

## **Knowledge Economy and the Emergence of Less-hierarchical Organizational Structures: An Institutionalist Approach**

### **Bilgi Ekonomisi ve Düşük Hiyerarşik Organizasyonel Yapıların Ortaya Çıkışı: Kurumsalcı Bir Yaklaşım**

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Research Article

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#### **ABSTRACT**

Recent years have witnessed the proliferation of horizontal and less-hierarchical governance structures in organizations. The present paper argues that this development can be read as an institutional transition, within organizations themselves, in response to the rise of knowledge economy. Drawing also upon the related literature on hunter and gatherers, the paper shows that asset-based production is generally related with hierarchical social relations, whereas knowledge-based economic activity tends to generate relatively horizontal and egalitarian structures. It is argued in the paper that a similar dynamic is at work in today's knowledge-based organizations, and that the institutional approach has the conceptual tools to study this transformation. In this regard, the paper aims to open up a theoretical space where the tools of institutional theory can be used, not only in the study of macro social-structures, but also in that of organizations and their transformations. Some further theoretical and practical implications of this approach are discussed in the final section.

**Keywords:** knowledge economy, technology, organizations, less-hierarchical structures

#### **ÖZ**

Son yıllarda organizasyonlarda yatay ve düşük hiyerarşik yönetim yapılarının yaygınlaştığı görülmektedir. Bu çalışma, söz konusu gelişmenin organizasyonlarda bilgi ekonomisinin yarattığı kurumsal bir geçiş/dönüşüm olarak yorumlanabileceğini savunmaktadır. Ayrıca makalede, avcı ve toplayıcı gruplarıyla ilgili literatüre de referansla, varlık-tabanlı üretimin genel olarak hiyerarşik sosyal ilişkiler yarattığı, bilgi-tabanlı ekonomik faaliyetin ise nispeten yatay ve eşitlikçi yapılar oluşturduğu gösterilmektedir. Bu çalışmada bununla birlikte, benzer bir dinamiğin günümüz bilgi-tabanlı organizasyonlarında da etkin olduğu ve kurumsal teorik yaklaşımın bu dönüşümü incelemek için gerekli kavramsal araçlara sahip olduğu iddia edilmektedir. Bu bağlamda makale, kurumsalcı teorik araçların sadece makro toplumsal yapıların değil, aynı zamanda organizasyonel dönüşümlerin de incelenmesinde kullanılabileceği teorik bir alan yaratmayı amaçlamaktadır. Böyle bir yaklaşımın diğer bazı teorik ve pratik sonuçları da çalışmanın son bölümünde tartışılmaktadır.

**Anahtar Kelimeler:** bilgi ekonomisi, teknoloji, organizasyonlar, düşük hiyerarşik yapılar

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## **1. Introduction**

Humans are capable of organizing their social existence under a variety of institutional and cultural structures—both hierarchical as well as relatively egalitarian and horizontal (Kaplan, Hooper, and Gurven, 2009). No other species in the animal kingdom shows this level of flexibility in its social habitat. The multitude of different social arrangements that human groups can create has been the subject matter of numerous analyses in different fields, ranging from sociology and anthropology to human ecology (see Kaplan, Hooper, and Gurven, 2009; Pierce and White, 1999; Woodburn, 1982). Institutional economists, too, have been interested in the diversity and possibility of different social structures, especially as far as their relation to technology and economic resources are concerned (Hodgson, 1998; Lower, 1987; Rutherford, 1984). Thorstein Veblen, the key figure in American Institutionalism, was mainly concerned with understanding the interplay between socio-cultural structures and the prevailing techno-economic base in human societies. Unlike many of the mainstream-inclined economists, Veblen applied this perspective not only in his analysis of modern economies, but also in that of earlier forms of human social organizations. In his evolutionary analysis, he showed how the existing techno-economic elements in different epochs in human history shaped and were in turn shaped by socio-cultural structures.<sup>2</sup>

This “macro” perspective, the analysis of the relation between techno-economic elements and socio-cultural structures, has indeed been one of the defining aspects of Veblenian institutional economics. His more detailed discussions of certain institutional structures of modern societies, such as conspicuous consumption or modern business corporation, have their proper places in this broader framework.<sup>3</sup> More importantly for the main theme of this paper, this framework offers a particular way of thinking about the two-way connection between technology and institutional structures: In Veblen’s analysis, new techno-economic conditions engender new habits of thought in society, and thus bring with themselves the potential for new institutional

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<sup>2</sup> Veblen did this by incorporating certain psychological tendencies of human beings, such as the instinct of workmanship, parental bent, or the acquisitive propensities of human nature, in the main corpus of his social theory. The concept “habits” was central to this analysis in that it functioned as a connector for Veblen between his psychological foundations and his institutional theorizing (see Veblen [1914] 1918).

