of life-cycle patterns in both work and parenting.

In the industrial society, which was organized around the idea of progress and the development of productive forces, *becoming* structured *being*, time conformed space. In the network society, the space of flows dissolves time by disordering the sequence of events and making them simultaneous in the communication networks, thus installing society in structural ephemerality: *being* cancels *becoming*.

The construction of space and time is socially differentiated. The multiple space of places, fragmented and disconnected, displays diverse temporalities, from the most traditional domination of biological rhythms, to the control of clock time. Selected functions and individuals transcend time (like changing global time zones), while devalued activities and subordinate people endure life as time goes by. There are, however, alternative projects of the structuration of time and space, as an expression of social movements that aim to modify the dominant programs of the network society. Thus, instead of accepting timeless time as the time of the financial automaton, the environmental movement proposes to live time in a *longue durée*, cosmological perspective, seeing our lives as part of the evolution of our species, and feeling solidarity with future generations, and with our cosmological belonging: it is what Lash and Urry (1994) conceptualized as glacial time.

Communities around the world fight to preserve the meaning of locality, and to assert the space of places, based on experience, over the logic of

the space of flows, based on instrumentality, in the process that I have analyzed as the "grassrooting" of the space of flows (Castells, 1999). Indeed, the space of flows does not disappear, since it is the spatial form of the network society, but its logic could be transformed. Instead of enclosing meaning and function in the programs of the networks, it would provide the material support for the global connection of the local experience, as in the Internet communities emerging from the networking of local cultures (Castells, 2001).

Space and time are redefined both by the emergence of a new social structure and by the power struggles over the shape and programs of this social structure. Space and time express the power relationships of the network society.

Culture in the Network Society

Societies are cultural constructs. I understand culture as the set of values and beliefs that inform, guide, and motivate people's behavior. So, if there is a specific network society, there should be a culture of the network society that we can identify as its historical marker. Here again, however, the complexity and novelty of the network society require caution. First of all, because the network society is global, it works and integrates a multiplicity of cultures, linked to the history and geography of each area of the world. In fact, industrialism, and the culture of the industrial society, did not make specific cultures disappear around the world. The industrial society had many different, and indeed contradictory, cultural manifestations (from the United States to the Soviet Union, and from Japan to the United Kingdom). There were also industrialized cores in otherwise largely rural and traditional societies. Not even capitalism unified its realm of historical existence culturally. Yes, the market ruled in every capitalist country, but under such specific rules, and with such a variety of cultural forms, that identifying a culture as capitalist is of little analytical help, unless by that we actually mean American or Western, which then becomes empirically wrong.

In the same way, the network society develops in a multiplicity of cultural settings, produced by the differential history of each context. It materializes in specific forms, leading to the formation of highly diverse institutional and cultural systems (Castells, 2004b). However, there is still a common core to the network society, as there was to the industrial society. But there is an additional layer of unity in the network society. It exists globally in

real time. It is global in its structure. Thus, it not only deploys its logic to the whole world, but it keeps its networked organization at the global level while specifying itself in every society. This double movement of commonality and singularity has two main consequences at the cultural level.

On one hand, specific cultural identities become the communes of autonomy, and sometimes trenches of resistance, for collectives and individuals who refuse to fade away in the logic of dominant networks (Castells, 2004c). To be French becomes as relevant as being a citizen or a consumer. To be Catalan, or Basque, or Galician, or Irish, or Welsh, or Scottish, or Quebecois, or Kurd, or Shiite, or Sunni, or Aymara, or Maori becomes a rallying point of self-identification vis-à-vis the domination of imposed nation-states. In contrast to normative or ideological visions that propose the merger of all cultures in the cosmopolitan melting pot of the citizens of the world, the world is not flat. Resistance identities have exploded in these early stages of the development of the global network society, and have induced the most dramatic social and political conflicts in recent times. Respectable theorists and less respectable ideologists may warn against the dangers of such a development, but we cannot ignore it. Observation must inform the theory, not the other way around. Thus, what characterizes the global network society is the contraposition between the logic of the global net and the affirmation of a multiplicity of local selves, as I have tried to argue and document in my work (Castells, 2000a, c, 2004c; see also Tilly, 2005).

