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NETWORKS, HIERARCHIES AND THE MODERN GLOBAL UNREST

Abstract. The paper seeks to make a contribution towards a better understanding of the current global political unrest. It argues that this unrest reflects ongoing tensions between hierarchies and networks. In contrast to many current approaches, the paper argues that the source of this conflict in not in the perceived ontological opposition between hierarchical and non-hierarchical interactions. Rather, it is rooted in the paradigm of the Enlightenment that continues to dominate our civilization and that is based a very limited view of reality. This paradigm excludes the process of construction from its frame of vision. The resolution of the conflict between networks and hierarchies requires that our civilization should transcend the paradigm of the Enlightenment and advance a new vision that would be centrally focused on the process of construction. This process should be the main organizing principle for the new social practice outlined in the paper.

Keywords: networks, hierarchies, the modern global unrest.

МЕРЕЖІ, ІЄРАРХІЇ ТА СУЧАСНИЙ ГЛОБАЛЬНИЙ ПРОТЕСТ

Анотація. Автор прагне донести краще розуміння нинішнього глобального політичного протесту. Він стверджує, що цей протест відображає наростаюче напруження між ієрархіями і мережами. На відміну від багатьох сучасних підходів у статті стверджується, що джерело цього конфлікту не є виявом онтологічної опозиції між ієрархічними та неієрархічними взаємо-

діями. Ймовірно, цей конфлікт кориниться в парадигмі Просвітництва, яка продовжує домінувати в нашій цивілізації і має дуже обмежене уявлення про реальність. Вирішення конфлікту між мережами та ієрархією вимагає від нашої цивілізації вийти за межі парадигми Просвітництва і ствердити нове бачення, яке буде зосереджено на процесі творчості. Такий процес має стати головним організаційним принципом нової соціальної практики.

Ключові слова: мережі, ієрархії, сучасні глобальні протести.

СЕТИ, ИЕРАРХИИ И СОВРЕМЕННЫЙ ГЛОБАЛЬНЫЙ ПРОТЕСТ

Аннотация. Статья призвана внести вклад в лучшее понимание нынешних глобальных политических протестов. В ней утверждается, что этот протест отражает растущее противоречие между иерархиями и сетями. В отличие от многих современных подходов, в статье утверждается, что источник этого конфликта находится не в онтологической оппозиции между иерархическими и неиерархическими взаимодействиями. Скорее, он уходит корнями в парадигму Просвещения, которая продолжает доминировать в нашей цивилизации и основана на очень ограниченном представлении о реальности. Разрешение конфликта между сетями и иерархиями требует, чтобы наша цивилизация преодолела парадигму Просвещения и выдвинула новое видение, которое будет сориентировано на процесс творчества. Этот процесс должен стать главным организующим принципом новой социальной практики.

Ключевые слова: сети, иерархии, современный глобальный протест.

Target setting. Anti-Hierarchical Nature of the Contemporary Protest Movements. We live in a turbulent world beset by global political unrest. Although this unrest started decades ago, it shows no signs of abatement today. The Tiananmen Square protests, the Arab Spring, the color revolutions, the Revolution of Dignity in Ukraine, Occupy Wall Street and Islamic jihad are all part of the turmoil that has toppled governments, changed regimes and shook the political order in the world to its foundation. It engulfed countries as diverse as Thailand and Greece, USA and Syria, Argentina and Afghanistan, Great Britain and Ukraine. No country seems to be immune to the awesome power of this unrest.

There is one pervasive feature in many if not most of these conflicts. They reveal profound distrust and hostility towards hierarchies — not just the hierarchies that presently dominate the world, but the very principle of hierarchical organization. The attitude is visceral and widespread. Whether peaceful and reformist or violent and destructive, these movements have a distinctly non-hierarchical character and use network as their organizational structure. Their participants seek either to limit severely the power of hierarchies or to destroy them completely, replacing their rule with a broad non-hierarchical

approach in organizing social and political practice, hence the name "horizontalists" that is used in reference to these movements and their ideologies (Bookchin, 1991; Sitrin, 2011; Davies, 2012; Benski, Langman, Perugorría and Tejerina, 2013). The response from the hierarchies toward these protests has varied, ranging from relatively benign but hostile tolerance to outright enmity and aggression (Bandow, 2014). But regardless of the response, the general attitude toward these movements — whether Occupy Wall Street in the USA or Maidan in Ukraine — on the part of government hierarchies has been one of distrust and suspicion.