<sup>3</sup> Conspicuous consumption, for instance, is for Veblen an institutional phenomenon of modern pecuniary culture, which is based, not on industrious and workman-like qualities, but on acquisitive propensities of human beings (Veblen [1899] 1994). Similarly, modern business enterprise functions, according to Veblen, according to the principles of a pecuniary and acquisitive culture, which he sees as detrimental to the general welfare of society. In his institutionalist perspective, Veblen expected that the proliferation of the machine technology would cultivate habits of thought (especially in modern-day engineers) based on the industrious inclinations of human psychology. And this would change, he argued, the institutional structures of modern societies, making them more in line with workman-like propensities of human nature ([1921] 2001).

arrangements. But at the same time, the existing institutional structure could show the tendency to persist even if the associated technology has become obsolete (see Edgell, 1975; Hodgson, 1992; Rutherford, 1998). This dynamic tension constitutes a key element in Veblenian institutional economics, and thus lies at the center of its theoretical framework.

This paper aims to make a contribution to this Veblenian framework by analyzing the dynamics of the relation between technology and social structures for a specific group of institutions: *organizations*. In particular, the paper wants to explain the emergence of “flatter organizational hierarchies” in knowledge-intensive sectors from the vantage point of an institutionalist analysis. The managerial hierarchy, which emerged in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, characterized the main organizational framework of the 20<sup>th</sup>-century capitalist business enterprise. In this framework, there is a clear line of demarcation between managers and subordinates, where the former have formal authority over the latter in terms of the allocation of tasks and resources, as well as in terms of performance evaluations (Lee and Edmondson, 2017). In the peculiar conditions of industrial business capitalism, this hierarchical framework proved to be useful in the sense of providing stability to business organizations while they were getting more and more complex throughout the 20<sup>th</sup> century (Landes, 1986; Weber, 1946). The separation of industry and business, and the accompanying emergence of “office work” with its many functional layers were among the key factors in the creation of hierarchical organizational structures.

But, due to three main reasons, this organizational framework based on managerial hierarchy seems to have started to lose its effectiveness and usefulness today: First, bureaucratic hierarchies perform best when the external conditions are themselves stable. So, in the face of rising uncertainty in today’s business environment, hierarchical organizations find it ever more difficult to show the required flexibility for adaptation (Lee and Edmondson, 2017). Second, younger generations today seem to be more willing to find meaning and self-realization in the work they do (Ng, Schweitzer, and Lyons, 2010). This creates a problem for hierarchical organizations because their very structure is simply unable to satisfy the expectation of millennials in this sense. And third, with the increasing importance of human knowledge and creativity, individual contributions in horizontal teams become more and more valuable (Adler, 2001; Blackler, Reed, and Whitaker, 1993). This, in turn, makes the case for more individual autonomy and initiative within the organizational relations of a business firm. Of these three factors, the current study will focus on the last one, and try to develop an institutionalist account

of how knowledge-based work plays its part in the emergence of less-hierarchical organizational structures.

The main thesis of the paper states that the shift from the traditional managerial hierarchy toward less-hierarchical arrangements reflects an institutional transition in organizations in response to the main technological dynamics of knowledge-based economy. Even though this transition has been analyzed in different literatures from different perspectives (Barker, 1992; Carson, Tesluk, and Marrone, 2007; Manz and Sims, 1987; Turco, 2016), an institutionalist account of this transition is yet to be developed. Moreover, the paper also points to the fact that the recent horizontal and team-based arrangements create a tension with the prevailing hierarchical structures in organizations, which represent the institutional heritage of the 20<sup>th</sup> century industrial economy. This main perspective is supplemented in the paper by two distinct lines of literature, both of which, it is argued, have an important potential to contribute to an institutionalist study of organizations. The first literature concerns the way institutions are analyzed in the Austrian tradition in economics (see Langlois, 1992). In the present study, the Austrian perspective will be deployed to explicate the “spontaneous/undesigned” character of the emergence of non-hierarchical structures in knowledge-intensive organizations. The idea that there are undesigned elements in the organizational cultures of business firms, which are affected by techno-economic factors, is the key point here. The second literature is the line of research in anthropology that studies the dynamics of the *egalitarian* social relations in pre-modern societies—in particular in hunter-gatherers (see Woodburn, 1982). Below it will be argued that today’s knowledge-based organizations bear a similarity to egalitarian hunter and gatherer groups where economic activity is also primarily skill and knowledge-based (rather than asset-based), and where, therefore, individuals have more independence and autonomy.

The paper is structured as follows. The next section explains how the “spontaneous order” way of thinking of Austrian economics could be applied to the study of organizations—in particular, to the analysis of the unplanned emergence of structural/cultural elements within organizations. Then, the paper proceeds to discuss how the existing techno-economic context plays its part in the emergence of certain structural behavior patterns. In this part the main reference will be to the literature in anthropology which analyzes the relation between the resource context and the associated social structures in human groups and societies. The subsequent section applies this theoretical framework to analyze the recent proliferation of horizontal organizational structures in today’s knowledge-intensive firms. The final section concludes with some further remarks

about the contemporary significance of this analysis, and provides suggestions for further research.

