A Network Theory of Power

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Power in the network society is exercised through networks. There are four different forms of power under these social and technological conditions:

1. *Networking Power*: the power of the actors and organizations included in the networks that constitute the core of the global network society over human collectives and individuals who are not included in these global networks.
2. *Network Power*: the power resulting from the standards required to coordinate social interaction in the networks. In this case, power is exercised not by exclusion from the networks but by the imposition of the rules of inclusion.
3. *Networked Power*: the power of social actors over other social actors in the network. The forms and processes of networked power are specific to each network.
4. *Network-making Power*: the power to program specific networks according to the interests and values of the programmers, and the power to switch different networks following the strategic alliances between the dominant actors of various networks.

Counterpower is exercised in the network society by fighting to change the programs of specific networks and by the effort to disrupt the switches that reflect dominant interests and replace them with alternative switches between networks. Actors are humans, but humans are organized in networks. Human networks act on networks via the programming and switching of organizational networks. In the network society, power and counterpower aim fundamentally at influencing the neural networks in the human mind by using mass communication networks and mass self-communication networks.

Introduction

Power relationships are the foundation of society, as institutions and norms are constructed to fulfill the interests and values of those in power. However, wherever there is power, there is counterpower, enacting the interests and values of those in subordinate positions in the social

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organization. The shape of the institutions and organizations that construct human action depend on the specific interaction between power and counterpower. Power is multidimensional, and it is constructed around multidimensional networks programmed in each domain of human activity according to the interests and values of empowered actors.

Each type of society has a specific form of exercising power and counterpower. It should not surprise us that in the network society, social power is primarily exercised by and through networks.[1] The question is, though, which kind of networks? And how do they operate in the making of power?

To approach these questions, I must first differentiate between four distinct forms of power: (a) networking power, (b) network power, (c) networked power, and (d) 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 those human collectives or individuals *not* included in these global networks. This form of power operates by exclusion/inclusion. Tongia and Wilson (2007, see also Wilson and Tongia, this special section) have advocated a formal analysis that shows that the cost of exclusion from networks increases faster than do the benefits of inclusion in those same networks. While the value of being in the network increases exponentially with the size of the network—as proposed in 1976 by Metcalfe's Law—the devaluation attached to exclusion from the network also increases exponentially and at a faster rate than does the increase of value of being in the network. *Network gatekeeping theory* has investigated the various processes by which nodes are included or excluded in the network, showing the key role of the network's gatekeeping capacity to be the enforcement of 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 who 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

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[1] For an analysis of the global network society as the social structure of our time, I refer to "The Rise of the Network Society" (Castells, 1996, 2010 editions).

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, p. 5)

Therefore, the standards or (in my terminology) protocols of communication, determine the rules to be accepted once in the network. Once certain standards are incorporated in the program of networks, 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 both a specific set of social actors at the source of network formation and also of the establishment of the standards (protocols of communication).

But how does networked power operate? Who has power in the dominant networks? 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 answered very simply or simply impossible to answer.

The answer 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 (e.g., Moody's or Standard & Poor) are the authoritative interpreters for common mortals. The "word" is usually spoken in the language of the U.S. Treasury Department, the Federal Reserve Board, or Wall Street, with some German, French, Japanese, Chinese, or Oxbridge accents, depending upon times and spaces. Another example is the military power of the United States, and in more analytical terms, the power of any apparatus that can harness technological innovation and knowledge in the pursuit of military power and that 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. Because 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, given the size, volume, and complexity of the flows of capital that circulate throughout its networks, as well as the dependence of its valuation criteria on unpredictable information turbulences. Political decision making is said to be dependent on media, but the media constitute a plural ground—however biased in ideological and political terms—and the process of media politics is highly complex. 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 that 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. Yes, in some instances, like in the United States after 9/11, or in Russia or China, or in Iran or Israel in their area of influence, governments may engage in unilateral actions that bring chaos to the international scene. But geopolitical unilateralism ultimately concedes to the realities of our globally interdependent world. In sum, the states, even the most powerful states, have some power (mainly destructive), but not all the power.

So, perhaps 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 peoples' lives regardless of their will. So, there are power relationships at work, albeit in new forms and with new kinds of actors.