Tensions and conflicts between hierarchies and networks are not unique to our time. In fact, the entire evolution of human civilization provides many examples of this adversity that nurtured numerous revolutions and uprisings throughout human history. Niall Ferguson aptly observes: "Clashes between hierarchies and networks are not new in history; on the contrary, there is a sense in which they are history" (Ferguson, 2014). This deep-seated enmity towards hierarchies led at least some researchers to conclude that it reflects something very fundamental in the nature of hierarchical and non-hierarchical interactions.

For Max Weber, authority and status were two very distinct features of bureaucratic hierarchies (Weber, 1978). These features appear to be totally absent in the more flexible, pliant and largely egalitarian structure of networks. Lawrence Tshuma observes in his study of the relationship between government hierarchies and networks: '...bureaucracies and networks stand in stark contrast as polar opposites' (Tshuma, 2000, p. 131). More often than not, this opposition translates into tensions and conflicts. Why is this the case? Why in our civilization, in which, many agree, hierarchies emerged out of network connections (Dubreuil, 2010; Trigger, 2003; Bowles, 2009; and Agre, 2003), are they often at odds with each other?

The statement of basic materials. Hierarchical and Non-Hierarchical Interactions in Nature. The perception that hierarchical and non-hierarchical interactions are polar opposites contradicts what we know about systems. Generally, these two types of interactions complement each other. Non-hierarchical interactions create new and more powerful levels and forms of organization, that is, they create hierarchies. Hierarchical interactions optimize and conserve what non-hierarchical interactions have created. Both types of interactions are important and their balance is essential for sustaining systems and making their evolution possible.

In his book *The Origin of Intelligence in Children* Jean Piaget, the famous Swiss psychologist and philosopher, provides one example of such balanced relationship. His study describes how sensory-motor operations (for example, visual and audio functions) combine with each other and create a more powerful level of organization that regulates their interactions. As a result, the child begins to "see" when he or she hears, and "hear" when he or she sees something. When the child hears mother's voice, the child begins to turn head, searching for a familiar image. Thus, the interaction between the functions creates a hierarchy that enriches both

of them and expands their degrees of freedom. This development gives rise to mental images — an even more powerful level of organization that allows the child to "see" and "hear" even when the object is not present. The emergence of mental images is an important step toward the development of symbolic thought. Each new level of this hierarchy enriches the sensory-motor operations that have been involved in their creation.

The fact that regulation represents a level of organization more powerful than any of the subsystems or their sum total indicates the presence of a hierarchy. In other words, the functioning of networks necessarily leads to the emergence of hierarchies (Collins, 1986; Copelli, Zorzenon Dos Santos and Sá Martins, 2002; Corominas-Murtra, Goñi, Solé and Rodríguez-Caso, 2013)[1]. It is true of all systems, including human systems. In his insightful article "Does Democracy Inevitably Imply Hierarchy?" William Collins shows that the functioning of democracy necessarily leads to the emergence of hierarchies. Collins concludes his analysis by the following observation:

Does democracy now imply hierarchy? The answer to this question depends upon how the equilibrium conditions for the model describing a democratic polity are interpreted. If the absence of hierarchy is understood as the emergence of a persistent self-equilibrating harmony among interests, then the constraints imposed by the sign matrix must be understood as an incipient form of hierarchy (Collins, 1986, p. 415; emphasis added).

There is a great deal of evidence that hierarchies and networks are ubiquitous in nature. Functional and regulatory operations in a system form a hierarchical organization (Clauset, Moore and Newman, 2007). By and large, their relationship is complementary, cooperative and balanced (Danchin, 1989). Hierarchical organizations in non-human systems do not operate on the basis of command–control. In his epochal article "The Architecture of Complexity," Herbert A. Simon emphasizes that hierarchy does not necessarily imply a command–control mode of operation (Simon, 1962). Olffen and Romme's article also points to the need for reconceptualization of hierarchies away from the conception of command–control structures and in the direction of amore balanced structural relationship (Van Olffen and Romme, 1995, p. 202). Regulatory operations are a product of the interaction of subsystems. Regulatory function relies, or supervenes, on local non-hierarchical interactions among subsystems. It also regulates and coordinates their activity. Regulation relies on the functioning of the subsystems and, in turn, enhances the subsystems' degrees of freedom. The subsystems adapt to the more powerful regulatory operation, and this adaptation increases their power. It is not appropriate to describe such mutual dependence of the two levels in this hierarchy as command–control. Rather, one should describe it as complementary and symbiotic.

