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# Networks as Alternative Forms of Organization: Some Critical Remarks

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## Abstract

*This paper claims that in its current use the term ‘network’ represents no more than a suggestive image of organizing in an age of spectacular context-crossing electronic transactivity. Compared to the strong social embeddedness of formal organizations and markets and their institutional and legal ties, networks emerge as nearly devoid of institutional anchoring and social implications. And yet, current developments drive the organization of economic activity away from the logic of the efficient utilization of resources that characterized the industrial age towards the making, remaking and rapid mediation of decisions concerning what is to be produced and how it is to be disposed of. Matters of communication and networking across established boundaries tend to assume a primacy over technical, intra-organizational decisions of resource optimization, thereby making context-crossing electronic transactivity a crucial modality of organizing. However, the solidification and the institutional embeddedness of these interaction forms go far beyond the social and legal regulation of electronic transactivity and involve the confrontation with the institutional order associated with markets and organizations. In this process, central aspects of contemporary life like those of stable or full employment, equality, individual sovereignty and others need be renegotiated.*

## Keywords:

Networks, organizations, markets, institutions, strategic context, production, communication.

## 1. Introduction

For some time now the notion of the network-form of organization has been associated with far reaching changes in contemporary economy and society (see, e.g. Castells 1996, 2000, Fukuyama 1997, Malone & Laubacher 1998, Dahlbom 2000). Increasingly, networks are supposed to challenge central principles of the organizational order of modernity, notably the *boundary-maintaining* practices of modern organizations and the institutional principles or conventions sustaining such practices, i.e. *the standard labour contract, rule following and hierarchical stratification*. The popularity the term has recently obtained owes undeniably very much to Castells’ work “The Rise of the Network Society” (Castells 1996). Its importance notwithstanding, this book obtained a striking popularity thanks to its timely arrival. Soon it became the springboard of the idea claiming the network-form of organization to be a basic organizational form of the emerging informational mode of production that pushes in-

creasingly aside one of the central economic institutions of the industrial age, i.e. the large, hierarchically structured industrial enterprise.

Crucial to the transition to the information age is the key role contemporary technologies of information and communication play in enabling alternative forms of work and interaction (Zuboff 1988, Castells 1996, 2001, Dahlbom 2000). Brought into organizations, information and communication technologies (ICTs) provide occasions for re-punctuating the organizational operations throughout. They may be deployed for regrouping activities and tasks and reallocating responsibilities. They are often claimed to result in the reframing of the very premises of the process of production by making interaction and communication sequences, centring around *knowledge development and exchange*, central elements of productivity and value creation (Nonaka 1994, Castells 1996). But ICTs challenge the organizational archetypes of the modern industrial age in a fashion that straightforwardly relates to networking. The expanding social, economic and organizational involvement of ICTs and the diffusion of the internet make the frequent crossing of institutional and geographical boundaries a common everyday experience. The development of data interchange standards and protocols and the proliferation of interoperable systems make context-free *electronic transactivity* a central element of organizational life, rendering thus increasingly redundant the principle of boundary maintenance and the hierarchical ordering such a principle presupposes. These developments challenge in a straightforward fashion what historians of technology call the *factory system* (Forester 1989) and organizational sociologists refer to, in the lead of Weber (1947, 1978), as the *bureaucratic form of organization*. On this view, the concentration of people and resources in secluded localities, governed by elaborate systems of rules and regulations, proves too cumbersome and restrictive to address the communicative transactions across boundaries that the shifting demands of the contemporary world make necessary (Castells 1996, Dahlbom 2000).

Thus seen, the industrial age is closely tied to the organizational practice of boundary-maintenance and the hierarchical ordering through which such a practice has been constructed and sustained. The distinctive character of organizations of the industrial age is identified with the strong regulation of *the points of passage* through which the environment is “allowed” to enter the organization. While being a major concern of organizations of the modern age (Thompson 1967), organizational closure has too been strongly occasioned by the communicative conventions and administrative techniques of the industrial age. Time-consuming feedback loops, cumbersome archiving and paper-based filing systems made *spatial proximity* an essential requirement for information, communication and decision-making processes. Contemporary ICTs change these conditions dramatically. They make organizational boundaries permeable and they enable communicative transactions alongside the vertical line of command, thus undermining the logic of regulation based on hierarchical ordering and rendering the tight control of *les points de passage* a largely vain and non-productive project.