Rather than the rise of a homogeneous global culture, what we observe is historical cultural diversity as the main common trend: fragmentation rather than convergence. The key question that then arises is the capacity of these specific cultural identities (made with the materials inherited from singular histories and reworked in the new context) to communicate with each other (Touraine, 1997). Otherwise, the sharing of an interdependent, global social structure, while not being able to speak a common language of values and beliefs, leads to systemic misunderstanding, at the root of destructive violence against the other. Thus, protocols of communication between different cultures are the critical issue for the network society, since without them there is no society, just dominant networks and resisting communes. The project of a cosmopolitan culture common to the citizens of the world lays the foundation for democratic global governance and addresses the central cultural-institutional issue of the network society (Habermas, 1998; Beck, 2005). Unfortunately, this vision proposes the

solution without identifying, other than in normative terms, the processes by which these protocols of communication are to be created or could be created, given the fact that cosmopolitan culture, according to empirical research, is present only in a very small part of the population, including in Europe (Norris, 2000; European Commission's *Eurobarometer*, 2007, 2008). Thus, while personally wishing that the culture of cosmopolitanism would gradually increase communication between peoples and cultures, observation of current trends points in a different direction.

To determine what these protocols of intercultural communication may be is a matter for investigation. This investigation will be taken up in this book, on the basis of the following hypothesis: *the common culture of the global network society is a culture of protocols of communication enabling communication between different cultures on the basis not of shared values but of the sharing of the value of communication*. This is to say: the new culture is not made of content but of process, as the constitutional democratic culture is based on procedure, not on substantive programs. Global culture is a culture of communication for the sake of communication. It is an open-ended network of cultural meanings that can not only coexist, but also interact and modify each other on the basis of this exchange. The culture of the network society is a culture of protocols of communication between all cultures in the world, developed on the basis of the common belief in the power of networking and of the synergy obtained by giving to others and receiving from others. A process of material construction of the culture of the network society is under way. But it is not the diffusion of the capitalist mind through the power exercised in the global networks by the dominant elites inherited from industrial society. Neither is it the idealistic proposal of philosophers dreaming of a world of abstract, cosmopolitan citizens. It is the process by which conscious social actors of multiple origins bring their resources and beliefs to others, expecting in return to receive the same, and even more: the sharing of a diverse world, thus ending the ancestral fear of the other.

The Network State

Power cannot be reduced to the state. But an understanding of the state, and of its historical and cultural specificity, is a necessary component of any theory of power. By state, I mean the institutions of governance of society and their institutionalized agencies of political representation and of

management and control of social life; that is, the executive, the legislative, the judiciary, public administration, the military, law enforcement agencies, regulatory agencies, and political parties, at various levels of governance: national, regional, local, and international.

The state aims to assert sovereignty, the monopoly of ultimate decision-making over its subjects within given territorial boundaries. The state defines citizenship, thus conferring rights and claiming duties on its subjects. It also extends its authority to foreign nationals under its jurisdiction. And it engages in relationships of cooperation, competition, and power with other states. In the analysis presented above, I have shown, in accord with a number of scholars and observers, the growing contradiction between the structuration of instrumental relationships in global networks and the confinement of the nation-state's authority within its territorial boundaries. There is, indeed, a crisis of the nation-state as a sovereign entity (Appadurai, 1996; Nye and Donahue, 2000; Jacquet et al., 2002; Price, 2002; Beck, 2005; Fraser, 2007). However, *nation-states, despite their multidimensional crises, do not disappear; they transform themselves to adapt to the new context*. Their pragmatic transformation is what really changes the landscape of politics and policy-making in the global network society. This transformation is influenced, and fought over, by a variety of projects that constitute the cultural/ideational material on which the diverse political and social interests present in each society work to enact the transformation of the state.

Nation-states respond to the crises induced by the twin processes of the globalization of instrumentality and identification of culture via three main mechanisms:

1. They associate with one another and form networks of states, some of them multipurpose and sharing sovereignty, such as the European Union. Others are focused on a set of issues, generally trade issues (for example, NAFTA or Mercosur) or security issues (for example, NATO). Still others are constituted as spaces of coordination, negotiation, and debate among states with interests in specific regions of the world; for example, OAS (Organization of American States), AU (African Union), the Arab League, ASEAN (Association of South East Asian Nations), APEC (Asia-Pacific Economic Cooperation Forum), the East Asian Summit, the Shanghai Cooperation Organization, and so on. In the strongest networks, the states share some attributes of sovereignty. States also establish permanent or semi-permanent informal networks to elaborate

strategies and to manage the world according to the interests of the network participants. There is a pecking order of such groupings, with the G-8 (soon to become G-20 or G-22) being at the top of the food chain.