Our neural system, including our brain, for example, represents a much more powerful level of organization

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[1] Collins offers a very interesting mathematical examination of the relationship between hierarchies and democracy (Collins, 1986).

with a much greater number of degrees of freedom than, for example, the level of organization of other organs or cells in our body. However, we cannot characterize the relationship between neural functions and other functions in our organism in terms of command–control. Neurons do not dictate cells and organs what they should do. Rather each side acts in its own capacity, and their cooperative interaction results in the most appropriate selection from the available repertoire of possibilities (Danchin, 1989). Neural functions supervene on physiological functions of the organism and in turn regulate, sustain and thus conserve these functions. We can find many other examples of such symbiotic relationship between adjacent levels of organization in nature (Corning, 1995; Jablonka and Lamb, 2005; Bich and Damiano, 2012).

The Genesis of the Conflict Between Networks and Hierarchies in Human Systems

The analysis of the process that gives rise to new levels of organization shows the importance of the balanced and complementary relationship between hierarchical and non-hierarchical interactions. In fact, one can only see this importance in the context of the process of construction. Now, let us perform one *Gedankenexperiment*. Let us remove this process from our frame of vision. Let us pretend that we are not conscious of it and that for us (in the sense of the Kantian '*für sich*') this process does not even exist. How will then reality appear to us?

When we exclude the process that gives rise to new levels of organization, we certainly would not be able to see how the non-hierarchical interactions among subsystems create new levels of organization and new properties and how these new levels conserve what non-hierarchical interactions have created. In other words, we will not be able to see the complementarity and balance in their relationship. In fact, the two types of interactions will appear as completely separate and even diametrically opposed to each other.

We should not be surprised at this result: after all, we have removed something very important that connected these two types of interactions; we have eliminated the frame that brings them together. With the process of construction out of our field of vision, the more powerful level of organization will appear as if by miracle by some kind of supreme design of superior rationality — as if from nowhere and from nothing — to take control of the entire system. It would appear that the operations on this more powerful level of organization simply determine the operations on the less powerful one, that they in fact limit the latter's degrees of freedom. Think for a moment about the symbolic representation of the object — mother or toy — in the mind of a child. This representation is capable of triggering both the visual and audio function. If we do not understand how the child combines the two completely incommensurable functions — audio and visual — into one symbolic representation, as Piaget has explained in his *The Origin of Intelligence in Children* (Piaget, 1998), we would not be able to understand the rise of symbolic representation. Moreover, we would not be able to see the symbiotic nature of the relationship between the two; in fact,

we would get the impression that the symbolic representation simply takes control over the reflex functions. We would not be able to understand how much such symbolic representation enhances the degrees of freedom of these functions, how the audio function is activated by the visual one and vice versa; andhow both can be activated by a purely symbolic object when the real object is not even present (Piaget, 1998). Yet, this is precisely the way in which the major epistemological perspectives that dominate our civilization approach reality.

There are two such perspectives: atomistic and holistic. The atomistic approach is by far the more popular of the two. It seeks to explain the properties of the whole by the properties of its parts; that is, it seeks to explain the properties of a system by the properties of its subsystems. As has been explained elsewhere (Shkliarevsky, 2011; Shkliarevsky, 2014), this approach is doomed to failure because it tries to explain a more powerful level of organization by using a less powerful one, which is impossible. It does not take into consideration the powerful combinatorial effects of the process of construction. Without understanding this process, atomism simply cannot explain how new properties emerge. For this reason, when atomism has to explain emergence, it resorts to modern-day science-like equivalents of a miracle, such as, chance, random mutations, contingent conditions and circumstances. The Big Bang, quantum mechanics in its present form, the emergence of life forms, the neo-Darwinist evolutionary theory and the non-explanation of the rise of human consciousness — all are

products of this approach. Atomistic approaches ultimately do not explain what they try to explain — the emergence of new levels and forms of organization.

The holistic perspective — the less popular of the two — does not fare much better. It also does not explain the phenomenon of emergence. Holism simply accepts the emerging totality as a given and devotes attention primarily to the way that this totality directs the operation of its parts. The provenance of this totality, however, remains unknown. All too often, the holistic approach implies the existence of some higher rationality whose origin remains unexplained and is in principle unexplainable within this perspective.

Although atomism and holism are diametrical opposites, they share one important commonality: they both do not include the process of construction into their frame of vision. As axiomatic principles that organize our knowledge, they originate from the same cognitive system — one that does not include the process of construction into its frame of vision. Neither holism nor atomism can refute each other because they have equal explanatory power since they originate from the same source. If we use either the atomistic or holistic approach, we would not be able to trace the emergence of new and more powerful levels of organization simply because we exclude the process of construction. Both approaches miss an important part of reality.