## 2. The Institutional Order of Organizations and Markets

The trends described above are difficult to deny. Yet, they are open to different and often widely divergent interpretations. Despite the significance attributed to networks, there is a remarkable lack of precision in the literature as to what network forms of organization really involve and how they differ from the two basic institutions of the modern economy, namely formal organizations and markets. In its current use, the term ‘network’ encompasses everything from *informal groups and virtual communities* sharing norms (Fukuyama 1997)

through *flat organizations* operating on decentralized principles (Castells 1996, 2000, 2001) to *temporary electronically-sustained alliances* of individuals or organizations (Malone & Laubacher 1998, Rifkin 2000). Most importantly, the normative, legal or institutional embeddedness of networks into the wider social order remains unclear.

Indeed, the term 'network' in its current use seems to offer no more than a *counter image* of organization to the boundary-maintaining, hierarchically structured systems underlying the industrial age. Sassen (2002) captures the basic characteristics of digital networks in the core dimensions of *decentralization*, *simultaneity* and *interconnectivity* and Castells (2001) makes the concept of *scalability* (i.e. the expanding or contracting of operations) pivotal to his understanding of networks. The image of connections linking discrete actors (or entities) in non-hierarchical, scalable patterns of instant feedback loops suggests an intuitive juxtaposition of networks to formal organizations conceived as rigid, scaffold-structured arrangements of discrete entities (roles, units, departments). However, even if it were to be accepted, such an image would most probably fall short of the crucial task of detailing the precise forms by which networks are supposed to challenge (complement or replace) formal organizations and the institutional edifice associated with them.

How networks differ from markets remains too quite unclear (Fukuyama 1997). The operations of markets presuppose fluid, non-hierarchical connections of actors across the social field. After all, the communicative messages carried by the price system connect actors together in transient relations of buying and selling. In the Austrian school's renown account, the market resembles a huge network of distributed capacities and knowledge that confers markets a remarkably adaptive advantage over centrally organized planning systems (Hayek 1947). Now it is well known that markets may fail to function under ambiguous conditions where products and services cannot easily be separated from one another, or the very background activities from which they are derived, and priced. The transaction costs that would have been incurred in separating and pricing product and services suggest that formal organizations or other sorts of collective arrangements such as networks may be more effective forms for managing operations of this sort. This claim has been around for several decades now and goes back from Williamson's (1975) through Arrow's (1974) to Coase's (1937) seminal work on the "Nature of the Firm". In none of the accounts that are built on the contributions of these authors are networks anything more than intermediate forms of organization developed in the interstices, as it were, of markets and organizations (Ciborra 1993, Kallinikos 1996).

A case could perhaps be made for the fact that the superimposition of electronic transactivity upon the communicative processes of market exchange implies a breakthrough that transforms networks to a momentous mechanism of societal coordination (Malone & Laubacher 1998, Rifkin 2000). ICTs enable commercial relations that are mediated, Rifkin suggests, through the *logic of access* (leased use of services or products) as opposed to the exchange of goods and services. Access is an activity that runs on time, presupposes repeated use while it does not entail the exchange of ownership which buying implies. Access is particularly germane to networking, since it demands the building of long-term relationships whereupon users (not buyers) pay a lease for having access to resources or knowledge commanded by specific corporations. Agriculture (seed reproduction) and medicine (biotechnology), database management, publishing and business format franchising are typical examples of fields that are particularly susceptible to networking, built upon the logic of access (Rifkin 2000). On such an account, networks take on the form of a spider net, whereupon a significant number of peripheral units are tied to a central node. Thus understood, networks resemble the centralized interaction patterns mediated by client-server technological infrastructures rather than the distributed relations enabled by peer-to-peer technologies. If on Castells' (1996,

2001) view the network threatens the administrative legacy of the industrial enterprise, on Rifkin's (2000) account, centrally-regulated access to a focal unit challenges the logic of the market as decentralized, locally-sensitive system of spot exchanges.