2. States have built an increasingly dense network of international institutions and supranational organizations to deal with global issues, from general purpose institutions (for example, the United Nations) to specialized ones (the WTO, the IMF, the World Bank, the International Criminal Court, and so on). There are also ad hoc international institutions defined around a set of issues (for example, the treaties on the global environment and their agencies).
3. Nation-states in many countries have engaged in a process of devolution of power to regional governments, and to local governments, while opening channels of participation with NGOs, in the hope of halting their crisis of political legitimacy by connecting with people's identity.

The actual process of political decision-making operates in a network of interaction between national, supranational, international, co-national, regional, and local institutions, while also reaching out to the organizations of civil society. In this process, we witness the transformation of the sovereign nation-state that emerged throughout the modern age into a new form of state – which I conceptualized as the network state (Castells, 2000a: 338–65). The *emerging network state* is characterized by shared sovereignty and responsibility between different states and levels of government; flexibility of governance procedures; and greater diversity of times and spaces in the relationship between governments and citizens compared to the preceding nation-state.

The whole system develops in a pragmatic way, by ad hoc decisions, ushering in sometimes contradictory rules and institutions, and making the system of political representation more obscure, and further removed from citizens' control. The nation-state's efficiency improves but its crisis of legitimacy worsens, although overall political legitimacy may improve if local and regional institutions play their part. Yet, the growing autonomy of the local and regional state may bring the different levels of the state into contradiction, and turn one against the other. This new form of state induces new kinds of problems, derived from the contradiction between the historically constructed nature of the institutions and the new functions and mechanisms they have to assume to perform in the network, while still relating to their territorially bound national societies.

Thus, the network state faces a *coordination problem*, with three aspects: organizational, technical, and political.

Organizational: agencies invested in protecting their turf, and their privileged commanding position vis-à-vis their societies, cannot have the same structure, reward systems, and operational principles as agencies whose fundamental role is to find synergy with other agencies.

Technical: protocols of communication do not work. The introduction of computer networking often disorganizes the participating agencies rather than connecting them, as in the case of the new Homeland Security Administration created in the United States in the wake of the declaration of the war on terror. Agencies are reluctant to adopt networking technology that implies networking their practices, and may jeopardize their ability to preserve their control over their bureaucratic turf.

Political: the coordination strategy is not only horizontal between agencies, it is also vertical in two directions: networking with their political overseers, thus losing their bureaucratic autonomy; and networking with their citizen constituencies, thus being obliged to increase their accountability.

The network state also confronts an ideological problem: coordinating a common policy means a common language and a set of shared values, for instance against market fundamentalism in the regulation of markets, or acceptance of sustainable development in environmental policy, or priority of human rights over *raison d'état* in security policy. It is not obvious that such compatibility exists between distinct state apparatuses.

There is, in addition, a geopolitical problem. Nation-states still see the networks of governance as a bargaining table at which they will have the chance to advance their interests. Rather than cooperating for the global common good, nation-states continue to be guided by traditional political principles: (a) maximize the interests of the nation-state, and (b) prioritize the personal/political/social interests of the political actors in command of each nation-state. Global governance is seen as a field of opportunity to maximize one's own interests, rather than a new context in which political institutions share governance around common projects. In fact, the more the globalization process proceeds, the more the contradictions it generates (identity crises, economic crises, security crises) lead to a revival of nationalism, and to attempts to restore the primacy of sovereignty. Indeed, the world is *objectively multilateral* but some of the most powerful political actors in the international scene (for example, the United States, Russia, or China) *tend to act unilaterally, putting their national interest first, without concern for the destabilization of the world at large*. So doing, they jeopardize

their own security as well, because their unilateral actions in the context of a globally interdependent world induce systemic chaos (for example, the connection between the Iraq War, tensions with Iran, the intensification of war in Afghanistan, the rise of oil prices, and the global economic downturn). As long as these geopolitical contradictions persist, the world cannot shift from a pragmatic, ad hoc networking form of negotiated decision-making to a system of constitutionally founded, networked, global governance.