The preceding discussion has made three important points. Onepoint is that there is nothing ontological about the tensions between networks and hierarchies. On the contrary, in nature,

hierarchical and non-hierarchical interactions are generally in balance and complement each other. They are both necessary for advancing the evolution of a system. The second point is that the two types of interactions appear to be ontologically separate and diametrically opposed to each other only if we exclude the process of construction from our frame of vision. And the final point is that our current paradigm excludes the process of construction from its frame of vision, which is the main reason why networks and hierarchies appear to us as standing "in stark contrast as polar opposites"?

How important is the fact that we exclude an important part of reality from our frame of vision? Do we not organize our practice in accordance with the way we view reality? Of course we do. And if this is the case, then the perception that hierarchical and non-hierarchical interactions "stand in stark contrast as polar opposites" (Tshuma, 2000, p. 131) must have an important effect on our social and political practice[2].

Obviously, if we see networks and hierarchies as polar opposites, we will not be able to organize our practice in a way that will ensure their balanced cooperation. Such cooperation is essential for constructing new levels and forms of organization. Without it networks cannot optimize and conserve their creation, while hierarchical interactions alone cannot create. As a result, the system cannot sustain itself and evolve;

and when a system does not evolve, it starts disintegrating.

The failure to organize balanced cooperation between networks and hierarchies creates a fertile ground for their conflict. Both networks and hierarchies obey the law of conservation. Without balanced cooperation, they will be conserving only their specific function and mode of operation, which brings them into conflict. The mode of operation of hierarchies is ... hierarchical. In order to conserve their specific mode of operation, hierarchies will have to assimilate networks into their mode of operation; that is to say, they will have to include networks into their hierarchical interactions and subordinate them. There can only be one outcome of such assimilation: the atomization of network agents and the destruction of networks. Thus, the assimilation of networks by hierarchies represents a mortal threat to the networks' existence, and it comes as no surprise that the latter resist such assimilation. Also, non-hierarchical interactions create new levels and forms of organization. In other words, the functioning of networks creates hierarchies. These newly created hierarchies obviously represent a threat to the existing ones. The perception of networks as posing a direct threat increases the tendency on the part of existing hierarchies to subordinate networks and include their agents into hierarchies, which destroys networks. Thus efforts to conserve their specific functions create a widening gap between networks and hierarchies; their tensions and hostilities towards each other grow.

Finally, the failure to include the process of construction into our frame of vision shifts our focus away from the

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[2] On the role of the collective unconscious, see: Суший О. В. Теоретичні засади соціальної архетипіки // Публічне урядування, № 3 (4), 2016.

process and towards products of construction. The inevitable result of such shift is the tendency to absolutize and conserve the product — that is, a particular construct — rather than the process that creates it. The product becomes more important than the process. As a result, we tend to conserve the product rather than the process. Conservation of the product hinders and disrupts the process of construction, leads to stagnation, making the system's evolution more difficult and less efficient.

Fragmentation, disorder, instability, tensions, hostility, and stagnation are very visible in our society today. It is my contention that these negative effects are, to a significant degree, due to our failure, as a civilization, to balance hierarchical and non-hierarchical interactions in our social practice. This imbalance is a major source of conflicts that are raging in our society today.

Transforming Social Practice

If the imbalance between hierarchical and non-hierarchical interactions, between hierarchies and networks, is a major source of instability and conflict in today's world, then the obvious solution is to reorganize our social practice in a way that would balance this relationship. In fact, this idea is not entirely new. It lies, for example, at the heart of neo-liberalism since the early 1980s when Ronald Reagan and Margaret Thatcher began to advance the neo-liberal agenda.

Critics usually associate neo-liberalism with the concentration of power in the hands of the elites, both economic and political. To a large extent, this criticism is valid. However, there is another dimension to neo-liberalism. One of the ideas that have inspired neo-liberalism was to balance hierarchical interactions represented by the state with non-hierarchical interactions of the market. Unfortunately, the neo-liberal agenda does not go nearly far enough. Indeed, it has brought closer together political and business elites but it has not made any broad changes in our social practice to balance hierarchical and non-hierarchical interactions. The dominance of the hierarchical principle in our civilization has, for the most part, remained intact. Even if the general structure of the market is non-hierarchical, the managerial culture remains by and large hierarchical (Leavitt and Kaufman, 2003; Denning and Collins, 2011).