The most crucial forms of power follow the logic of network-making power. In a world of networks, the ability to exercise control over others depends on two basic mechanisms: (a) the ability to constitute network(s) and to program/reprogram the network(s) in terms of the goals assigned to the network; and (b) 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.

Let us call holders of the first power position *programmers;* holders of the second power position are *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, in fact, subnetworks of the networks that organize society. Not abstract, unconscious networks, nor automata, but humans organized around their projects and interests. Note that they are not single actors (individuals, groups, classes, religious leaders, or political leaders), as 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—a networked subject.

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 has greater capability to 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 the 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 (e.g., 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, the control of (or the 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, as well as 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. Holders of these positions are switchers, for example, of the connections between the political leadership networks, the media networks, the scientific and technology networks, and the military and security networks to assert a geopolitical strategy. Or the connection between the political networks and the 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 an "old-boy network." These are specific systems of interface that are formulated on a relatively stable basis as a way to articulate the actual operating system of society beyond the formal self-presentation of institutions and organizations. However, this is not to resurrect 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 no unified power elite is 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 (e.g., dominance of the market and social stability; military power and financial restrain; political representation and reproduction of capitalism; and 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, or that governments do not have total control over the media. The more that switchers become crude expressions of single purpose domination, the more that power relationships in the network society suffocate the dynamism and initiative of its multiple sources of social structuration and social change. Switchers are actors, composed 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 interest, 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 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. Another example of new codes in the global financial networks is the evaluating of company stocks according to their environmental ethics or their respect for human rights in the hope that this would 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 and equitable 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 I may use 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, allowing women to decide on issues with other bodies and pregnancies—but to submit them to the interpretation of God by its earthly bishops. In another instance, when the movement for global justice claims the rewriting 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. Here, the term *metaprogram* refers to a program that functions as the source code for the programs of the networks that operate organizations and institutions. This can be accomplished, for instance, by filing law suits, or by influencing the U.S. Congress in order to undo the connection between oligopolistic media business and government by challenging the rules of the U.S. 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 spotlighting the incompatibility between being a vice president and receiving income from one's former company that is benefiting from military contracts, or opposing intellectual servitude to the powers that be, which occurs when academics use their positions as platforms for propaganda. More radical disruption of the switchers affects the material infrastructure of the network society: for example, the material and psychological attacks on air transportation, on computer networks, on information systems, and on the networks of facilities on which societies depend for their livelihood 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 the daily lives of people and forces them to live under a state of emergency, thus feeding the growth of other power networks, particularly the security networks that 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. Resistance networks are also powered by information and communication technologies (Arquilla & Rondfeldt, 2001). The improperly labeled "anti-globalization movement" is a global-local network organized and debated on the Internet, and it is structurally switched on with the media networks. Al Qaeda and its related organizations is a network 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. The environmental movement is a locally rooted, globally connected network that aims to change the public mind as a means of influencing policy decisions to save the planet or one's own neighborhood.

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, either by forming separate networks and/or reforming existing networks. 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 centrally organized labor movement. Similarly, 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 the multimedia communication networks.

Power, Networks, and Communication

I contend that social power throughout history, but even more so in the network society, operates primarily by the construction of meaning in the human mind through processes of communication. In the network society, this is enacted in global/local multimedia networks of mass communication, including mass self-communication, that is, the communication organized around the Internet and other horizontal digital communication networks. Although theories of power and historical observation point to the importance of the state's monopoly on violence as a source of social power, I argue that the ability to successfully engage in violence or intimidation requires the framing of individual and collective minds. The smooth functioning of society's institutions does not result from their policing ability to force citizens into compliance. How people think about the institutions under which they live, and how they relate to the culture of their economy and society defines whose power can be exercised and how it can be exercised. Violence and the threat of violence always combine with the construction of meaning in the production and reproduction of power relationships in all domains of social life. The

process of constructing meaning operates in a cultural context that is simultaneously global and local, and is characterized by a great deal of diversity. There is, however, one feature common to all processes of symbolic construction: They are largely dependent on the messages and frames created, formatted, and diffused in multimedia communication networks. To be sure, interpersonal, face-to-face communication is a significant part of the communication process. And each individual human mind constructs its own meaning by interpreting the communicated materials on its own terms. Yet, this mental processing is conditioned by the communication environment. Furthermore, in the new world of mass self-communication and highly segmented audiences, there are few instances of simultaneous mass sharing of media messages; instead, what is broadly shared is the culture of sharing messages from multiple senders-receivers. Precisely because the new communication system is so versatile, diversified, and open-ended, it integrates messages and codes from all sources, enclosing most of socialized communication in its multimodal, multichannel networks.