In the last resort, it is only the power of global civil society acting on the public mind via the media and communication networks that may eventually overcome the historical inertia of nation-states and thus bring these nation-states to accept the reality of their limited power in exchange for increasing their legitimacy and efficiency.

Power in the Networks

I have now assembled the necessary analytical elements to address the question that constitutes the central theme of this book: where does power lie in the global network society? To approach the question, I must first differentiate between four distinct forms of power:

- networking power;
- network power;
- networked power;
- and network-making power.

Each one of these forms of power defines specific processes of exercising power.

Networking power refers to the power of the actors and organizations included in the networks that constitute the core of the global network society over human collectives or individuals who are *not* included in these global networks. This form of power operates by exclusion/inclusion. Tongia and Wilson (2007) have proposed a formal analysis that shows that the cost of exclusion from networks increases faster than the benefits of inclusion in the networks. This is because the value of being in the network increases exponentially with the size of the network, as proposed in 1976 by Metcalfe's Law. But, at the same time, the devaluation attached to exclusion from the network also increases exponentially, and at a faster

rate than the increase in value of being in the network. *Network gatekeeping theory* has investigated the various processes by which nodes are included in or excluded from the network, showing the key role of gatekeeping capacity to enforce the collective power of some networks over others, or of a given network over disconnected social units (Barzilai-Nahon, 2008). Social actors may establish their power position by constituting a network that accumulates valuable resources and then by exercising their gatekeeping strategies to bar access to those who do not add value to the network or jeopardize the interests that are dominant in the network's programs.

Network power can be better understood in the conceptualization proposed by Grewal (2008) to theorize globalization from the perspective of network analysis. In this view, globalization involves social coordination between multiple networked actors. This coordination requires standards:

The standards that enable global coordination display what I call network power. The notion of network power consists in the joining of two ideas: first, that coordinating standards are more valuable when greater numbers of people use them, and second that this dynamic – which I describe as a form of power – can lead to the progressive elimination of the alternatives over which otherwise free choice can be collectively exercised... Emerging global standards... [provide] the solution to the problem of global coordination among diverse participants but it does so by elevating one solution above others and threatening the elimination of alternative solutions to the same problem. (Grewal, 2008: 5)

Therefore, the standards or, in my terminology, protocols of communication determine the rules to be accepted once in the network. In this case, power is exercised not by exclusion from the networks, but by the imposition of the rules of inclusion. Of course, depending on the level of openness of the network, these rules may be negotiated between its components. But once the rules are set, they become compelling for all nodes in the network, as respect for these rules is what makes the network's existence as a communicative structure possible. Network power is the power of the standards of the network over its components, although this network power ultimately favors the interests of a specific set of social actors at the source of network formation and of the establishment of the standards (protocols of communication). The notion of the so-called "Washington consensus" as the operating principle of the global market economy illustrates the meaning of network power.

But who has power in the dominant networks? How does *networked power* operate? As I proposed above, power is the relational capacity to impose an actor's will over another actor's will on the basis of the structural capacity of domination embedded in the institutions of society. Following this definition, the question of power-holding in the networks of the network society could be either very simple or impossible to answer.

It is simple if we answer the question by analyzing the workings of each specific dominant network. Each network defines its own power relationships depending on its programmed goals. Thus, in global capitalism, the global financial market has the last word, and the IMF or rating financial agencies (for example, Moody's or Standard and Poor's) are the authoritative interpreters for ordinary mortals. The word is usually spoken in the language of the United States Treasury Department, the Federal Reserve Board, or Wall Street, with some German, French, Japanese, Chinese, or Oxbridge accents depending upon times and spaces. Or else, the power of the United States, in terms of state-military power, and, in more analytical terms, the power of any apparatus able to harness technological innovation and knowledge in the pursuit of military power, which has the material resources for large-scale investment in war-making capacity.