A growing number of scholars recognize the need to restructure our social practice and public space. They also consider that a balance between hierarchical and non-hierarchical interactions should be the basis for such restructuring. One popular trend is the so-called hybrid solutions, that is, solutions that still see hierarchical and non-hierarchical interactions as ontologically separate but seek some format that would ameliorate the negative effects of the opposition. These solutions are largely eclectic and do not achieve a truly integrative balance (Fawcett, Manwaring and Marsh, 2011; Kotter, 2011; Ebersand Oerlemans, 2013; Uhl-Bien et al, 2007).

John Kotter, the chief innovation officer at Kotter International and a professor emeritus of the Harvard Business School, typifies this approach. In his view, hierarchies and networks are two separate structures that perform specific functions. Hierarchies, for example, are very good at optimizing the work of

enterprises. Indeed, Kotter argues, they are capable of effecting small and medium-sized changes but they also have their limitations. Referring to large-scale transformations of enterprises, Kotter writes:

But I am referring to something far bigger: large-scale organizational change, such as a company redesigning its entire business model, or accomplishing its most important strategic objectives of the decade, or changing its portfolio of product offerings. And there is no evidence to suggest that the Hierarchy allows for such changes, let alone that it effectively facilitates them (Kotter, 2011; emphasis added).

In Kotter's view, the future lies in the coexistence of the two structures in one business organization. In his own words:

All of this has led me to believe that the successful organization of the future will have two organizational structures: a Hierarchy, and a more teaming, egalitarian, and adaptive Network. Both are designed and purposive. While the Hierarchy is as important as it has always been for optimizing work, the Network is where big change happens. It allows a company to more easily spot big opportunities and then change itself to grab them (Kotter, 2011; emphasis added).

Hybrid solutions provide a rich plethora of interesting ideas. However, as all eclectic solutions, they are not theoretically grounded and tend to have internal contradictions. Nothing illustrates this shortcoming better than the discussion of the critical subject of the relationship between leaders/managers and networks/employees. Opinions on this point vary widely, from those advocating a more activist role for leaders/managers as enablers (Plowman, Solansky, Beck, Baker, Kulkarni and Villarreal, 2007) to a weaker role as regulators and filterers of external information (Van Olffen and Romme, 1995), to an even a weaker one as facilitators of critical discourse and enhancers of local interactions among network agents (Raelin, 2011; Roelofs, 2009). Some even believe that no structural changesare required. All that needs to be done is to modify the rationale for the role of hierarchies and to educate managers in the values and merits of organizational democracy. Martin Clarke and David Butcher, for example, see education and the principle of voluntarism they borrow from political philosophy as vehicles for reconciling hierarchies and networks (Clarke and Butcher, 2006).

The literature on hybrids certainly deserves serious attention. It addresses many aspects of what is obviously a very complex and comprehensive problem. Many of its ideas are undoubtedly useful, but they hardly constitute a comprehensive solution to the problem — the fact that quite a few researchers have recognized. In their essay "Simplistic vs. Complex Organization: Markets, Hierarchies, and Networks in an Organizational Triangle", Elsner, Hocker, and Schwardt make an argument for just such comprehensive solution. They write: "... pure market and hierarchy, including their potential formal hybrids, are an empirically void set". Rather, real world "coordination forms", they argue, "have to be conceptualized in a fundamentally different way. A relevant organizational space must reflect the dimensions of a complex world" (Elsner, Hocker and

Schwardt, 2009). Philip Agre expresses a similar view. In his insightful piece on Herbert Simon's contribution to systems theory when he writes:

My suggestion, then, is that phenomena of hierarchy and self-organization are not mutually exclusive, and that neither one is necessarily destined to win a world-historical battle against the other. Although they are analytically distinct and should not be conflated, they nonetheless coexist, in both ideology and in reality, and they are likely to continue coexisting in the future. From this perspective, the models of Simon and the general systems theorists — all hierarchy or all self-organization — are models of simplicity, not of complexity. Real complexity begins with the shifting relations between the two sides (Agre, 2003; emphasis added).

As has already been stated, the balance between hierarchical and non-hierarchical interactions is very common in nature. Human society is a product of the evolution of the natural world. Given the ubiquity of the balance between hierarchical and non-hierarchical interactions in nature, there is no reason to think that such balance cannot be attained in human systems. On the contrary, we have every reason to believe that the problem is in principle resolvable.