## ***2. Spontaneous Emergence of Behavior Patterns in Organizations***

In this section, I would like to start with a conceptual definition of an “organization” from an institutional perspective. Institutions, in general, are social systems which comprise certain rules that people consistently follow in their interactions (Hodgson, 1998; Langlois, 1992). So, “rule-following behavior” that structures social interactions so as to create established behavior patterns lies at the center of social institutions. Organizations are a special kind of institutions in that they are established for a definite purpose. In other words, the rules of an organization are concrete and directed toward the achievement of certain goals and objectives (Langlois, 1992). Business firms, schools, charity foundations etc. are all examples of organizations thus defined. They embody specific rules which create orderly and predicted patterns of behavior, and which serve a particular purpose and mission.

Organizations can be counterposed to another class of institutions. These are what Friedrich Hayek calls (spontaneous) “orders”—institutions whose rules are abstract and independent of a concrete purpose.<sup>4</sup> For instance, the Austrian tradition in economics sees the market system as an order in this sense. That is, unlike the concrete rules of an organization, the rules governing exchange in the market system do not serve pre-determined purposes. From the same perspective, one can think of a legal “constitution” as possessing abstract rules which are independent of particular circumstances (Langlois, 1992). It is in this sense that constitutions create socio-legal orders which embody abstract and general principles. One should note here that this distinction between organizations and orders is not related to the “origins” of institutions (why and how do institutions emerge?). It rather concerns the nature of the rules of an institution—whether they are abstract and general (*orders*), or whether they are concrete and directed toward a particular purpose (*organizations*).

In terms of the origins of institutions, another classification may be useful. The one Carl Menger proposes, for instances, concerns “pragmatic” vs. “organic” institutions (Menger, 1963). The

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<sup>4</sup> In his analysis, Hayek (1973) differentiates between “made” orders (taxes) and “spontaneous” orders (cosmos). In this classification, *organizations* fall under the first category of made orders. However, throughout this paper I will follow Langlois (1992) and use the term order only for institutions with abstract rules, whether spontaneous or designed. So, the terminology I use in this paper is not strictly Hayekian. But this terminology offers, I believe, a congenial framework to think about the difference between institutions with abstract vs. concrete rules.

former kind of institutions arise as a result of a planned process which directly contributes to their creation: Pragmatic institutions are designed. Organic institutions, on the other hand, are the unintended result of individual actions (Menger, 1963). They arise spontaneously as a result of a social process which is not directly controlled by an authority in charge. So, the question of the origins of institutions (pragmatic vs. organic) is distinct from the one concerning the nature of their rules (abstract vs. concrete). Theoretically at least, pragmatic as well as organic institutions could have abstract or concrete rules governing their operations.

So, these two different classifications give us a 2x2 matrix of possible configurations below (Table 1). Organic institutions which have abstract rules (top – left) are what Friedrich Hayek calls spontaneous orders (Hayek, 1973). They operate based on abstract rules and are the unintended result of the actions of their constituent elements. For Hayek, “markets” are one of the prime examples of spontaneous orders. “Languages” and “unwritten norms of behavior” could also be classified under this heading. One example for pragmatic (designed) institutions which have abstract and general principles would be constitutions (bottom – left). In terms of their origins, constitutions are pragmatic in the sense that they rely on a will that plays a decisive role in their creation. At the same time, constitutions are based on abstract rules and principles which are designed to establish socio-legal orders independent of particular purposes and cases.

Table 1

*Orders and Organizations with Spontaneous vs. Designed Origins*

		<b>In terms of the rules of operation</b>	
		<b>Orders</b> <i>(abstract rules independent of purpose)</i>	<b>Organizations</b> <i>(concrete rules toward a purpose)</i>
<b>In terms of the origins of institutions</b>	<b>Organic</b> <i>(spontaneous)</i>	Spontaneous orders <i>-Market</i> <i>-Language</i> <i>-Norms of behavior</i>	Complex organizations with emergent structures
	<b>Pragmatic</b> <i>(designed)</i>	Constitutions	Product development units

Source: Reproduced from Langlois (1992) in a modified form.

What is important for the main theme of this paper is that *organizations* could also have organic or pragmatic origins. Since organizations operate based on rules which are directed toward

concrete purposes, it may seem more natural to think that all organizations must be designed, and hence of pragmatic origins. This argument can perhaps be valid as long as we think of an organization only as a legal entity. But, when we direct our attention to the culture of governance and to the complex interrelations among its units, the undesigned/organic structures within an organization become more visible. It is in this sense that it is argued in the present paper that organizations may have pragmatic as well as organic elements (Langlois, 1992). Organization as a site of complex interrelations among its units could embody emergent (organic) governance structures that no one actually planned before. A similar idea can be found in the literature on complex systems (Plowman et al., 2007). According to complexity theory, systems could display *emergent self-organization* which arises as the unintended result of the interaction of its constituent elements. A particular branch of literature in organizational studies has applied this insight from complexity theory to the analysis of organizations (see Anderson, 1999; Stacey, 1995). In the terminology of this section, this literature is essentially based on the idea that organizations could embody organic structural elements which have not been intentionally designed.