Referring to the typology of network power presented above, let us hypothesize, on the basis of empirical observation,[2] that multimedia communication networks jointly exercise network power over the messages they convey because messages must adapt to the common protocols of communication embodied in the structure and management of the networks. However, while standardized forms of mass communication may shape minds by their formatting of the messages (for instance, news as infotainment), in the world of mass self-communication (built on the Internet and horizontal digital communication networks), the diversity of formats is the rule. Thus, apparently, standards are diminished as a source of network power. However, digitization operates as a protocol of communication. In principle, everything can be digitized, so it does not appear that this standard inhibits the message. Yet, it does have an opposite, significant effect: It amplifies the diffusion of the message beyond anyone's control. Digitization is tantamount to potential viral diffusion throughout global networks of communication. This is highly positive if you do want to diffuse the message, but devastating if you do not want to diffuse the message (if, say, the message is a video recording of your wrongdoing). In this case, the network power exercised by digital networks assumes a new form: the removal of control over message distribution. This is in contrast with the traditional network power of mass media, which reformats the message to be suitable for the audience in accordance with their corporate strategy.

Yet, multimedia networks as structures of communication do not hold networking power, networked power, or network-making power by themselves. They depend on the decisions and instructions of their programmers. In my conceptual framework, networking power consists of the capacity to let a medium or a message enter the network through gatekeeping procedures. Those in charge of the operations of each communication network are the gatekeepers, and so they exercise networking power by blocking or allowing access to media outlets and/or to messages that are conveyed to the network. I call it gatekeeping the nodes and gatekeeping the messages. The rise of mass self-communication has deeply modified the gatekeeping capacity of the programmers of mass communication. Anything that reaches the Internet may reach the world at large. However, gatekeeping still yields considerable networking power, as most socialized communication is still processed through the mass media, and the

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[2] See the empirical evidence presented in "Communication Power" (Castells, 2009).

most popular information Web sites are those of mainstream media, given the importance of branding in the source of the message. Furthermore, government's control over the Internet and corporate business' attempt to enclose telecommunication networks in their privately owned "walled gardens" show the persistence of networking power in the hands of the gatekeepers.

Networked power, distinct from network power and from networking power, is the form of power exercised by certain nodes over other nodes within the network. In communication networks, this translates as the agenda-setting, managerial and editorial decision-making power in the organizations that own and operate multimedia communication networks. Communication research has identified the multilayered structure of decision making in the corporate media There is a complex interaction between different decision makers of news production, that is, the social actors that set up the communication agenda (e.g., governments or social elites, owners of communication networks and their corporate sponsors [through the intermediation of advertising agencies], managers, editors, journalists, and an increasingly interactive audience). It is at each one of these levels that programmers exercise power. There are multiple programmers in each network. While there is a hierarchy in the capacity to program the network, it is the whole set of programmers who jointly decide on the network's operations. Because they interact among themselves, as well as with the programmers of other communication networks, it can be said that programmers constitute a network themselves—a decision-making network to set up and manage the programs on the network. But their power is specific, as it is geared to ensure the fulfillment of the goals of the network, with the primary objective being to attract an audience regardless of whether it is to maximize profits, or influence, or something else. The overarching goal of network management by the networked power of programmers is to constitute the programmed. The programmed are the subordinated subjects of the power holders in the communication networks. However, the networked management of the communication networks operates under the conditions of a metaprogram that has been designed by someone else from outside the network. This enigmatic "someone else" is the subject of the most determining form of power—network-making power.