Yet, the question could become an analytical dead-end if we try to answer it one-dimensionally and attempt to determine the Source of Power as a single entity. Military power could not prevent a catastrophic financial crisis; in fact, it could provoke it, under certain conditions of irrational, defensive paranoia, and the destabilization of oil-producing countries. Or, global financial markets could become an Automaton, beyond the control of any major regulatory institution, because of the size, volume, and complexity of the flows of capital that circulate throughout its networks, and because of the dependence of its valuation criteria on unpredictable information turbulences. Political decision-making is said to be dependent on the media, but the media constitute a plural ground, however biased in ideological and political terms, and the process of media politics is highly complex (see Chapter 4). As for the capitalist class, it does have some power, but not power over everyone or everything: it is highly dependent on both the autonomous dynamics of global markets and on the decisions of governments in terms of regulations and policies. Finally, governments themselves are connected in complex networks of imperfect global governance, conditioned by the pressures of business and interest groups, obliged to negotiate with the media which translate government actions for their citizenries, and periodically assailed by social movements and expressions

of resistance that do not recede easily to the back rooms at the end of history (Nye and Donahue, 2000; Price, 2002; Juris, 2008; Sirota, 2008). Yes, in some instances, such as in the US after 9/11, or in the areas of influence of Russia or China or Iran or Israel, governments may engage in unilateral actions that bring chaos to the international scene. But they do so at their peril (with us becoming the victims of collateral damage). Thus, geopolitical unilateralism ultimately gives way to the realities of our globally interdependent world. In sum, the states, even the most powerful states, have some power (mainly destructive power), but not The Power.

So, maybe the question of power, as traditionally formulated, does not make sense in the network society. But new forms of domination and determination are critical in shaping people's lives regardless of their will. So, there are power relationships at work, albeit in new forms and with new kinds of actors. And the most crucial forms of power follow the logic of *network-making power*. Let me elaborate.

In a world of networks, the ability to exercise control over others depends on two basic mechanisms: (1) *the ability to constitute network(s), and to program/reprogram the network(s) in terms of the goals assigned to the network;* and (2) *the ability to connect and ensure the cooperation of different networks by sharing common goals and combining resources, while fending off competition from other networks by setting up strategic cooperation.*

I call the holders of the first power position the *programmers*; I call the holders of the second power position the *switchers*. It is important to note that these programmers and switchers are certainly social actors, but not necessarily identified with one particular group or individual. More often than not these mechanisms operate at the interface between various social actors, defined in terms of their position in the social structure and in the organizational framework of society. Thus, I suggest that in many instances *the power holders are networks themselves*. Not abstract, unconscious networks, not automata: they are humans organized around their projects and interests. But they are not single actors (individuals, groups, classes, religious leaders, political leaders), since the exercise of power in the network society requires a complex set of joint action that goes beyond alliances to become a new form of subject, akin to what Bruno Latour (2005) has brilliantly theorized as the "actor-network."

Let us examine the workings of these two mechanisms of power-making in the networks: programming and switching. The *programming* capacity of the goals of the network (as well as the capacity to reprogram it) is, of course, decisive because, once programmed, the network will perform

efficiently, and reconfigure itself in terms of structure and nodes to achieve its goals. How different actors program the network is a process specific to each network. The process is not the same in global finance as it is in military power, in scientific research, in organized crime, or in professional sports. Therefore, power relationships at the network level have to be identified and understood in terms specific to each network. However, all networks do share a common trait: *ideas, visions, projects, and frames generate the programs*. These are cultural materials. In the network society, culture is mostly embedded in the processes of communication, particularly in the electronic hypertext, with global multimedia business networks and the Internet at its core. So, ideas may be generated from a variety of origins, and linked to specific interests and subcultures (for example, neoclassical economics, religions, cultural identities, the worshipping of individual freedom, and the like). Yet, ideas are processed in society according to how they are represented in the realm of communication. And ultimately these ideas reach the constituencies of each network, depending on the constituencies' level of exposure to the processes of communication. Thus, control of, or influence on, the networks of communication, and the ability to create an effective process of communication and persuasion along the lines that favor the projects of the would-be programmers, are the key assets in the ability to program each network. In other words, the process of communication in society, and the organizations and networks that enact this process of communication, are the key fields where programming projects are formed, and where constituencies are built for these projects. They are the fields of power in the network society.