If one takes the opposite view and considers all organizations by definition as pragmatic institutions, this would mean that the culture of governance of an organization and the interrelations among its different units can be designed in every detail. This could perhaps be true for organizations created for a particular project and for a particular time period (bottom – right). For instance, a specific unit within a firm that is responsible for the development of a certain product will mostly be of a pragmatic character. But, as organizations become more and more complex, they should be expected to have emergent structures which constitute their organic character.

One of the main arguments in Langlois (1992) is that this organic nature of organizations provides a congenial framework for an Austrian theory of institutions. Traditionally, Austrian economics has mainly been concerned with the analysis of social orders, and lacks therefore a well-developed theory of organizations. Langlois argues that the insight that organizations could have non-designed organic structures is a useful starting point to develop an Austrian perspective on organizations. More specifically, as far as business firms are concerned, he further adds that such an Austrian analysis can be supplemented with the transaction cost approach of Ronald Coase (1937).<sup>5</sup> The current paper, however, wants to take a different route.

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<sup>5</sup> This idea is interesting because it allows one to theorize the organically emergent patterns within organizations in reference to the transaction cost theory. Accordingly, a business organization could be thought of as the site of

As discussed above, it looks upon the emergent structures within an organization in their relation to the existing economic resources and technologic elements. This, I believe, is one of the defining aspects of an institutional analysis (especially in the Veblenian sense), and the relevant literatures in some other fields such as anthropology and cultural ecology are full of supporting examples and case studies in this regard. The findings of these studies can fruitfully be used to explain the emergence of flatter organizational structures in today's knowledge-based economy, which is the main theme of the next section.

### ***3. Techno-economic Elements and Organic Social Structures***

The analysis of the relation between techno-economic elements and the accompanying socio-cultural structures is not peculiar to Veblenian institutional economics. In fact, a variety of disciplines in humanities and social sciences, such as anthropology and cultural ecology, set themselves the task of examining the dynamics of this relation (Kaplan, Hooper, and Gurven, 2009; Pierce and White, 1999). But whereas these disciplines mainly confine themselves to the analysis of pre-modern societies, Veblen also analyzed the modern industrial complex from this perspective. Therefore, the question of "how technology and the nature of economic resources affect social organizations" was for Veblen one of the central elements of his evolutionary socio-economic theory. In this section, I shall dwell on some of the recent literature on hunter-gatherers, which also share this theoretical perspective, to show how this body of work contributes to the main analysis in this paper.

One of the key questions in the literature on hunter and gatherers (foragers) is to understand the egalitarian social structure that these societies have as compared to more recent forms of social organizations. Even though there are some differences in this regard between hunter and gatherer groups living in different geographical locations, they on average display relatively higher levels of egalitarianism among their members in terms of both wealth and power (see Kaplan, Hooper, and Gurven, 2009). But, the question as to why such differences exist between different hunter and gatherer groups is also an important aspect of the same theoretical problem. This question is important because it shows that "forager egalitarianism" is not something that can be taken for granted by researchers. It should be explained why different forager groups exhibit differences in terms of their social systems and hierarchical structures. A particular line

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organically emergent sub-systems which fall outside the order of the price system due to the cost structure. This perspective could serve as a fruitful starting point for those who would like to develop the Austrian approach along the lines of transaction cost theory.



of research in anthropology looks at the resource context and the mode of economic activity to explain such socio-organizational differences (see Pierce and White, 1999).

To illustrate, in his studies on egalitarianism in hunter and gatherer groups, Woodburn (1982) differentiates between two different modes of organization observed among hunter and gatherers: *immediate-return* and *delayed-return* systems. In the former, the return to labor is immediate in the sense that individuals receive the direct result of their productive activities. For instance, food procured through hunting and gathering activities is not stored, but directly consumed either on the spot or in a short span of time. The tools and knowledge necessary to engage in productive activities, moreover, are easily accessible by everyone in immediate-return hunter and gatherer groups. Individuals, therefore, are not directly dependent on others for their livelihood. This open system of production stands in contrast to that observed in “delayed-return” hunter and gatherers. In such groups, people have ownership rights to valuable assets which bring economic return. These ownership rights are usually attached to productive equipment such as boats, nets and other tools which require considerable amount of labor to produce—and from which a return is expected over a particular time period. People can also claim ownership over stored food, especially when it is processed or improved by human labor. Finally, in delayed-return systems, there may also exist various forms of immediate-return economic activity, but these are generally considered as low-status engagements (Woodburn, 1982).