Network-making power is the capacity to set up and program a network, in this case a multimedia, mass communication network. This mainly refers to the owners and controllers of media corporations, be they businesses or the state. They are the ones who have the financial, legal, institutional, and technological means to organize and operate mass communication networks. And they are those who, in the last resort, decide the content and format of communication according to the formula that will best accomplish the goals they assign to the network: profit making, power making, culture making, or all of the above. But who are "they"? To name a few: Murdoch, Berlusconi, Bloomberg, or if I introduce Internet business corporations, Sergey Brin, Larry Paige, Jerry Yang, David Filo, Mark Zuckerberg, and the like. Yet, empirical research (Arsenault & Castells, 2008) shows a highly complex picture of the reality of global multimedia business networks—the core of the entire communication system, global, national or local. Network-making power is in the hands of a small number of conglomerates and their surrogates and partners. But these conglomerates are formed by networks of multiple media properties operating in multiple modes and in multiple cultural and institutional environments. And multimedia conglomerates are intertwined with financial investors of various origins, including financial institutions, sovereign funds, private equity investment firms, hedge funds, and others. There are some exceptional cases of highly personalized decision-making capacity, but, even in the case

of Murdoch, there is a dependence on various sources of network-making power. In sum: The *metaprogrammers* empowered with network-making capacity are themselves corporate networks. . They are networks creating networks and programming them to fulfill the goals that these originating networks embody: maximizing profits in the global financial market; increasing political power for government-owned corporations; and attracting, creating, and maintaining an audience as the means to accumulate financial capital and cultural capital. Moreover, the range of investment of these global multimedia business networks increases with new possibilities of interactive, multimodal communication, particularly the Internet and wireless communication networks. In this case, the programming of the networks is less about content than it is about format. The Internet only becomes profitable if people use it, and people would use it less if it lost its fundamental features of interactivity and unfettered communication regardless of how surveilled it is. The expansion of Internet networks and the development of the Web 2.0 and Web 3.0 offer extraordinary business opportunities for the implementation of the strategy I call the *commodification of freedom*: enclosing the commons of free communication and selling people access to global communication networks in exchange for surrendering their privacy and becoming advertising targets. However, once in cyberspace, people may have all kinds of ideas, including challenging corporate power, dismantling government authority, and changing the cultural foundations of our aging, aching civilization.

And so, there is a dialectical process: As more corporations invest in expanding communication networks (benefiting from a hefty return), more people build their own networks of mass self-communication, thus empowering themselves. By networks of mass self-communication I understand Internet-based communication networks. Therefore, network-making power in the communication realms is characterized by the action of multimedia corporate networks, including business and government, that interact with networked users who both consume media products and create their own culture. Networks interact with networks in the shared process of network making.

But where is power in all of this? If power is the relational capacity to impose the will and values of social actors over others, who are these social actors? Power is made through communication networks, and research has shown how these networks operate, and how and by whom these communication networks are established and programmed. But whose power do these networks process? If the metaprogrammers are the owners of the multimedia business networks, are they the power elite of the network society?

The owners of global multimedia corporate networks—themselves networks, but of people at the helm of their organizations—are certainly among the power holders of the network society because they program the decisive network: the metanetwork of communication networks, that is, the networks that process the ideational materials with which we feel, think, live, submit, and fight. Their relationship to the social actors on which they exercise their power is also easy to identify: They transform humans into audiences by selling us the images of our lives**.** So, they achieve their interests (money making, influence making) by designing the content of our culture according to their corporate strategies. This does not necessarily mean that they impose their values upon us (although they often do), because the effectiveness of the media depend on their adaptation to different cultural patterns and states of mind, as well as to the differential evolution of each one of these patterns and moods. It means that the bottom

line of what will be processed in the networks depends on what sells (or convinces, if the motive is politico-ideological) regardless of the congruity between what corporations want and what we want. There is consumer choice, but within a range of predefined products and presupposing consumption, rather than through coproduction. This is why the rise of mass self-communication, which increases the ability of the audience to produce its (our) own messages, potentially challenges corporate control of communication and may change power relationships in the communication sphere. However, for the time being, there is an unequal competition between professionalized media production and our low quality home videos and blog gossip. The power relationship between multimedia corporate networks and society at large is centered around the shaping of cultural production according to the will, values, and interests of corporate owners and their sponsors.