There is a second source of power: *the control of the connecting points between various strategic networks*. I call the holders of these positions the *switchers*. For instance, the connections between political leadership networks, media networks, scientific and technology networks, and military and security networks to assert a geopolitical strategy. Or, the connection between political networks and media networks to produce and diffuse specific political-ideological discourses. Or, the relationship between religious networks and political networks to advance a religious agenda in a secular society. Or, between academic networks and business networks to provide knowledge and legitimacy in exchange for resources for universities and jobs for their products (aka graduates). This is not the old boys network. These are specific interface systems that are set on a relatively stable basis as a way of articulating the actual operating system of society beyond the formal self-presentation of institutions and organizations.

However, I am not resurrecting the idea of a power elite. There is none. This is a simplified image of power in society whose analytical value is limited to some extreme cases. It is precisely because there is no unified power elite capable of keeping the programming and switching operations of all important networks under its control that more subtle, complex, and negotiated systems of power enforcement must be established. For these power relationships to be asserted, the programs of the dominant networks of society need to set compatible goals between these networks (for example, dominance of the market and social stability; military power and financial restraint; political representation and reproduction of capitalism; free expression and cultural control). And, they must be able, through the switching processes enacted by actor-networks, to communicate with each other, inducing synergy and limiting contradiction. This is why it is so important that media tycoons do not become political leaders, as in the case of Berlusconi. Or that governments do not have total control over the media. The more the switchers are crude expressions of single-purpose domination, the more power relationships in the network society suffocate the dynamism and initiative of its multiple sources of social structuration and social change. Switchers are not persons, but they are made of persons. They are actors, made of networks of actors engaging in dynamic interfaces that are specifically operated in each process of connection. *Programmers and switchers* are those actors and networks of actors who, because of their position in the social structure, hold *network-making power*, the paramount form of *power in the network society*.

Power and Counterpower in the Network Society

Processes of power-making must be seen from two perspectives: on one hand, these processes can enforce existing domination or seize structural positions of domination; on the other hand, there also exist countervailing processes that resist established domination on behalf of the interests, values, and projects that are excluded or under-represented in the programs and composition of the networks. Analytically, both processes ultimately configure the structure of power through their interaction. They are distinct, but they do, however, operate on the same logic. This means that resistance to power is achieved through the same two mechanisms that constitute power in the network society: the programs of the networks, and the switches between networks. Thus, collective action from social

movements, under their different forms, aims to introduce new instructions and new codes into the networks' programs. For instance, new instructions for global financial networks mean that under conditions of extreme poverty, debt should be condoned for some countries, as demanded, and partially obtained, by the Jubilee movement. Another example of new codes in the global financial networks is the project of evaluating company stocks according to their environmental ethics or their respect for human rights in the hope that this will ultimately impact the attitude of investors and shareholders vis-à-vis companies deemed to be good or bad citizens of the planet. Under these conditions, the code of economic calculation shifts from growth potential to sustainable growth potential. More radical reprogramming comes from resistance movements aimed at altering the fundamental principle of a network – or the kernel of the program code, if you allow me to keep the parallel with software language. For instance, if God's will must prevail under all conditions (as in the statement of Christian fundamentalists), the institutional networks that constitute the legal and judicial system must be reprogrammed not to follow the political constitution, legal prescriptions, or government decisions (for example, letting women make decisions about their bodies and pregnancies), but to submit them to the interpretation of God by his earthly bishops. In another instance, when the movement for global justice demands the re-writing of the trade agreements managed by the World Trade Organization to include environmental conservation, social rights, and the respect of indigenous minorities, it acts to modify the programs under which the networks of the global economy work.

The second mechanism of resistance consists of blocking the switches of connection between networks that allow the networks to be controlled by the metaprogram of values that express structural domination – for instance, by filing law suits or by influencing the US Congress in order to undo the connection between oligopolistic media business and government by challenging the rules of the US Federal Communication Commission that allow greater concentration of ownership. Other forms of resistance include blocking the networking between corporate business and the political system by regulating campaign finance or by spotlighting the incompatibility between being Vice-President and receiving income from one's former company that is benefiting from military contracts. Or by opposing intellectual servitude to the powers that be, which occurs when academics use their chairs as platforms for propaganda. More radical disruption of the switchers affects the material infrastructure of the network society: the

material and psychological attacks on air transportation, on computer networks, on information systems, and on the networks of facilities on which the livelihood of societies depend in the highly complex, interdependent system that characterizes the informational world. The challenge of terrorism is precisely predicated on this capacity to target strategic material switches so that their disruption, or the threat of their disruption, disorganizes people's daily lives and forces them to live under emergency – thus feeding the growth of other power networks, the security networks, which extend to every domain of life. There is, indeed, a symbiotic relationship between the disruption of strategic switches by resistance actions and the reconfiguration of power networks toward a new set of switches organized around security networks.