Contemporary ICTs may not therefore be unequivocal enablers of decentralized operations. On the contrary, they can be deployed in ways that promote dependency and centralized patterns, a point that Zuboff (1988) laboured to make some fifteen years ago. The consideration of the effects ICTs may have on contemporary economy and society begs the careful appreciation of the historical significance markets and bureaucracies have assumed in the making of the modern world (North 1981, Gellner 1983). The effects of technology are mediated and shaped by social and institutional factors (Orlikowski 2000). After Max Weber, we do know that the bureaucratic form of organization (of which the large industrial enterprise is but one expression) is a basic institution of the modern (capitalist, industrial) age. Rather than being simply a managerial model for running the production of goods and services, the bureaucratic organization is a major institution that *modulates the relationship of the individual to the organization* in ways that express basic civic and cultural orientations of the modern age (du Gay 2000; Kallinikos 2003). Central to such modulation is the legally and culturally sanctioned stipulation of the terms by which individuals join, abandon or interact with organizations.

Major characteristics of bureaucracy derive from its rational-legal orientation and the fundamental fact that bureaucratic authority in principle regulates only the employment contract. Individuals are involved in organizations *qua roles* and not *qua persons* or existential totalities (Luhmann 1995). Work is thus regulated an elaborate legal edifice that limits arbitrary behaviour and stipulates the employee's and the employer's rights and obligations. Ideally, organizational behaviour is governed by the universalistic principles of meritocracy while recruitment, career development and the relationship of the organization to its environment (other organizations, consumers, citizens) are thus shaped as to conform to these principles (Weber 1947, 1978). Though not often thought this way, bureaucracy represents a basic institutional modality through which modernity historically sought to break with paternalistic and autocratic patterns of government (Kallinikos 2003). A major objective thereof has been the regulation of the organization's relationship to people, inside and outside its boundaries, in ways that are compatible with the ideals of liberty, transparency and justice (Perrow 1986, du Gay 2000). It is not by accident that Weber distinguished and juxtaposed the *rational-legal order* of the bureaucratic form to traditional and charismatic forms of power and authority.

A prerequisite and an effect of the bureaucratic form of organization is the clear separation of the social domains of work, family and civic life (Kallinikos 2003). In addition to being tied to functional considerations (order, predictability, efficiency), the principle of boundary-maintenance of the bureaucratic organization is the outcome of complex cultural and institutional context that strives to *rationalize the exercise of authority* and to limit it within the confines of the organization. The organization cannot, at least in principle, make claims to regulate other than the spatio-temporal and institutional order that falls within its boundaries. Even such regulation must conform to the wider legitimate order. Bureaucracy has no legal mandate, no jurisdiction whatsoever, to apply its order beyond these boundaries. Family relationships, leisure and community/civic life are subject to different rationalities, obeying other rules and priorities.

Placed against this dense institutional system and the theoretical accounts by which the bureaucratic form of organization has been explained (Weber 1947, 1978, Gellner 1983), the term 'network' appears devoid of the institutional anchoring that would make it an alternative

to bureaucracy. Indeed, in Castells' account it is no more than a *model*, albeit a basic one, for running the operations of the economic organizations of the contemporary world. As chapters three in "The Rise of the Network Society" and "The Internet Galaxy" show, Castells subscribes rather uncritically to managerial accounts, blending indiscriminately desire with evidence, of how organizations are run today. Networks are identified with lean production, flat hierarchies and distributed decision-making processes sustained by ICTs, characteristics that are assumed to make the network form of organization capable of rescaling its operations to respond to ceaseless market and environmental change (Castells 1996, 2001).