However, the range of power relationships is much broader, and includes, particularly, political power relationships, which provide the access to and management of institutions of governance. Communication networks are essential to the construction of political power and counterpower. The owners of corporate communication networks also provide the platform for the construction of meaning for other social actors. Thus, they exercise power through cultural production, and they exercise networking power over other actors by controlling access to communication networks, e.g., vis-à-vis political actors who need access to communication to construct their power relationships vis-à-vis the citizenry. However, in political power relationships, the metaprogrammers—those who produce the message—are political actors. To be sure, political actors rely on the actors whose values and interests they represent (e.g., religious organizations, corporate businesses, the military-industrial complex). They articulate the diversity of interests supporting their project to maximize their autonomy as political actors while increasing their chances of seizing political power. But once in power, they are the programmers of political processes and policy making. Their programs are diverse, because different leaders and their coalitions vie for power in a political competition shaped by the procedures of each political system. However, they share some fundamental protocols of communication that aim to preserve the stability of state domination under constitutional rules. So, the programs embedded in political institutions exercise network power over citizens and political actors. The judiciary exercises networking power by gatekeeping access to political competition both in terms of actors and procedures. And the political system as a whole is based on networked power distributed at different levels of the relationship between the state and society.

Political network-making power, which is the power to define rules and policies in the political realm, depends on winning the competition to access political office and on obtaining support, or at least resignation, from the citizens. Media politics is the fundamental mechanism by which access to political power and policy making operates. Therefore, the programs embedded in multimedia networks shape and condition the implementation of the political networks' programs. Yet, media owners are not those who design and determine political programs. Neither are they passive transmitters of the programs' instructions. They exercise gatekeeping power, and they format and distribute the political programs according to their specific interests as media organizations. Thus, media politics is not just politics in general, nor is it the politics of the media: It is the dynamic interface between political networks and media networks. I call the management of this interface between two or more networks *network switching.* The control of this switching capacity defines a fundamental form of power in the network

society—switching power, which refers to the specificity of connecting various power networks in society, particularly, financial networks at the heart of capitalist power. Indeed, the network society, for the time being, is a capitalist society, as was the industrial society in most of the world (although in competition with statism). Furthermore, because the network society is global, we live in global capitalism. However, analysis of capitalism in general does not exhaust the understanding of the dynamics of power relationships, because the brand of global capitalism we live in today is very different from previous historical forms of capitalism, and because the structural logic of capitalism is articulated in practical terms with the specific forms of social organization in societies around the world. And so, the dynamics of the global network society interact with the dynamics of capitalism in constructing social relationships, including power relationships. How does this interaction work to construct power relationships around communication networks?

Communication networks are largely owned and managed by global multimedia corporate networks. Although states and their controlled corporations are part of these networks, the heart of global communication networks is connected to, and largely dependent on, corporations that are themselves dependent on financial investors and financial markets. This is the bottom line of multimedia business. But financial investors place their bets according to the expected performance of media business in the global financial market—the mother of all accumulations of capital and the dominant network of global capitalism, as analyzed in my trilogy on the Information Age (Castells, 1996–1998, 2010). The critical matter is that the global financial market is a network itself, beyond the control of specific social actors and largely impervious to the regulatory management of national and international institutions of governance, largely because the regulators chose to deregulate the financial networks and program the financial markets accordingly. Once financial markets became organized in a loosely regulated global network, their standards became applicable to financial transactions around the world, and therefore to all economic activities, since in a capitalist economy, production of goods and services begins with investment from capital and yields profits that are converted into financial assets. The global financial market exercises network power over the global economy.

This network power from financial markets is not in the hands of the invisible hand (the market), because, as documented by a number of studies, financial markets only partly behave according to market logic. What some scholars have called "irrational exuberance" and what I term "information turbulence" (Castells, 2000) plays a major role in determining investors' psychology, and therefore their financial decisions. Furthermore, the global networking of financial markets means that any information turbulence from anywhere instantly diffuses throughout the network, be it political instability, a natural catastrophe, or a financial scandal. Thus, while the global financial market exercises network power, and the governments of leading countries enact network-making power by deregulating and liberalizing financial markets from the mid-1980s onward, there is a diffusion of networked power in the global financial networks. I have used the term "global automaton" in some of my writings (Castells, 2000) in reference to the global financial market, as it largely functions according to its own dynamic, without control from specific corporations or regulators, and yet it disciplines and shapes the global economy. I am not implying an automatic mechanism of power enforcement or the existence of a dehumanized power. Corporate capitalism is embodied in financial tycoons, in financial managers, in securities traders and corporate lawyers, and in their families, personal networks, bodyguards, personal assistants, golf clubs,

temples, secluded venues, and sinful playgrounds. All of these people are part of the networks that run the programs that run the world. But they are not alone in those networks, and they do not even control the financial networks that they inhabit as they navigate their uncertain waters with gut instinct rather than mathematical models, as Caitlin Zaloom (2006) showed in her wonderful ethnographic investigation on financial trading in the pits of Chicago and London.