The important difference between these two systems is that whereas the immediate-return hunter and gatherer groups are egalitarian, the delayed-return ones are typically associated with inequalities of wealth and power (Woodburn, 1982). In the former, such inequalities are simply not tolerated. For instance, successful hunters are expected to share their catch with others and show humility. Leaders, if exist at all, are not allowed to have authority over others or to increase their personal wealth. Woodburn observes that “[i]n these societies there are either no leaders at all or leaders who are very elaborately constrained to prevent them from exercising authority or using their influence to acquire wealth or prestige” (p. 444). What needs an emphasis at this point is that these social “levelling” mechanisms are systematically used in regular daily life settings (Woodburn, 1982). So, there are unwritten rules in immediate-return hunter and gatherer groups which consistently operate against the accumulation of wealth and power. These rules, it should be emphasized, do not represent the will of a particular body or a group of people in charge. They rather emerge within immediate-return groups in reference to

a particular mode of economic activity that needs an egalitarian culture to sustain itself. In the terminology of the previous section, the egalitarian rules that govern the social and economic relations in immediate-return systems can be considered as organic.

From a similar but more general perspective, Kaplan, Hooper, and Gurven (2009) analyze the ecological origins of human social organizations. In particular, they start with what they call the “modal pattern of social organization” which characterized the initial history of our species for millennia, and then try to explain why later forms of human societies diverged from this initial form. The emphasis in this mode of explanation is again on the nature of economic resources used in different historical epochs. In the foraging economy, for instance, the productivity of an individual was determined, not by defensible assets such as land and animals, but by hunting and gathering skills. This prevented, accordingly, the development of any form of dependency relations in primordial human groups. With the rise of agriculture, however, the forager egalitarianism gave way to hierarchical and dominance-based social relations under agrarian despotic states. In other words, in agricultural societies, the economic importance of “defendable assets” created a new form of social structure that was based on unequal property relations. Interestingly enough, Kaplan, Hooper, and Gurven (2009) argue that the rise of commerce in Europe in the 15th century can also be analyzed along similar lines. According to this perspective, commercial activities produced an economy based on financial and managerial skills, which, so the argument goes, might have played a role in the rise of the democratic claims of the bourgeoisie. So, this new economy of commercial skills was probably an important factor in the emergence of representative governments in Europe, and hence in the move toward more equal power relations in the realm of politics. Below, I shall actually adopt a similar approach in explaining the horizontal/less-hierarchical governance structures in today’s knowledge-based organizations.

One of the main conclusions of these studies in anthropology is that there is a close connection between the dominant form of economic activity—especially as far as the type of economic resources are concerned—and the structure of social organizations. In particular, when the economic system of a social unit is based on human knowledge and skill, rather than on defensible resources, a relatively egalitarian social structure is likely to develop. On the other hand, when the ownership of assets plays the primary role in economic production, hierarchical dominance relations become the rule in social organizations. These findings can be summarized in the table below:

Table 2  
*Nature of Economic Activity and Social Outcomes*

	<b>Economic Activity</b>	
	<b>Asset-based</b>	<b>Skill and knowledge-based</b>
<i>Social Hierarchy</i>	Vertical relations	Horizontal relations
<i>Social Status</i>	Material ownership of valuable assets	Social reputation based on valuable contributions
<i>Social Structure</i>	Dependency relations	Individual autonomy

Thus as a general rule, when economic activity is based on productive assets, such as land or heavy equipment, vertical social relations are likely to develop. In this social setting, high social status is attributed to the ownership of valuable assets, and there generally exist dependency relations between the haves and have-nots of these productive assets. On the other hand, when productive activity is mainly skill and knowledge-based, as in the case of immediate-return hunter and gatherers, horizontal social relations tend to prevail. In this form of social groups, individuals' social reputation derives not from the ownership of assets, but from their valuable contributions based on their skills and expertise. It should be emphasized at this point that online peer-to-peer communities and free and open-source software (FOSS) developer groups also share these characteristics (Kolođlugil, 2012).

These results, which have mainly been obtained through anthropological studies, can also be applied to the analysis of organizations. This idea should be interesting because there are close parallels in this regard between immediate-return hunter and gatherer groups and today's knowledge-based organizations. The latter can simply be defined as organizational structures in which the primary element of value-producing activity consists of human knowledge and creativity (see Adler, 2001). In reference to the discussion so far, it can be argued that in a similar way to skill-based hunter and gatherer groups, today's knowledge-based organizations display an organic tendency toward more horizontal arrangements. Lee and Edmondson (2017) observe that "[t]hese trends have put increasing pressure on the managerial hierarchy and made its limitations more apparent to both scholars and practitioners, which in turn has led to numerous and varied efforts to organize less hierarchically" (p. 37). In the next section, I shall focus on these horizontal structures in some more detail and explain why today's knowledge-based work places bear strong similarity to immediate-return hunter and gatherer groups in terms of their organizational formations.

#### ***4. The Trend Toward Less-Hierarchical Organizational Structures***

The typical managerial hierarchy, the existence of formal demarcations between superiors and subordinates within an organization, was one of the defining elements of the 20th-century business corporation. In the peculiar conditions of industrial capitalism, which was characterized by the existence of an institutional dichotomy between “industry and business” (and between “engineering and office work”, for that matter), hierarchical structures were considered essential for achieving performance and efficiency. The idea that managerial hierarchy can successfully delineate roles and responsibilities within an organization, and thus ensures efficient attainment of business objectives was one of the key factors behind its widespread adoption (see Landes, 1986 for an historical account). In this setting, the role of a manager was seen as indispensable for coordinating work among the different units of the modern business enterprise.