Even accepting that contemporary ICTs mingle with novel attitudes to promote new modes of managing organizations, it is not quite clear how these modes break with the organizational legacy of bureaucracy and its institutional embeddedness. The emergence of new principles for running the operations of organizations does not automatically lead to institutional forms that remake an entire social and economic configuration. Or to put it differently, institutional forms like the bureaucratic organization are capable of accommodating varying modes of managing organizations. Cisco, for instance, that Castells (2001) construes as the archetypical example of the network form, cannot be anything else than a formal organization. It retains the core characteristics of the bureaucratic organization and adopts a *specific mode of management* that puts special emphasis on the extensive use of *subcontracting* and a premium on *technological innovation*. But these ways of exercising management cannot define a new institutional form. To equate them with a supposedly new key institution that ushers contemporary economy and society to a new age is to fall victim to the prevailing, socially indifferent and historically insensitive business rhetoric.

Any claim tying networks to a new social and economic order must spell out the specific forms by which electronic transactivity tends to revise or replace those social relationships built in and around the bureaucratic and market institutions. If the legal edifice sustaining modern formal organization is revised and the social practices associated with it decline then by what sort of legal and cultural order are they replaced? A crucial issue in this respect would be to account for the forms by which individuals are involved into network forms of organization. Are they employees, temporary participants, paid-for-fee consultants, users? Does the standard labour contract end up as a bygone institution? Is it as easy as Laubacher and Malone (2000) suggest that freelances and post-industrial guilds are taking the place of the standard labour contract and unions? Analogous tasks face the claim of the decline of the market. If the asserted logic of access is to be more than semantic invention then its consequences must be spelled out. Land use, housing, health care and banking are some of the fields in which the logic of access has been active for centuries.

### **3. Production versus Communication: The Practice of Networks**

There are currently certain less encompassing managerial developments that have a bearing on the organizational patterns associated with networks. Developments of this sort are intimately related to the increasing organizational involvement of ICTs, the growth of the internet and the extensive use of subcontracting and outsourcing as important organizational practices (Malone & Laubacher 1998, Castells 2001). The advocated focus on the wider socio-historical context into which the understanding of networks must be placed by no means implies that these developments can be ignored or trivialized. They do have some significance, and they may well be part of a wider system of changes in the functioning of the late capitalist economy of the information age. These developments undeniably have a bearing on

the term 'network' and can be held to a certain degree responsible for the alluring attractiveness the term has acquired in the imagination of lay men, journalists and researchers alike.

The significance current developments acquire is better understood if placed in the wider cultural context of late capitalism (Baudrillard 1988, Kallinikos 2001). The combination of manpower, material resources and financial capital in efficient and persistent ways is no longer the major determinant of profitability or success. Increasingly, the major issue today for a growing population of organizations is the capacity to reshuffle such combinations to address shifting, economic, cultural and institutional demands. Due to the growing individualism and the deepening differentiation of social groups and life styles, goods and services are increasingly judged in terms of *relevance* (how far they are capable of addressing consumer needs or social needs in the case of public services) rather than in terms of *context-free efficiency* (Dahlbom 2000, 2002). Contemporary technologies of information and communication are key factors in this process. They can be used to spot changes and consumer habits, produce buying records and consumer profiles, communicate attitudes, address social and consumer groups, and exchange data, information and messages of various kinds. They can also be deployed to produce novel services and re-punctuate internal operations in ways that raise organizational adaptability.

At a closer scrutiny, these trends can be shown to alter, in subtle yet decisive ways, the governance of late modern, late capitalist organizations. It may sound weird, yet successful economic undertakings are increasingly dissociated from the management of the *primary process of throughput*, the major concern and responsibility of the organizations of the industrial age. They are instead directed towards *providing the context* within which such primary processes are to develop and their output disposed and used. Context here means the *market and social relevance* whose steadily shifting character comes to define the transient characteristics of products and services produced by primary processes (Kallinikos 2001). A shift in target can thus be observed whereby a growing part of economic activity takes the form of the *monitoring of monitoring* of primary processes (Luhmann 1993). Activities of this sort are increasingly concerned with the very premises under which resources, manpower and capital are to be combined into ceaselessly shifting forms, capable of responding to economic, social and institutional change (Ciborra 1997). The crucial issue is when and under which conditions to shift from one combination to another. The game is increasingly framed in terms of adaptability (constant capacity for adaptation) rather than adaptation (Weick 1979).

