

# Institutional Isomorphism and New Technologies

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## INTRODUCTION

Technological factor is mainly underestimated in the literature on institutions and organizations. Although organizational studies and information technology are disciplines dedicated respectively to studying socio-political and technical aspects of organizing, cross-fertilization among such fields has remained quite limited. Only rarely the variable of technology has been interpreted as a crucial element for explaining institutional uniformity. From a more general point of view, changing technical factors have been considered “relatively unimportant sources of organizational change in a mature organizational field” (Yang, 2003, p. 433).

Only after the spread of the information and communication technologies (ICTs), a good number of studies has started to consider the relationships among information technology and organizational structure (Guthrie, 1999). Neo-institutional analysis on the use of information technology was mostly directed at showing how the embeddedness of organizational actors “in cognitive, cultural, social, and institutional structures influences the design, perceptions, and uses of the Internet and related [information technology]” (Fountain, 2001, p. 88). Therefore, it can be argued that most of the literature on this field concerns the way in which technology represents a social construct, because it shows that any technological application is strongly influenced by social aspects, such as cognitive frames, political culture, local traditions and so forth.

Yet, a few contributions have been dedicated until now to investigate how institutions change through the introduction of new technologies. Although technological innovation is said to be the source of variation in a given institutional context, as “new technology offers new possibilities for solving problems [and] new practices arise when innovative organizations take advantage of its novel benefits” (Leblebici, 1991, p. 335), little attention is focused on technological variables. Despite such disregard, in the following article some examples of the strategic use of information and communication technologies will be included, with specific reference to pressures exerted by ICTs for producing “institutional isomorphism.”

## BACKGROUND

Institutional isomorphism represents a central issue in the neo-institutional approach. Such concepts refer to the way organizations in a population are forced to “resemble” other organizations that “face the same set of environmental conditions.” (DiMaggio & Powell, 1983, p. 66). It deals in part with the organizational process of homogenization.

The main contributions on institutional isomorphism can be divided in two different fields of research, only rarely put together. The first one can be identified with the analysis of organization, which looks to pressures leading to conformity among organizational actors. The second one has found new areas of application after the process of globalization: it is the study of policy transfers, which aims at underlining the policy convergence in different political contexts. Both the approaches show many similarities in the discourse on institutional change and can be also associated for the lack of consideration for technological variables. How the adoption of a new technology may influence and being influenced by pre-existing institutional setting has represented a crucial and underestimated issue. Yet, after the spread of ICTs, the relevance of the strategic use of technology for producing institutional effects is becoming more evident.

The analysis of organizational isomorphism refers to a notable source of inspiration. In *The Protestant Ethic and the Spirit of Capitalism*, Max Weber (1905/1958) introduced the imagery of the iron cage to catch the process of bureaucratic homogenization in which the humanity was imprisoned. Organizations were deemed to a destiny of increased rationalization that would make them more similar to each other in structure, culture and outputs. The same image of imprisonment was used—and revised—by DiMaggio and Powell (1983) in their note studies on the mechanisms of institutional isomorphic change. As a constraining pressure which forces one unit in a population to resemble other units that face the same sets of environmental conditions, the concept of isomorphism aims at explaining why there is homogeneity of forms and practices in a given organizational field.

Three type of isomorphism can be identified. Coercive forces occur when an actor influences other actor's behaviour through formal and informal instruments. Generally, in this circumstance an organism legally imposes rules that are to be followed by a specific set of organizations. The most classical and remarkable example is represented by the state in its capacity of acting as a normative power which defines standards and rules of action. Mimetic isomorphism does not derive from a coercive authority, mainly responding to the search for efficiency and the need of institutional legitimacy. It can be argued that an organization that builds a reputation for excellence will attract other organizations trying to imitate its practices. Finally, the third source, the normative one, for producing isomorphism is constituted by the relevant trend of *professionalization*, interpreted as a "collective struggle of members of an occupation to define the conditions and methods of their works, to control 'the production of producers'" (DiMaggio & Powell, 1983, p. 152).