Thus, what happened in the late 19th and early 20th centuries within the frontiers of the modern business enterprise was the proliferation of the efficiency mind set (or habits of thought in the Veblenian perspective) in the organizational culture of doing business. This concern with efficiency, which had its origins in the mechanical industrial processes in the factory, came also to define the entire organizational structure of the 20th-century business firm. High-level managers who had their background in engineering fields might also have contributed to the general growth of managerial hierarchy throughout business organizations. It can be argued that as the organizational tasks of a business enterprise, ranging from human resources to marketing and finances, were getting more and more complex, the managerial hierarchy offered a practical and “modern” solution to this ever-growing complexity (Landes, 1986; Magee and Galinsky, 2008).

Just like in the case of the assembly line, when tasks are standardized also in the office, people can function as parts of a bureaucratic machine where completion of tasks is ensured through the reporting-relationship between subordinates and superiors. Office employees partake in this hierarchy not in their unique individualities, but as standardized parts of a bureaucratic system. This phenomenon of modern industrial economy provides strong support to the institutionalist idea that technological developments create the conditions for certain habits of thought to rise and proliferate at the expense of others (Hodgson, 1992; Rutherford, 1998). In this particular case, the efficiency and control mindset of industrial engineers affected the entire organizational

structures of business concerns, and basically turned business managers into the efficiency engineers of office work.

Toward the end of the 20th century, however, the limitations of this organizational model seemed to become more and more apparent. Indeed, especially beginning from the 1990s, a particular strand in management science literature started to analyze the growing incidence of “new forms of organization” (Bartlett and Ghoshal, 1993; Ezzamel, Lilley, and Willmott, 1994; Ruigrok and Achtenhagen, 1999). The main emphasis in this literature was on the transition from “traditional management hierarchies and compartmentalization, towards operating and strategic decentralization and company-internal networks” (Ruigrok and Achtenhagen, 1999, p.522). This transition toward flatter organizational structures was generally described using such concepts as *decentralization* (Hill, Martin, and Harris, 2000; Wynen, Verhoest, and Rubecksen, 2014), *team-based organization* (Day, Gronn, and Salas, 2006; Mohrman, Cohen, and Morhman, 1995), and *shared leadership* (Carson, Tesluk, and Marrone, 2007; Pearce and Conger, 2002). More recently, the effects of digital technologies on the new forms of organizational structures have also been analyzed in this literature (see Fenwick and Vermeulen, 2019).

It could be illustrative to compare how these new forms of organizational structures differ from the traditional managerial hierarchy. As mentioned above, team-based models with accompanying leadership styles in a more decentralized setting characterize these new flatter organizational forms. In this context, a team is defined as “a set of two or more individuals interacting adaptively, interdependently and dynamically towards a common and valued goal” (Salas, Burke, and Cannon-Bowers, 2000, p.341). The emphasis on interdependence and shared goals is important as these aspects are what differentiate teams from other forms of groups. Teams may have leaders who coordinate the actions of team members. But team leadership in this model does not involve assigning pre-determined tasks to individuals in a subordinate-superior relationship. Nor does it mean that each and every action of team members is strictly monitored and controlled by the team leader. Moreover, in this form of organization, different individuals could take on leadership roles based on their skills and expertise (see Carson, Tesluk, and Marrone, 2007). These aspects of “shared leadership” in teams stand in sharp contrast to the hierarchical model where the tasks of the individuals are assigned and evaluated by a superior authority in charge.

From an institutionalist perspective, what is at stake here is the development of a new institutional work arrangement in organizations. Knowledge economy engenders new habits of thought and associated behavior patterns today which go against the traditional hierarchical structures. It is one of the central arguments of this paper that the institutional approach has the conceptual apparatus to analyze the main dynamics behind this organizational transition. In particular, the emphasis Veblen places on technology and on psychological and habitual factors to explain institutional phenomena has a direct bearing on this case. In Veblen's framework, there is a close link between "instincts", which he sees as certain psychological dispositions and proclivities of the human nature, and "behavioral habits" which ultimately establish themselves as institutions in society (Veblen [1914] 1918). And moreover, this relation between instincts and habits becomes active and operative within a certain techno-economic context. For instance, the egalitarianism of the hunter and gatherer groups Veblen ascribes to the *instinct of workmanship* and the *parental bent*. In the specific conditions of the forager economic system, these "peaceful" psychological inclinations of the human nature give rise to associated behavioral habits, and thus create an egalitarian social culture. However, under conditions where ownership of productive assets becomes salient for economic activities (such as in the case of the agricultural economy or the modern industrial economy), *acquisitive instincts* take the scene, and create social institutions based on ownership relations (see Adkisson, 2004; Edgell, 1975).