So what do we need to do to restructure our social practice? What will the new practice look like? What will be the new role of leadership in this practice?

As this article has shown, the perception that hierarchical and non-hierarchical interactions are ontologically separate and diametrically opposed to each other has no basis in reality. It appears only when the process of construction of new levels and forms of organization is not included into our frame of vision. Therefore, the first and most important condition for balancing hierarchical and non-hierarchical interactions is to use the process of construction as the main organizing principle of our social practice. Sustaining this process through constant evolution and unceasing creation of new and more powerful levels and forms of organization should be the most important goal of this practice. The tradition of the Enlightenment does not include the process of construction into its frame of vision and, for this reason, represents the main obstacle to reorganizing our social practice. Therefore, we should transcend this tradition, which will open the path toward creating a balanced relationship between hierarchical and non-hierarchical interactions.

This article has shown that the current theoretical perspectives for eliminating this imbalance are not satisfactory. They still perceive these two types of interactions as ontologically separate and opposed to each other. As a result, they can only ameliorate this imbalance, not eliminate it. Their proposals still involve the dominance, albeit in a more flexible form, of one type over another.

In charting the course toward a new practice, we should remember that neither hierarchies nor networks are fortuitous and arbitrary phenomena. Neither is a result of some tragic aberration in human evolution. They are essential products of this evolution. Therefore, both have a legitimate role to play.

In the course of their local interactions, network agents combine their differences. The inclusion of differences into a common framework creates new,

more inclusive, and consequently more powerful levels and forms of organization. Thus, non-hierarchical interactions are the principal source of creativity.

By creating a new and non-local level of organization, non-hierarchical interactions create a hierarchy. In order to conserve and optimize what has been created, this hierarchy should be preserved. Therefore, the main functional operation that it performs should be conserved. Conservation requires activation, therefore the local level of non-hierarchical interactions and the global level of hierarchical interactions should be integrated so that they stimulate each other's function. Such integration requires a frame that would include both local and non-local operations as its particular cases. Thus the entire system consisting of the local and non-local level evolves into a new state. Both the local and non-local level are involved in the creative process that leads to the evolution of the system.

This brief description shows that both network agents, who operate on the local level, and leaders, who operate on the non-local level, have an important role to play in the common enterprise of sustaining the entire system by advancing its evolution. Network agents generate a new, more powerful and non-local level of organization in their interactions. In other words, they and no one else create the position of leadership. Once this position has been created, the role of the leader is to conserve it by integrating the non-local level and local level. Only the leader from the non-local position of leadership can make this integration possible because only the leader by virtue of his position can see both the local and non-local level.

As has been indicated in the above description, such integration requires a framework that would include both the local and non-local level as its particular cases. The construction of this frame is a very creative task that only the leader can perform. In order to do so, the leader must find the way to translate non-local operations into the terms of local ones; that is to say, the leader faces the task of making non-local operations accessible to those on the local level. Only such access makes possible the adaptation of local agents to non-local operations. By adapting to the non-local level, network agents enrich themselves and increase the power of their operations. In order to be conserved, these new and more powerful operations performed by local agents should be equilibrated with each other, which takes place in local interactions among agents. The result of these interactions will be the development of the new non-local level that fills the integrative frame created by the leader.

Conclusions

Thus one can see that in the new social practice, both the leader and network agents are essentially equal partners in a common enterprise of creating new levels and forms of organization. In contrast to the current practice, hierarchies do not have to assert their dominance over local non-hierarchical interactions. By doing so, hierarchies will destroy the creative potential of networks on which they vitally depend. Networks and hierarchies do not have to fear each other. Networks create non-local levels of organization on which hierarchies operate. Hierarchies,

for their part, conserve and integrate local and non-local levels of interactions. This mutual dependence in common creative work cannot be described in terms of command-control but only as equal partnership, since both sides participate in the common process in which both are involved in hierarchical and non-hierarchical interactions.

Differences are the source of creativity. By integrating all differences into a common frame we create new and more powerful levels and forms of our mental organization that make possible to identify increasingly more complex problems and give rise to new ideas to solve these problems. The inclusive character of the new practice does not depend exclusively on the subjective predispositions of participants, as important as their shared attitudes, values, and norms may be. The very nature of the creative process determines this practice. Its organizational form is a cascading structure of hierarchical levels that are nested in each other and that vitally depend on each other. By its very nature, such social practice is incompatible with conditions of exclusion and domination. Its natural element is true democracy, as a political system that ensures universal inclusion and empowerment of all.

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