An important consequence of these developments is the conditions of possibility they provide for decoupling (both operationally and also in terms of ownership) the *primary process of production* from the overall *strategic context* of this process. Whereas Taylorism created a divide between planning and execution within the same organization, contemporary developments increasingly dissociate these processes and thus create the conditions under which separate organizations can take care of these processes. The arm's length relationships that have been developing between producers of public services (primary process) and other public organizations that use these services (context providers) or the very disintegration of industrial companies into smaller independent units (Malone & Laubacher 1998) may be seen as exemplifying these claims.

The impressive diffusion of *subcontracting* and *outsourcing* is a case in point (Malone & Laubacher 1998, Rifkin 2000). The most conspicuous perhaps manifestation of these trends is the emergence of *digitally-sustained networks* that subcontract production and most other resources in short-lived schemes. By these means, network enterprises (e.g. Cisco, Gant or Nike) use their meddling ability and financial capacity to rapidly move to alternative configu-

rations of manpower and resources to address shifting consumer demands or technological developments on a regional and often global scale. Sustained by contemporary ICTs, transient strategic alliances of actors across or beyond established boundaries emerge as a new set of organizational practices that seek to accommodate the context of late capitalism and its ephemeral consumption patterns (consumption of identity making products and services and lifestyle experiences). They provide for ways of bringing together diverse and spatio-temporally scattered contributions that defy the logic of boundary maintenance, and its accompanied investment in physical assets, underlying the unitary industrial enterprise. Production literally becomes an accessory of a much wider logic that puts a *premium* on the *timely* and *successful adaptation* to market or to the environment in which an organization may happen to operate.

These trends are however far from univocal in their effects. Indeed, they can be interpreted in various ways. They can be seen in positive terms as done by popular management theory and as Castells seems, by and large, to assume. The term 'network' has partly been used to capture these tendencies. It mostly refers to this *Lego model of late capitalism*, incessantly combining and recombining diverse contributions to satisfy an insatiable and ever-changing market that increasingly acquires global dimensions. An illustration of these processes is provided by the *International Printers Network*, an alliance of more than 30 geographically scattered companies, operating in the field of digital printing, graphic design and visual communications. Relying on strong online connections, the network offers an impressive array of services that can be produced by members of the network, in ways that reflect the global distribution of capacities and the availability of people/facilities among its members, and transferred to local offices with direct access to customers. The network is thus capable of meeting the contingent character of the contemporary economic game and delivering services on-demand and just-in-time basis ([www.ipn.com](http://www.ipn.com)).

However, placed in a more encompassing context, these trends could be interpreted as the yet unsettled outcome of a power game in which operational or financial control is increasingly replaced by *strategic control* (Harrison 1994, Rifkin 2000). Strategic actors set the premises on which large numbers of subcontractors operate, and force these to commit to choices that they would have otherwise preferred to avoid. These practices are of course not unknown to powerful industrial enterprises (Chandler 1977, Perrow 1986). However, a crucial contrast to the exercise of power in traditional industrial systems relates to the fact that the linking-pin capacity of strategic networks, as analysed above, does not derive from being a central production unit into which numerous suppliers are tied. What confers these networks their distinctive character is the capacity to provide the strategic context for other organizations. Rather than being derived from the centrality of production operations, such a capacity is on the contrary contingent on *the dissociation of such networks from production facilities*. The less-loosely coupled to particular assets and places the higher the capacity of these forms to respond to emergent situations. A new division of labour with strong elements of domination is thus established manifested in the operational and financial dissociation of strategy making from the very production of goods or services. Successful strategy has pay-offs without operational control of resources. By contrast, companies holding control of operational resources may find themselves deprived all-of-a-sudden from the very context into which they operate.