As far as the main problem in this paper is concerned, this theoretical insight can be supplemented by the findings of a more recent literature. This literature studies specifically how hierarchical structures change in human groups in response to the changes in contextual factors, including economic ones (see Magee and Galinsky, 2008). An important finding in this area of research concerns the observation that hierarchies could arise spontaneously out of interpersonal interactions. And conversely, when circumstances change, within-group dynamics may also work against the existing hierarchical structures. If, for instance, certain individuals possess or have access to key resources which are deemed important and valuable by others, these individuals tend to rank higher in the group hierarchy (Magee and Galinsky, 2008). In this case, hierarchical relations could emerge organically within the group in reference to the ownership of the valued resources. The discussion in the previous section about the relation between the ownership of productive assets and vertical social relations is a case in point. On the other hand, if the development of external events reduces the importance and

value of these resources, and consequently alter people's perception of them, this could trigger a spontaneous change against the prevailing hierarchy (Burkhardt and Brass, 1990)

This perspective is important because it shows, first, that hierarchal relations have the potential to grow organically in human groups. So, apart from *formal hierarchy*, characterized by the existence of job titles, formal job descriptions and organigrams, we can also talk about *informal hierarchy* which arises spontaneously out of human interaction (Blau and Scott, 2003). It has been also argued in the literature that the stability and coordination that hierarchies provide might be appealing to human psychology so that individuals may willingly be part of hierarchical relations (Friesen et al., 2014). In this sense, hierarchies perform a social function by seeing to it that a state of order, coordination and stability is achieved in the group. But as a second point, this psychological perspective also gives support to the idea that there could be countervailing dynamics in human groups that tend to diminish organically the strength of established hierarchies. As mentioned above, when a valued resource loses its economic and social significance, for instance, then established hierarchies along the dimension of that resource tend to become weaker.

This, I would like to argue, is one of the fundamental reasons why we observe horizontal/egalitarian social relations when economic activity is essentially skill and knowledge-based. Since it is difficult to monopolize human knowledge and skills, knowledge-based systems tend to create relatively more horizontal social relations. In such systems, each and every individual is a potential source of valuable contributions so that hierarchical relations cannot develop along the dimension of "access to a key resource". This perspective brings us to the conclusion that the recent rise of formal team-based models has its institutional origin in the *organic proliferation of less-hierarchical relations* in knowledge-based organizations. In other words, formal horizontal arrangements within organizations are the manifestation of an institutional transition toward a less-hierarchical organizational structure. Individuals in egalitarian/horizontal structures may no doubt have different social statuses based on their skills, expertise and valuable contributions. For instance, in immediate-return hunter and gatherer groups, older men usually have more influence when it comes to such matters as when and where to move the camp (Woodburn, 1982). Similarly, in online peer-to-peer to groups, certain individuals are more well-known than others and enjoy a certain amount of respect for their contributions (see Kologlugil, 2012). But, where egalitarian habits and horizontal social

arrangements predominate, such differences among individuals do not turn into strict hierarchical relations.

Thus, this theoretical perspective explains the emergence of horizontal arrangements in today's organizations in relation to the rise of knowledge-based economy. This does not mean, however, that there will be an almost automatic transition in organizations from managerial hierarchy toward flatter and decentralized structures. It is one of the main theoretical arguments of institutional economics that institutional transformations always lag behind technological developments. And the chief reason for this lag is the prevalence of habits of thought associated with the older technological set-up. In times of technological advances which have the capacity to alter the entire economic landscape, these "ceremonial" habits of thought usually become impediments in front of institutional change. In fact, this is the reason why the literature in management science puts so much emphasis on concepts such as "transformational leadership". Leaders who can transform their organizations in line with technological advances can do so by, first and foremost, changing the mind sets associated with the earlier techno-social arrangements. But, Drucker (1988) argues that such transformations could be difficult because they

"[T]hreaten the jobs, status, and opportunities of a good many people in the organization, especially the long-serving, middle-aged people in middle management who tend to be the least mobile and to feel most secure in their work, their positions, their relationships, and their behavior." (Drucker, 1988, p.8)

Here we see the institutionalist tension between the new technological dynamics, with their potential to instill new habits of thought, and the established behavior patterns associated with earlier technological and economic conditions. One of the main objectives of the growing literature on transformational leadership is actually to overcome this tension in the knowledge economy.

One important point should be emphasized at this stage. It does not follow from the main analysis in this paper that the "managerial position" is destined to go extinct in the new economy. But the analysis here does suggest that new management or leadership styles are needed in the knowledge economy which are in line with the horizontal organizational tendencies of the current era. Those organizations which can implement this transformation will be in a better position to fully reap the benefits of a knowledge-based economic system. In the



final section, I shall briefly elaborate on some of the theoretical and practical implications of this transition, and point to some avenues for further research from an institutionalist perspective.