The processes by which isomorphism mechanisms intervene show a mix of different institutional logics. Action is driven by the principle of rationality as well as by rules of appropriate or exemplary behaviour. According to March and Olsen (1995) social actors follow prescriptions of what is socially defined as normal, true, right or good, without, or in spite of, calculation of consequences and expected utility. Isomorphism derives from institutional arrangements that link roles/identities, accounts of situations, resources and prescriptive rules and practices. Internalized principles and prescriptions have to be balanced by the calculated expected utility and constrains that a specific institutional frame determines.

The category of institutional isomorphism has been usually applied to the analysis of organizational uniformity in specific organizational fields, which are, in the words of March and Olsen, recognised areas of institutional life. Other contributions have tried to enlarge their perspective. With the increase of interdependence due to globalization, the idea of isomorphism has been used to underline a growing phenomenon of policy convergence from one political setting to another. Dolowitz and Marsh note that a significant body of literature in political science and in international studies refers to terms as lesson-drawing, policy convergence, policy diffusion and policy transfer in order to indicate "the process by which knowledge about policies, administrative arrangements, institutions and ideas in one political system (past or present) is used in the development of policies, administrative arrangements, institutions and ideas in another political system" (Dolowitz & Marsh, 2000, p. 5). The reasons why the policy transfer occurs run, in a simplified and heuristic model, from voluntary adoption—a rational response starting from the "dissatisfaction with the status quo"—to direct imposition. In addition to this, what is transferred is also variable, and Rose (1993, p. 30) set at the one extreme "direct coping" which regards full "lesson-drawing" of a

programme or a policy from one jurisdiction to another, and, at the other extreme "inspiration," with reference to mimetic mechanisms. Although many factors influence the process of institutional adaptation, a crucial point in the literature on isomorphism is that the institutional arena contains a number of exogenous pressures that influence the structure and behaviour of organizations, based on socio-cultural norms or interdependency (Dacin, 1997; Tucker, 1983).

It can be confirmed that both classical studies on organizational isomorphism and analyses on policy transfer underestimate the role of technological variables. Although, as La Porte et al. (2002) put it, "growing homogeneity among modern organizations emerges as a function of unprecedented amounts of newly available information about other organizations in the environment" (p. 435), the role of information and communication technologies remains quite implicit.

The reasons behind such a scarce attention to the potentials of technology in terms of creating institutional uniformity probably rests on a fundamental distinction between institutional and technical sources of organizational practices: technology is said to be the source of variation while institutions are considered responsible for conformity and of predictability of behaviour (Meyer & Rowan, 1977, in Leblebici et al., 1991). Yet it is difficult to defend this statement after the spread of new technologies, when the definition of a computer-based infrastructure was used to establish a true code able to regulate the various actors' behaviour.

For instance, Jane Fountain, by showing how the intensive use of new technologies is embedded in an institutional context with its social, cultural and legal features, observes the collision between traditional practices and traditions with technological innovation. In her contribution *Building the Virtual State: Information Technology and Institutional Change* (2001) she focuses on the role of digital policies, and in particular of e-government, in offering new incentives and constrains to change governments. According to Fountain, it is to be assumed that within a government agency there is a dominant homogenous culture, and the strategic use of new technologies can constitute an instrument for constructing such discourse (Yang, 2003). If her main finding is that institutions are the most important factors in explaining how information technology is being adopted and used in government, at the same time it can be argued that new technologies themselves are a relevant element for the shaping of institutions.

Also, Lawrence Lessig (1999) considers the effects of the introduction of new technologies in influencing institutional settings. What he calls "the code," the complex system of software and hardware instructions defining the Internet rules, seems to show a constitutive potential. Indeed, the idea of the code tends to consider the effects of new technologies not only for creating convergence in the public administrations'

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