Whether these tendencies will proliferate to become the rule is contingent on many factors. Two of them are worth noting in this context. The first relates to the degree to which ICTs will allow for the multi-modal communication necessary to sustain the transference of information, decision and orders across industries and borders, and the tuning of attitudes and instrumental cultures among widely dispersed actors and operations. This necessitates im-



provements not only on broadband and data interchange standards but, and perhaps more decisively, software development capable of going far beyond what current e-mailing, ERP and supply chain management systems can offer. The second crucial factor concerns precisely the institutional roots of organizations and markets. Neither of these are simply coordination mechanisms for the production and allocation of resources, as economists tend to assume (Malone & Laubacher 1998). We have been at pains to show in this paper that formal organizations and markets are complex institutional forms still embedded in the prevailing cultural, legal and constitutional order. The transformation of networks into institutions makes necessary far reaching changes in the institutional edifice of contemporary societies. Some of these developments do seem, however, to be underway (Dahlbom 2000, 2002).

## 4. Conclusions

This paper has sought to identify a set of crucial issues associated with the emergence of networks as alternatives to organizations and markets. Issues of this sort tend to remain hidden behind the spectacular effects accompanying the expanding involvement of ICTs in socio-economic life, and the emergence of electronic transactivity as major modality of organizing. The author is fully aware that the claims advanced in this article neither provide an adequate depiction of the processes involved in the restructuring of the late capitalist economy of the information age nor exhaust the issues raised by the diffusion of network-forms of organization. At any rate, such questions cannot be adequately dealt with within the confines of a conference article. The major objective of this paper was to make, as convincingly as possible, a case for the urgent need to reframe the appreciation of contemporary change by placing the understanding of networks and the economic impact of ICTs in a wider historical and economic context. Here are some preliminary observations that derive from this venture.

Current modes of managing organizations betray a shift from the efficient use of physical assets and human skills onto providing the *communicative premises* upon which decisions about production and consumption patterns develop. If chemistry (in the sense of combining materials and skills to create new values) has been the implicit model onto which the production of product and services in the industrial age was predicated, current developments suggest communication (the transfer of messages and decisions concerning production and consumption) to become the organizing vehicle of the contemporary world (Luhmann 1995). To be sure, communication was an essential component of the industrial age. However, its current significance emerges in the background of the fact that issues centring on the efficient combination of resources give increasingly way to information management. The processing of information, the making of decisions and the transfer of messages increasingly provide the premises on which the utilization of resources and the consumption of products and services are based. A crucial effect is the possibility of decoupling operationally, financially and legally the domain of production from the domain of communication and subordinate the former to the latter. ICTs obtain their significance from these changing premises underlying contemporary economic and social life. The capacity to exchange organized information (not just simple messages) in instant feedback loops and to deploy multi-modal forms of communication on a global scale does challenge the institutional boundaries within which economic operations have traditionally been organized. ICTs establish a crucial set of conditions for alternative forms, e.g. networks, of organizing economic and social operations.

However, past and present experience suggest that the social and legal embeddedness of networks necessary to transform them to central institutions of the information age is going to become a complex and presumably painful social process (Beck 2000, Gellner 1983, Luhmann 1995). Perhaps what we currently experience is the stepwise solidification of field

practices that will develop to a new institutional form capable of accommodating the mobility the current age demands. Change of this magnitude cannot but encroach upon issues that go far beyond the legal regulation of electronic transactivity, involving the very core of modern society, e.g. forms of employment and accountability, equality and justice, privacy and individual sovereignty and others. The appreciation of these trends therefore necessitates placing the understanding of networks into the wider historical context of modernity. Only in its careful juxtaposition with the institutional order associated with formal organizations and markets can the distinctive character of networks emerge and the effects of the technological paradigm of contemporary ICTs be properly appreciated. Short of such an evaluation the term 'network' runs the danger of remaining no more than a catchword, devoid of any substantial content, while ICTs are attributed a causal, deterministic status difficult to accept these days.

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