But as a final remark, it should also be mentioned that the proliferation of less-hierarchical structures in organizations does not necessarily imply a more equal income distribution in society. In other words, in this analysis we should carefully distinguish between the rise of flatter/egalitarian organizational structures on the one hand, and the question of income inequality on the other. The latter is certainly a multi-dimensional subject which involves many micro- and macroeconomic elements. In this regard, the rise of knowledge economy per se should not be expected to bring about a decrease in income inequality in modern societies. In a knowledge-based economy, having access to education, knowledge, technology, and financial resources plays an important role in determining the financial outcomes of individuals. Therefore, in order to reach a more egalitarian society, not only in terms of hierarchical relationships but also in terms of income distribution, individuals should be granted equal access to education as well as to technological resources.

## **5. *Concluding Remarks***

I have argued in this paper that the recent rise of horizontal/less-hierarchical organizational models can be thought of as an institutional transition, within the confines of organizations themselves, in response to the growth of knowledge economy. I have further maintained that this transition can fruitfully be analyzed and understood as an organic (undesigned) institutional phenomenon which arises out of the inner workings of a knowledge-based organizational system. It follows from this conclusion that formal horizontal arrangements observed today in knowledge-intensive sectors have their origin in this organic institutional change. In other words, team-based or project-based work arrangements are the manifestation of an institutional process which has been underway for some time, and which changes the organizational cultures of knowledge-based business corporations.

This perspective, I believe, has certain implications which have both theoretical and practical significance. From a theoretical perspective, it shows that the institutional approach has certain conceptual tools which could be applied in the study of organizations. In the mainstream tradition in economics, the transaction-cost perspective has been the dominant framework in this area of research. This framework has been used to explain why certain economic

transactions are organized within the boundaries of firms, even if it should also be possible to use the price mechanism of the market (Coase, 1937). The well-known theoretical answer is the existence of transaction costs of using the price mechanism. In this sense, the transaction cost approach offers an explanation for the very existence of firms as organizations in a market-based economic order. But, the analysis of the dynamic transformations that organizations undergo in response to technological factors necessitates a whole different theoretical perspective. It is at this point, I have argued, that institutional economics could be of great value to researchers who would like to study organizations from a dynamic perspective.

This should also add an interesting and important dimension to the research repertoire of institutional economics. Organizational researchers in the area of management have been studying for years the various aspects of business organizations using a plethora of interdisciplinary approaches. The application of the institutional perspective in this area of research could strengthen the ties between institutional economics and organizational research in management. The latter is quite open to different interdisciplinary perspectives and borrows heavily from such fields as psychology, sociology and anthropology in the study of inner workings of organizations. The institutional approach, with its emphasis on the dynamic relation between technology and social structures, has a lot to contribute to the analysis of organizations—especially as far as the organizational effects of technology are concerned. This interdisciplinary link has the potential to motivate more and more institutional economists to study the changes that arise within organizations in relation to technological developments.

The main theme and conclusions of this paper also have some practical significance in applied areas. For instance, the recent emphasis in the education literature on the importance of collaborative competencies, together with the entire discussion on the so-called “21<sup>st</sup> century skills” (Geisinger, 2016), is related to the institutional transition experienced by knowledge organizations today. As rightly emphasized in this literature, in a knowledge-based setting where value is produced in reference to creative ideas, collaborative skills become all the more important. And from an institutional perspective, this change is intimately tied to the rise of horizontal organizational patterns in today’s work environments. It can be argued from this perspective that the education system today should place more emphasis on the attainment of skills related to teamwork and collaboration. In other words, students should have the opportunity in schools to experience and practice the co-creation of value with their fellow classmates. Secondly, the debates centered around the working habits of “millennials” also have

an institutional aspect to them (see Bannon, Ford, and Meltzer, 2011). The tendency of millennials to work more independently and avoid strict hierarchical relations concerns the new habits of thought acquired by younger generations in a knowledge and creativity-based socio-economic setting. So, institutional economics has the necessary conceptual tools to analyze and make sense of these recent organizational changes and their implications in different areas.

To conclude, in reference to the main discussion in this paper, I would like to outline some specific research topics for institutional analysis. First, the use of digital technologies in organizations is never only a technical issue. In order to make the most out technological innovations, organizations must be able and willing to show the necessary institutional adaptations. This opens up a vast avenue of research for institutional researchers: What kind of new behavior patterns are associated with the use of digital technologies at work places? How do the existing behavioral habits interact with these new patterns in different sectors and organizations? What actions should be taken in order to prevent the established ceremonial habits to adversely affect organizations' adaptations to new technology? Such questions invite institutional economists to undertake theoretical and empirical organizational research (also in the form of case studies, for instance) with the objective to understand how technological developments transform organizational structures. Furthermore, recent digital technologies such as the blockchain technology are likely to have direct organizational consequences (see Lumineau, Wang, and Schilke, 2021; Vergne, 2020). More specifically, blockchain and related technologies could pave the way toward new forms of decentralized organizational arrangements. This is a new and promising research area awaiting contributions from different fields. As the present paper has emphasized, these transformations contain an important institutional dimension, the analysis of which will play an important role in the study of new forms of organization.

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