Resistance to power programmed in the networks also takes place through and by networks. These are also information networks powered by information and communication technologies (Arquilla and Rondfeldt, 2001). The improperly labeled "anti-globalization movement" is a global-local network organized and debated on the Internet, and structurally switched on with the media network (see Chapter 5). *Al-Qaeda*, and its related organizations, is a network made of multiple nodes, with little central coordination, and also directly aimed at their switching with the media networks, through which they hope to inflict fear among the infidels and raise hope among the oppressed masses of the believers (Gunaratna, 2002; Seib, 2008). The environmental movement is a locally rooted, globally connected network which aims to change the public mind as a means of influencing policy decisions to save the planet or one's own neighborhood (see Chapter 5).

A central characteristic of the network society is that both the dynamics of domination and the resistance to domination rely on network formation and network strategies of offense and defense. Indeed, this tracks the historical experience of previous types of societies, such as the industrial society. The factory and the large, vertically organized, industrial corporation were the material basis for the development of both corporate capital and the labor movement. Similarly, today, computer networks for global financial markets, transnational production systems, "smart" armed forces with a global reach, terrorist resistance networks, the global civil society, and networked social movements struggling for a better world, are all components of the global network society. The conflicts of our time are fought by networked social actors aiming to reach their constituencies and target audiences through the decisive switch to multimedia communication networks.

In the network society, power is redefined, but it does not vanish. Nor do social struggles. Domination and resistance to domination change in character according to the specific social structure from which they originate and which they modify through their action. Power rules, counterpowers fight. Networks process their contradictory programs while people try to make sense of the sources of their fears and hopes.

Conclusion: Understanding Power Relationships in the Global Network Society

The sources of social power in our world – violence and discourse, coercion and persuasion, political domination and cultural framing – have not changed fundamentally from our historical experience, as theorized by some of the leading thinkers on power. But the terrain where power relationships operate has changed in two major ways: it is primarily constructed around the articulation between the global and the local; and it is primarily organized around networks, not single units. Because networks are multiple, power relationships are specific to each network. But there is a fundamental form of exercising power that is common to all networks: exclusion from the network. This is also specific to each network: a person, or group, or territory can be excluded from one network but included in others. However, because the key, strategic networks are global, there is one form of exclusion – thus, of power – that is pervasive in a world of networks: to include everything valuable in the global while excluding the devalued local. There are citizens of the world, living in the space of flows, versus the locals, living in the space of places. Because space in the network society is configured around the opposition between the space of flows (global) and the space of places (local), the spatial structure of our society is a major source of the structuration of power relationships.

So is time. Timeless time, the time of the network society, has no past and no future. Not even the short-term past. It is the cancellation of sequence, thus of time, by either the compression or blurring of the sequence. So, power relationships are constructed around the opposition between timeless time and all other forms of time. Timeless time, which is the time of the short “now,” with no sequence or cycle, is the time of the powerful, of those who saturate their time to the limit because their activity is so valuable. And time is compressed to the nano-second for those for whom time is money. The time of history, and of historical identities, fades in a world in

which only immediate gratification matters, and where the end of history is proclaimed by the bards of the victors. But the clock time of Taylorism is still the lot of most workers, and the *longue durée* time of those who envision what may happen to the planet is the time of alternative projects that refuse to submit to the domination of accelerated cycles of instrumental time. Interestingly, there is also a mythical “future time” of the powerful which is the projected time of the futurologists of the corporate world. In fact, this is the ultimate form of conquering time. It is colonizing the future by extrapolating the dominant values of the present in the projections: how to do the same, with increased profit and power, twenty years from now. The ability to project one’s own current time, while denying the past and the future for humankind at large, is another form of establishing timeless time as a form of asserting power in the network society.

But how is power exercised within the networks and by the networks for those who are included in the core networks that structure society? I will consider first the contemporary forms of exercising power through the monopoly of violence and then through the construction of meaning by disciplinary discourses.