The networking logic of financial markets is of utmost importance for the exercise of power in communication networks at two levels. First, because communication networks will be programmed, set up, reconfigured, and eventually decommissioned according to financial calculations, unless the function of the communication network is predominantly political. But even in this case, the power-making logic will apply to specific nodes of the global communication network, but not to the network itself, whose overarching principle is profit making on the basis of financial valuation in the global financial market. Second, financial institutions and financial markets are themselves dependent upon the information flows generated, formatted, and diffused in the communication networks. Not just in terms of financially relevant information, but also in terms of the influence that information communication networks exert on perception and decision making by firms, investors, and consumers. This is precisely a network effect in the networking between financial markets and communication organizations. Global financial networks and global multimedia networks are intimately networked, and this particular network holds extraordinary network power, networking power, and network-making power. But it does not hold all power. This is true because this metanetwork of finance and media is itself dependent on other major networks, such as the political network, the cultural production network (which encompasses all kinds of cultural artifacts, not just communication products), the military network, the global criminal network, and the decisive global network of production and application of science, technology, and knowledge management.

I could proceed with a similar exploration of the dynamics of network making in each one of these fundamental dimensions of the global network society, but this is not really necessary to make my central argument, which is three-fold:

1. As stated at the outset of this article, power is constructed around multidimensional networks programmed in each domain of human activity. But all networks of power exercise their power by influencing the human mind predominantly (but not solely) through multimedia networks of mass communication. Thus, communication networks are the fundamental networks of power making in society.

2. Networks of power in various domains of human activity are networked among themselves; they do not merge. Instead, they engage in strategies of partnership and competition, practicing cooperation and competition simultaneously by forming ad hoc networks around specific projects and by changing partners, depending on their interests in each context and in each moment in time.

3. The network of power constructed around the state and the political system does play a fundamental role in the overall networking of power.

This is, first, because the stable operation of the system and the reproduction of power relationships in every network ultimately depend on the coordinating and regulatory functions of the state and political system. Second, it is via the state that different forms of exercising power in distinct social spheres relate to the monopoly of violence as the capacity to enforce power in the last resort. So, while communication networks process the construction of meaning on which power relies, the state constitutes the default network for the proper functioning of all other power networks.

The multiplicity of power networks and their necessary interaction for the exercise of power in the respective domains raises some fundamental questions:

How can networks relate to one another without blurring the focus that ensures their specificity, and therefore the implementation of their programs? How do power networks connect with one another while preserving their sphere of action? I propose that they do so through a fundamental mechanism of power making in the network society—*switching power.* This is the capacity to connect two or more different networks in the process of making power for each one of them in their respective fields. Switching functions, and therefore switchers, vary a great deal depending on the characteristics and programs of the networks they switch and on the procedures of exercising switching power. But their action is central to the understanding of power making.

Thus, programmers and switchers are the holders of power in the network society. They are embodied by social actors, but they are not individuals; they are networks themselves. This apparently abstract characterization of power holding in the network society has, in fact, very direct empirical references. Of course, networks are formed by actors in their networking arrangements. But who these actors are and what their networks are is a matter of the specific configuration of networks in each particular context and in each particular process. Therefore, I am not dissolving power relationships in an endless deployment of networks. Rather, I am calling for specificity in the analysis of power relationships and proposing a methodological approach: We must find the specific network configuration of actors, interests, and values who engage in their power-making strategies by connecting their networks of power to the mass communication networks—the source of the construction of meaning in the public mind. I am not identifying the concrete social actors who are power holders, but presenting a hypothesis: In all cases, they are networks of actors exercising power in their respective areas of influence through the networks that they construct around their interests. I am also proposing the hypothesis of the centrality of communication networks to implement the power-making process of any network. And I am suggesting that switching different networks is a fundamental source of power. Who does what, how, where, and why through this multipronged networking strategy is a matter for investigation, not for formal theorization. Formal theory will only make sense on the basis of an accumulation of relevant knowledge. For this knowledge to be generated, though, we need an analytical construction that fits the kind of society we inhabit. This is the purpose of my proposition: to suggest an approach that can be used in research, rectified, and transformed in ways that allow the gradual construction of a network theory of power that can be falsified by observation.

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