First, because networks are global, the state, which is the enforcer of power through the monopoly of violence, finds considerable limits to its coercive capacity unless it engages itself in networking with other states, and with the power-holders in the decisive networks that shape social practices in their territories while being deployed in the global realm. Therefore, the ability to connect different networks and restore some kind of boundary within which the state retains its capacity to intervene becomes paramount to the reproduction of the domination institutionalized in the state. But the ability to set up the connection is not necessarily in the hands of the state. The power of the switch is held by the switchers, social actors of different kinds who are defined by the context in which specific networks have to be connected for specific purposes. Of course, states can still bomb, imprison, and torture. But unless they find ways to bring together several strategic networks interested in the benefits of the state’s capacity to exercise violence, the full exercise of their coercive power is usually short-lived. Stable domination, providing the basis for the enforcement of power relationships in each network, requires a complex negotiation to set up partnerships with the states, or with the network state, that contribute to enhancing the goals assigned to each network by its respective programs.

Second, discourses of power provide substantive goals for the programs of the networks. Networks process the cultural materials that are constructed

in the variegated discursive realm. These programs are geared toward the fulfillment of certain social interests and values. But to be effective in programming the networks, they need to rely on a metaprogram that ensures that the recipients of the discourse internalize the categories through which they find meaning for their own actions in accordance with the programs of the networks. This is particularly important in a context of global networks because the cultural diversity of the world has to be overlaid with some common frames that relate to the discourses conveying the shared interests of each global network. In other words, there is a need to produce a global culture that adds to specific cultural identities, rather than superseding them, to enact the programs of networks that are global in their reach and purpose. For globalization to exist, it has to assert a disciplinary discourse capable of framing specific cultures (Lash and Lury, 2007).

Thus, switching and programming the global networks are the forms of exercising power in our global network society. Switching is enacted by switchers; programming is accomplished by programmers. Who the switchers are and who the programmers are in each network is specific to the network and cannot be determined without investigation in each particular case.

Resisting programming and disrupting switching in order to defend alternative values and interests are the forms of counterpower enacted by social movements and civil society – local, national, and global – with the difficulty that the networks of power are usually global, while the resistance of counterpower is usually local. How to reach the global from the local, through networking with other localities – how to “grassroot” the space of flows – becomes the key strategic question for the social movements of our age.

The specific means of switching and programming largely determine the forms of power and counterpower in the network society. Switching different networks requires the ability to construct a cultural and organizational interface, a common language, a common medium, a support of universally accepted value: exchange value. In our world, the typical, all-purpose form of exchange value is money. It is through this common currency that power-sharing is most often measured between different networks. This standard of measurement is essential because it removes the decisive role of the state, since the appropriation of value by all networks becomes dependent on financial transactions. This does not mean that capitalists control everything. It simply means that whoever has enough money, including political leaders, will have a better chance of operating

the switch in its favor. But, as in the capitalist economy, besides monetized transactions, barter can also be used: an exchange of services between networks (for example, regulatory power in exchange for political funding from businesses, or leveraging media access for political influence). So, switching power depends on the capacity to generate exchange value, be it through money or through barter.

There is a second major source of power: networks' programming capacity. This capacity ultimately depends on the ability to generate, diffuse, and affect the discourses that frame human action. Without this discursive capacity, the programming of specific networks is fragile, and depends solely on the power of the actors entrenched in the institutions. Discourses, in our society, shape the public mind via one specific technology: communication networks that organize socialized communication. Because the public mind – that is, the set of values and frames that have broad exposure in society – is ultimately what influences individual and collective behavior, programming the communication networks is the decisive source of cultural materials that feed the programmed goals of any other network. Furthermore, because communication networks connect the local with the global, the codes diffused in these networks have a global reach.

Alternative projects and values put forward by the social actors aiming to reprogram society must also go through the communication networks to transform consciousness and views in people's minds in order to challenge the powers that be. And it is only by acting on global discourses through the global communication networks that they can affect power relationships in the global networks that structure all societies. In the last resort, the power of programming conditions switching power because the programs of the networks determine the range of possible interfaces in the switching process. Discourses frame the options of what networks can or cannot do. In the network society, discourses are generated, diffused, fought over, internalized, and ultimately embodied in human action, in the socialized communication realm constructed around local-global networks of multimodal, digital communication, including the media and the Internet. Power in the network society is communication power.